

-----Class 1-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][012]]$   
-----

--  
Rules of  $T[L]$ :  
R1)  $0,-->0,0,--0,0,--$   
R2)  $0,0,-->$   
List of different nodes in  $T[L]$   
LEN=1)  $0,:$   
LEN=2)  $0,0,:$   
Number new nodes in level n is given by : 1,1, DONE

-----Class 2-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][021]]$   
-----

--  
Rules of  $T[L]$ :  
R1)  $0,-->0,0,--0,1,--$   
R2)  $0,0,-->$   
R3)  $0,1,-->0,1,--$   
List of different nodes in  $T[L]$   
LEN=1)  $0,:$   
LEN=2)  $0,0,: 0,1,:$   
Number new nodes in level n is given by : 1,2, DONE

-----Class 3-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][100]]$   
-----

--  
Rules of  $T[L]$ :  
R1)  $0,-->0,0,--0,1,--$   
R2)  $0,0,-->$   
R3)  $0,1,-->0,1,--$   
List of different nodes in  $T[L]$   
LEN=1)  $0,:$   
LEN=2)  $0,0,: 0,1,:$   
Number new nodes in level n is given by : 1,2, DONE

-----Class 4-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][101]]$   
-----

--  
Rules of  $T[L]$ :  
R1)  $0,-->0,0,--0,1,--$   
R2)  $0,0,-->$   
R3)  $0,1,-->0,1,--$   
List of different nodes in  $T[L]$   
LEN=1)  $0,:$   
LEN=2)  $0,0,: 0,1,:$   
Number new nodes in level n is given by : 1,2, DONE

-----Class 5-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][102]]$   
-----

--  
Rules of T[L]:  
R1)  $0,-->0,0,--0,1,--$   
R2)  $0,0,-->$   
R3)  $0,1,-->0,1,--$   
List of different nodes in T[L]  
LEN=1)  $0,:$   
LEN=2)  $0,0,: 0,1,:$   
Number new nodes in level n is given by : 1,2, DONE

-----Class 6-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][110]]$   
-----

--  
Rules of T[L]:  
R1)  $0,-->0,0,--0,1,--$   
R2)  $0,0,-->$   
R3)  $0,1,-->0,1,--$   
List of different nodes in T[L]  
LEN=1)  $0,:$   
LEN=2)  $0,0,: 0,1,:$   
Number new nodes in level n is given by : 1,2, DONE

-----Class 7-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][120]]$   
-----

--  
Rules of T[L]:  
R1)  $0,-->0,0,--0,1,--$   
R2)  $0,0,-->$   
R3)  $0,1,-->0,1,--$   
List of different nodes in T[L]  
LEN=1)  $0,:$   
LEN=2)  $0,0,: 0,1,:$   
Number new nodes in level n is given by : 1,2, DONE

-----Class 8-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][201]]$   
-----

--  
Rules of T[L]:  
R1)  $0,-->0,0,--0,1,--$   
R2)  $0,0,-->$   
R3)  $0,1,-->0,1,--$   
List of different nodes in T[L]  
LEN=1)  $0,:$

LEN=2) 0,0,: 0,1,:  
Number new nodes in level n is given by : 1,2, DONE

-----Class 9-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][210]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,1,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
Number new nodes in level n is given by : 1,2, DONE

-----Class

10-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][012][021]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
Number new nodes in level n is given by : 1,2, DONE

-----Class

11-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][012][100]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
Number new nodes in level n is given by : 1,2, DONE

-----Class

12-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][012][101]]$

--  
Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
Number new nodes in level n is given by : 1,2, DONE

-----Class

13-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][012][102]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
Number new nodes in level n is given by : 1,2, DONE

-----Class

14-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][012][110]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
Number new nodes in level n is given by : 1,2, DONE

-----Class

15-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][012][120]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
Number new nodes in level n is given by : 1,2, DONE

```
-----Class
16-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][010][012][201]]
-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->
R3) 0,1,-->0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
Number new nodes in level n is given by : 1,2,  DONE
```

```
-----Class
17-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][010][012][210]]
-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->
R3) 0,1,-->0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
Number new nodes in level n is given by : 1,2,  DONE
```

```
-----Class
18-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][010][021][100]]
-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,--
R2) 0,0,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
Number new nodes in level n is given by : 1,1,  DONE
```

```
-----Class
19-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][010][021][101]]
-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,--
R2) 0,0,-->
List of different nodes in T[L]
```

LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

20-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][010][021][102]]

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

21-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][010][021][110]]

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

22-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][010][021][120]]

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

23-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][010][021][201]]

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--

R2) 0,0,-->  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class

24-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][021][210]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class

25-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][100][101]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class

26-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][100][102]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class

27-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][100][110]]$

--

Rules of T[L]:

R1)  $0, \rightarrow 0, 0, \rightarrow 0, \rightarrow$

R2)  $0, 0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 0, :$

Number new nodes in level n is given by : 1,1, DONE

-----Class

28-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][100][120]]$

--

Rules of T[L]:

R1)  $0, \rightarrow 0, 0, \rightarrow 0, \rightarrow$

R2)  $0, 0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 0, :$

Number new nodes in level n is given by : 1,1, DONE

-----Class

29-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][100][201]]$

--

Rules of T[L]:

R1)  $0, \rightarrow 0, 0, \rightarrow 0, \rightarrow$

R2)  $0, 0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 0, :$

Number new nodes in level n is given by : 1,1, DONE

-----Class

30-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][100][210]]$

--

Rules of T[L]:

R1)  $0, \rightarrow 0, 0, \rightarrow 0, \rightarrow$

R2)  $0, 0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 0, :$

Number new nodes in level n is given by : 1,1, DONE

-----Class

31-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][101][102]]$



-----

--

Rules of T[L]:

R1)  $0, \rightarrow 0, 0, \rightarrow 0, \rightarrow$

R2)  $0, 0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 0, :$

Number new nodes in level n is given by : 1,1, DONE

-----Class

32-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][101][110]]$

-----

--

Rules of T[L]:

R1)  $0, \rightarrow 0, 0, \rightarrow 0, \rightarrow$

R2)  $0, 0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 0, :$

Number new nodes in level n is given by : 1,1, DONE

-----Class

33-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][101][120]]$

-----

--

Rules of T[L]:

R1)  $0, \rightarrow 0, 0, \rightarrow 0, \rightarrow$

R2)  $0, 0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 0, :$

Number new nodes in level n is given by : 1,1, DONE

-----Class

34-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][101][201]]$

-----

--

Rules of T[L]:

R1)  $0, \rightarrow 0, 0, \rightarrow 0, \rightarrow$

R2)  $0, 0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 0, :$

Number new nodes in level n is given by : 1,1, DONE

-----Class

35-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][101][210]]$   
-----

--  
Rules of T[L]:

R1)  $0,-->0,0,--0,--$

R2)  $0,0,-->$

List of different nodes in T[L]

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

36-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][102][110]]$   
-----

--  
Rules of T[L]:

R1)  $0,-->0,0,--0,--$

R2)  $0,0,-->$

List of different nodes in T[L]

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

37-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][102][120]]$   
-----

--  
Rules of T[L]:

R1)  $0,-->0,0,--0,--$

R2)  $0,0,-->$

List of different nodes in T[L]

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

38-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][102][201]]$   
-----

--  
Rules of T[L]:

R1)  $0,-->0,0,--0,--$

R2)  $0,0,-->$

List of different nodes in T[L]

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level n is given by : 1,1, DONE

```

-----Class
39-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][010][102][210]]
-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,--
R2) 0,0,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
Number new nodes in level n is given by : 1,1,  DONE

-----Class
40-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][010][110][120]]
-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,--
R2) 0,0,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
Number new nodes in level n is given by : 1,1,  DONE

-----Class
41-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][010][110][201]]
-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,--
R2) 0,0,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
Number new nodes in level n is given by : 1,1,  DONE

-----Class
42-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][010][110][210]]
-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,--
R2) 0,0,-->
List of different nodes in T[L]
LEN=1) 0,:

```

LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class

43-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][001][010][120][201]]

-----

--  
Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

Number new nodes in level n is given by : 1,1, DONE

-----Class

44-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][001][010][120][210]]

-----

--  
Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

Number new nodes in level n is given by : 1,1, DONE

-----Class

45-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][001][010][201][210]]

-----

--  
Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

Number new nodes in level n is given by : 1,1, DONE

-----Class

46-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][001][011][012][021]]

-----

--  
Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->

R3) 0,1,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
Number new nodes in level n is given by : 1,2, DONE

-----Class

47-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][012][100]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
Number new nodes in level n is given by : 1,2, DONE

-----Class

48-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][012][101]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
Number new nodes in level n is given by : 1,2, DONE

-----Class

49-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][012][102]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
Number new nodes in level n is given by : 1,2, DONE

-----Class

50-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][012][110]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
Number new nodes in level n is given by : 1,2, DONE

-----Class

51-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][012][120]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
Number new nodes in level n is given by : 1,2, DONE

-----Class

52-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][012][201]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
Number new nodes in level n is given by : 1,2, DONE

-----Class

53-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][012][210]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--  
List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
Number new nodes in level n is given by : 1,2, DONE

-----Class

54-----

Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][011][021][100]]

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, :

Number new nodes in level n is given by : 1,1, DONE

-----Class

55-----

Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][011][021][101]]

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, :

Number new nodes in level n is given by : 1,1, DONE

-----Class

56-----

Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][011][021][102]]

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, :

Number new nodes in level n is given by : 1,1, DONE

-----Class

57-----

Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][011][021][110]]

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

58-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][021][120]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--0,1,2,--  
R4) 0,1,2,-->0,1,2,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,2, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

59-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][021][201]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

60-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][021][210]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

61-----



Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][100][101]]$

-----  
--  
Rules of T[L]:  
R1)  $0,-->0,0,--0,--$   
R2)  $0,0,-->$   
List of different nodes in T[L]  
LEN=1)  $0,:$   
LEN=2)  $0,0,:$   
Number new nodes in level n is given by : 1,1, DONE

-----Class  
62-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][100][102]]$

-----  
--  
Rules of T[L]:  
R1)  $0,-->0,0,--0,--$   
R2)  $0,0,-->$   
List of different nodes in T[L]  
LEN=1)  $0,:$   
LEN=2)  $0,0,:$   
Number new nodes in level n is given by : 1,1, DONE

-----Class  
63-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][100][110]]$

-----  
--  
Rules of T[L]:  
R1)  $0,-->0,0,--0,--$   
R2)  $0,0,-->$   
List of different nodes in T[L]  
LEN=1)  $0,:$   
LEN=2)  $0,0,:$   
Number new nodes in level n is given by : 1,1, DONE

-----Class  
64-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][100][120]]$

-----  
--  
Rules of T[L]:  
R1)  $0,-->0,0,--0,1,--$   
R2)  $0,0,-->$   
R3)  $0,1,-->0,0,--0,1,2,--$   
R4)  $0,1,2,-->0,1,2,--$   
List of different nodes in T[L]  
LEN=1)  $0,:$   
LEN=2)  $0,0, : 0,1,:$

LEN=3) 0,1,2,:  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

65-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][001][011][100][201]]

-----

--  
Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

Number new nodes in level n is given by : 1,1, DONE

-----Class

66-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][001][011][100][210]]

-----

--  
Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

Number new nodes in level n is given by : 1,1, DONE

-----Class

67-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][001][011][101][102]]

-----

--  
Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

Number new nodes in level n is given by : 1,1, DONE

-----Class

68-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][001][011][101][110]]

-----

--  
Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->

List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

69-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][011][101][120]]

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--0,1,2,--  
R4) 0,1,2,-->0,1,2,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,2, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

70-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][011][101][201]]

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

71-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][011][101][210]]

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

72-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][011][102][110]]

-----  
--  
Rules of T[L]:  
R1)  $0, \rightarrow 0, 0, \rightarrow 0, \rightarrow$   
R2)  $0, 0, \rightarrow$   
List of different nodes in T[L]  
LEN=1)  $0, :$   
LEN=2)  $0, 0, :$   
Number new nodes in level n is given by : 1,1, DONE

-----Class  
73-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][102][120]]$   
-----

--  
Rules of T[L]:  
R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$   
R2)  $0, 0, \rightarrow$   
R3)  $0, 1, \rightarrow 0, 0, \rightarrow 0, 1, 2, \rightarrow$   
R4)  $0, 1, 2, \rightarrow 0, 1, 2, \rightarrow$   
List of different nodes in T[L]  
LEN=1)  $0, :$   
LEN=2)  $0, 0, : 0, 1, :$   
LEN=3)  $0, 1, 2, :$   
Number new nodes in level n is given by : 1,2,1, DONE

-----Class  
74-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][102][201]]$   
-----

--  
Rules of T[L]:  
R1)  $0, \rightarrow 0, 0, \rightarrow 0, \rightarrow$   
R2)  $0, 0, \rightarrow$   
List of different nodes in T[L]  
LEN=1)  $0, :$   
LEN=2)  $0, 0, :$   
Number new nodes in level n is given by : 1,1, DONE

-----Class  
75-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][102][210]]$   
-----

--  
Rules of T[L]:  
R1)  $0, \rightarrow 0, 0, \rightarrow 0, \rightarrow$   
R2)  $0, 0, \rightarrow$   
List of different nodes in T[L]  
LEN=1)  $0, :$   
LEN=2)  $0, 0, :$

Number new nodes in level n is given by : 1,1, DONE

-----Class

76-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][110][120]]$

-----

--

Rules of T[L]:

R1)  $0, \rightarrow 0,0, \rightarrow 0,1, \rightarrow$

R2)  $0,0, \rightarrow$

R3)  $0,1, \rightarrow 0,0, \rightarrow 0,1,2, \rightarrow$

R4)  $0,1,2, \rightarrow 0,1,2, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0,0, : 0,1, :$

LEN=3)  $0,1,2, :$

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

77-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][110][201]]$

-----

--

Rules of T[L]:

R1)  $0, \rightarrow 0,0, \rightarrow 0, \rightarrow$

R2)  $0,0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0,0, :$

Number new nodes in level n is given by : 1,1, DONE

-----Class

78-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][110][210]]$

-----

--

Rules of T[L]:

R1)  $0, \rightarrow 0,0, \rightarrow 0, \rightarrow$

R2)  $0,0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0,0, :$

Number new nodes in level n is given by : 1,1, DONE

-----Class

79-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][120][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--0,1,2,--  
R4) 0,1,2,-->0,1,2,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
LEN=3) 0,1,2,:  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

80-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][120][210]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--0,1,2,--  
R4) 0,1,2,-->0,1,2,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
LEN=3) 0,1,2,:  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

81-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][201][210]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class

82-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][021][100]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--0,1,1,--  
R4) 0,1,1,-->0,0,--  
List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,1, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

83-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][021][101]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--0,1,1,--  
R4) 0,1,1,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,1, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

84-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][021][102]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--0,1,1,--  
R4) 0,1,1,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,1, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

85-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][021][110]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
Number new nodes in level n is given by : 1,2, DONE

-----Class

86-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][021][120]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

R2)  $0, 0, \rightarrow$

R3)  $0, 1, \rightarrow 0, 0, \rightarrow 0, 1, 1, \rightarrow$

R4)  $0, 1, 1, \rightarrow 0, 0, \rightarrow$

List of different nodes in  $T[L]$

LEN=1)  $0, :$

LEN=2)  $0, 0, : 0, 1, :$

LEN=3)  $0, 1, 1, :$

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

87-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][021][201]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

R2)  $0, 0, \rightarrow$

R3)  $0, 1, \rightarrow 0, 0, \rightarrow 0, 1, 1, \rightarrow$

R4)  $0, 1, 1, \rightarrow 0, 0, \rightarrow$

List of different nodes in  $T[L]$

LEN=1)  $0, :$

LEN=2)  $0, 0, : 0, 1, :$

LEN=3)  $0, 1, 1, :$

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

88-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][021][210]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

R2)  $0, 0, \rightarrow$

R3)  $0, 1, \rightarrow 0, 0, \rightarrow 0, 1, 1, \rightarrow$

R4)  $0, 1, 1, \rightarrow 0, 0, \rightarrow$

List of different nodes in  $T[L]$

LEN=1)  $0, :$

LEN=2)  $0, 0, : 0, 1, :$

LEN=3)  $0, 1, 1, :$

Number new nodes in level n is given by : 1,2,1, DONE

-----Class



89-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][100][101]]$

-----  
--  
Rules of  $T[L]$ :  
R1)  $0,-->0,0,--0,1,--$   
R2)  $0,0,-->$   
R3)  $0,1,-->0,0,--0,1,1,--$   
R4)  $0,1,1,-->0,0,--$   
List of different nodes in  $T[L]$   
LEN=1)  $0,:$   
LEN=2)  $0,0,: 0,1,:$   
LEN=3)  $0,1,1,:$   
Number new nodes in level n is given by : 1,2,1, DONE

-----Class  
90-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][100][102]]$

-----  
--  
Rules of  $T[L]$ :  
R1)  $0,-->0,0,--0,1,--$   
R2)  $0,0,-->$   
R3)  $0,1,-->0,0,--0,1,1,--$   
R4)  $0,1,1,-->0,0,--$   
List of different nodes in  $T[L]$   
LEN=1)  $0,:$   
LEN=2)  $0,0,: 0,1,:$   
LEN=3)  $0,1,1,:$   
Number new nodes in level n is given by : 1,2,1, DONE

-----Class  
91-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][100][110]]$

-----  
--  
Rules of  $T[L]$ :  
R1)  $0,-->0,0,--0,1,--$   
R2)  $0,0,-->$   
R3)  $0,1,-->0,0,--0,0,--$   
List of different nodes in  $T[L]$   
LEN=1)  $0,:$   
LEN=2)  $0,0,: 0,1,:$   
Number new nodes in level n is given by : 1,2, DONE

-----Class  
92-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][100][120]]$

-----  
--

Rules of T[L]:

R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

R2)  $0, 0, \rightarrow$

R3)  $0, 1, \rightarrow 0, 0, \rightarrow 0, 1, 1, \rightarrow$

R4)  $0, 1, 1, \rightarrow 0, 0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 0, : 0, 1, :$

LEN=3)  $0, 1, 1, :$

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

93-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][100][201]]$

--

Rules of T[L]:

R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

R2)  $0, 0, \rightarrow$

R3)  $0, 1, \rightarrow 0, 0, \rightarrow 0, 1, 1, \rightarrow$

R4)  $0, 1, 1, \rightarrow 0, 0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 0, : 0, 1, :$

LEN=3)  $0, 1, 1, :$

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

94-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][100][210]]$

--

Rules of T[L]:

R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

R2)  $0, 0, \rightarrow$

R3)  $0, 1, \rightarrow 0, 0, \rightarrow 0, 1, 1, \rightarrow$

R4)  $0, 1, 1, \rightarrow 0, 0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 0, : 0, 1, :$

LEN=3)  $0, 1, 1, :$

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

95-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][101][102]]$

--

Rules of T[L]:

R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

```

R2) 0,0,-->
R3) 0,1,-->0,0,--0,1,1,--
R4) 0,1,1,-->0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,1,1,:
Number new nodes in level n is given by : 1,2,1,  DONE

```

-----Class

```

96-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][012][101][110]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->
R3) 0,1,-->0,0,--0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
Number new nodes in level n is given by : 1,2,  DONE

```

-----Class

```

97-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][012][101][120]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->
R3) 0,1,-->0,0,--0,1,1,--
R4) 0,1,1,-->0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,1,1,:
Number new nodes in level n is given by : 1,2,1,  DONE

```

-----Class

```

98-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][012][101][201]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->
R3) 0,1,-->0,0,--0,1,1,--
R4) 0,1,1,-->0,0,--
List of different nodes in T[L]

```

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,1, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

99-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][101][210]]$

-----  
--  
Rules of T[L]:  
R1) 0, -->0,0, --0,1, --  
R2) 0,0, -->  
R3) 0,1, -->0,0, --0,1,1, --  
R4) 0,1,1, -->0,0, --  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,1, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

100-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][102][110]]$

-----  
--  
Rules of T[L]:  
R1) 0, -->0,0, --0,1, --  
R2) 0,0, -->  
R3) 0,1, -->0,0, --0,0, --  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
Number new nodes in level n is given by : 1,2, DONE

-----Class

101-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][102][120]]$

-----  
--  
Rules of T[L]:  
R1) 0, -->0,0, --0,1, --  
R2) 0,0, -->  
R3) 0,1, -->0,0, --0,1,1, --  
R4) 0,1,1, -->0,0, --  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,1, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

102-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][102][201]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

R2)  $0, 0, \rightarrow$

R3)  $0, 1, \rightarrow 0, 0, \rightarrow 0, 1, 1, \rightarrow$

R4)  $0, 1, 1, \rightarrow 0, 0, \rightarrow$

List of different nodes in  $T[L]$

LEN=1)  $0, :$

LEN=2)  $0, 0, : 0, 1, :$

LEN=3)  $0, 1, 1, :$

Number new nodes in level n is given by : 1,2,1,    DONE

-----Class

103-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][102][210]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

R2)  $0, 0, \rightarrow$

R3)  $0, 1, \rightarrow 0, 0, \rightarrow 0, 1, 1, \rightarrow$

R4)  $0, 1, 1, \rightarrow 0, 0, \rightarrow$

List of different nodes in  $T[L]$

LEN=1)  $0, :$

LEN=2)  $0, 0, : 0, 1, :$

LEN=3)  $0, 1, 1, :$

Number new nodes in level n is given by : 1,2,1,    DONE

-----Class

104-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][110][120]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

R2)  $0, 0, \rightarrow$

R3)  $0, 1, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow$

List of different nodes in  $T[L]$

LEN=1)  $0, :$

LEN=2)  $0, 0, : 0, 1, :$

Number new nodes in level n is given by : 1,2,    DONE

-----Class

105-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][110][201]]$

```

-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->
R3) 0,1,-->0,0,--0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
Number new nodes in level n is given by : 1,2,  DONE

```

```

-----Class
106-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][012][110][210]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->
R3) 0,1,-->0,0,--0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
Number new nodes in level n is given by : 1,2,  DONE

```

```

-----Class
107-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][012][120][201]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->
R3) 0,1,-->0,0,--0,1,1,--
R4) 0,1,1,-->0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,1,1,:
Number new nodes in level n is given by : 1,2,1,  DONE

```

```

-----Class
108-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][012][120][210]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->
R3) 0,1,-->0,0,--0,1,1,--

```

R4) 0,1,1,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,1, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

109-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][201][210]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--0,1,1,--  
R4) 0,1,1,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,1, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

110-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][021][100][101]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--0,1,1,--0,1,--  
R4) 0,1,1,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,1, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

111-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][021][100][102]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--0,1,1,--0,1,--  
R4) 0,1,1,-->0,0,--  
List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,1, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

112-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][021][100][110]]$

-----  
--  
Rules of T[L]:  
R1) 0, -->0,0, --0,1, --  
R2) 0,0, -->  
R3) 0,1, -->0,0, --0,0, --0,1, --  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
Number new nodes in level n is given by : 1,2, DONE

-----Class

113-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][021][100][120]]$

-----  
--  
Rules of T[L]:  
R1) 0, -->0,0, --0,1, --  
R2) 0,0, -->  
R3) 0,1, -->0,0, --0,1,1, --0,1,2, --  
R4) 0,1,1, -->0,0, --  
R5) 0,1,2, -->0,0, --0,1,2, --  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,1, : 0,1,2, :  
Number new nodes in level n is given by : 1,2,2, DONE

-----Class

114-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][021][100][201]]$

-----  
--  
Rules of T[L]:  
R1) 0, -->0,0, --0,1, --  
R2) 0,0, -->  
R3) 0,1, -->0,0, --0,1,1, --0,1, --  
R4) 0,1,1, -->0,0, --  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,1, :



Number new nodes in level n is given by : 1,2,1, DONE

-----Class

115-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][021][100][210]]$

-----

--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,1,--$

R2)  $0,0,-->$

R3)  $0,1,-->0,0,--0,1,1,--0,1,--$

R4)  $0,1,1,-->0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,: 0,1,:$

LEN=3)  $0,1,1,:$

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

116-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][021][101][102]]$

-----

--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,1,--$

R2)  $0,0,-->$

R3)  $0,1,-->0,0,--0,1,1,--0,1,--$

R4)  $0,1,1,-->0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,: 0,1,:$

LEN=3)  $0,1,1,:$

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

117-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][021][101][110]]$

-----

--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,1,--$

R2)  $0,0,-->$

R3)  $0,1,-->0,0,--0,0,--0,1,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,: 0,1,:$

Number new nodes in level n is given by : 1,2, DONE

-----Class

118-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][021][101][120]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--0,1,1,--0,1,2,--  
R4) 0,1,1,-->0,0,--  
R5) 0,1,2,-->0,0,--0,1,2,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,1, : 0,1,2, :  
Number new nodes in level n is given by : 1,2,2, DONE

-----Class

119-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][021][101][201]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--0,1,1,--0,1,--  
R4) 0,1,1,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,1, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

120-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][021][101][210]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--0,1,1,--0,1,--  
R4) 0,1,1,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,1, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

121-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][021][102][110]]$

```

-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->
R3) 0,1,-->0,0,--0,0,--0,1,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
Number new nodes in level n is given by : 1,2,  DONE

```

```

-----Class
122-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][021][102][120]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->
R3) 0,1,-->0,0,--0,1,1,--0,1,2,--
R4) 0,1,1,-->0,0,--
R5) 0,1,2,-->0,0,--0,1,2,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,1,1,: 0,1,2,:
Number new nodes in level n is given by : 1,2,2,  DONE

```

```

-----Class
123-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][021][102][201]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->
R3) 0,1,-->0,0,--0,1,1,--0,1,--
R4) 0,1,1,-->0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,1,1,:
Number new nodes in level n is given by : 1,2,1,  DONE

```

```

-----Class
124-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][021][102][210]]
-----

```

```

--
Rules of T[L]:

```

```

R1) 0,-->0,0,--0,1,--
R2) 0,0,-->
R3) 0,1,-->0,0,--0,1,1,--0,1,--
R4) 0,1,1,-->0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,1,1,:
Number new nodes in level n is given by : 1,2,1,  DONE

```

-----Class

```

125-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][021][110][120]]
-----

```

```

Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->
R3) 0,1,-->0,0,--0,0,--0,1,2,--
R4) 0,1,2,-->0,0,--0,1,2,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,1,2,:
Number new nodes in level n is given by : 1,2,1,  DONE

```

-----Class

```

126-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][021][110][201]]
-----

```

```

Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->
R3) 0,1,-->0,0,--0,0,--0,1,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
Number new nodes in level n is given by : 1,2,  DONE

```

-----Class

```

127-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][021][110][210]]
-----

```

```

Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->
R3) 0,1,-->0,0,--0,0,--0,1,--
List of different nodes in T[L]

```

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
Number new nodes in level n is given by : 1,2, DONE

-----Class

128-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][021][120][201]]$

--

Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->
- R3) 0,1, -->0,0, --0,1,1, --0,1,2, --
- R4) 0,1,1, -->0,0, --
- R5) 0,1,2, -->0,0, --0,1,2, --

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,1, : 0,1,2, :

Number new nodes in level n is given by : 1,2,2, DONE

-----Class

129-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][021][120][210]]$

--

Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->
- R3) 0,1, -->0,0, --0,1,1, --0,1,2, --
- R4) 0,1,1, -->0,0, --
- R5) 0,1,2, -->0,0, --0,1,2, --

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,1, : 0,1,2, :

Number new nodes in level n is given by : 1,2,2, DONE

-----Class

130-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][021][201][210]]$

--

Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->
- R3) 0,1, -->0,0, --0,1,1, --0,1, --
- R4) 0,1,1, -->0,0, --

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0,: 0,1,:  
LEN=3) 0,1,1,:  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

131-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][100][101][102]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--0,1,1,--0,1,2,--  
R4) 0,1,1,-->0,0,--  
R5) 0,1,2,-->0,0,--0,1,1,--0,1,2,2,--0,1,2,3,--  
R6) 0,1,2,2,-->0,0,--0,1,1,--  
R7) 0,1,2,3,-->0,0,--0,1,1,--0,1,2,2,--0,1,2,3,3,--0,1,2,3,4,--  
R8) 0,1,2,3,3,-->0,0,--0,1,1,--0,1,2,2,--  
R9) 0,1,2,3,4,-->0,0,--0,1,1,--0,1,2,2,--0,1,2,3,3,--0,1,2,3,4,4,--0,1,2,3,4,5,--  
R10) 0,1,2,3,4,4,-->0,0,--0,1,1,--0,1,2,2,--0,1,2,3,3,--  
R11)  
0,1,2,3,4,5,-->0,0,--0,1,1,--0,1,2,2,--0,1,2,3,3,--0,1,2,3,4,4,--0,1,2,3,4,5,5,--0,  
1,2,3,4,5,6,--  
R12) 0,1,2,3,4,5,5,-->0,0,--0,1,1,--0,1,2,2,--0,1,2,3,3,--0,1,2,3,4,4,--  
R13)  
0,1,2,3,4,5,6,-->0,0,--0,1,1,--0,1,2,2,--0,1,2,3,3,--0,1,2,3,4,4,--0,1,2,3,4,5,5,--  
0,1,2,3,4,5,6,6,--0,1,2,3,4,5,6,7,--  
R14)  
0,1,2,3,4,5,6,6,-->0,0,--0,1,1,--0,1,2,2,--0,1,2,3,3,--0,1,2,3,4,4,--0,1,2,3,4,5,5,  
--  
R15)  
0,1,2,3,4,5,6,7,-->0,0,--0,1,1,--0,1,2,2,--0,1,2,3,3,--0,1,2,3,4,4,--0,1,2,3,4,5,5,  
--0,1,2,3,4,5,6,6,--0,1,2,3,4,5,6,7,7,--0,1,2,3,4,5,6,7,8,--  
R16)  
0,1,2,3,4,5,6,7,7,-->0,0,--0,1,1,--0,1,2,2,--0,1,2,3,3,--0,1,2,3,4,4,--0,1,2,3,4,5,  
5,--0,1,2,3,4,5,6,6,--  
R17)  
0,1,2,3,4,5,6,7,8,-->0,0,--0,1,1,--0,1,2,2,--0,1,2,3,3,--0,1,2,3,4,4,--0,1,2,3,4,5,  
5,--0,1,2,3,4,5,6,6,--0,1,2,3,4,5,6,7,7,--0,1,2,3,4,5,6,7,8,8,--0,1,2,3,4,5,6,7,8,9,  
--

List of different nodes in T[L]

LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
LEN=3) 0,1,1,: 0,1,2,:  
LEN=4) 0,1,2,2,: 0,1,2,3,:  
LEN=5) 0,1,2,3,3,: 0,1,2,3,4,:  
LEN=6) 0,1,2,3,4,4,: 0,1,2,3,4,5,:  
LEN=7) 0,1,2,3,4,5,5,: 0,1,2,3,4,5,6,:  
LEN=8) 0,1,2,3,4,5,6,6,: 0,1,2,3,4,5,6,7,:  
LEN=9) 0,1,2,3,4,5,6,7,7,: 0,1,2,3,4,5,6,7,8,:

LEN=10) 0,1,2,3,4,5,6,7,8,8,: 0,1,2,3,4,5,6,7,8,9,:  
Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,

-----Class

132-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][100][101][110]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--0,0,--0,1,2,--  
R4) 0,1,2,-->0,0,--0,0,--0,0,--0,1,2,3,--  
R5) 0,1,2,3,-->0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,--  
R6) 0,1,2,3,4,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,--  
R7) 0,1,2,3,4,5,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,--  
R8) 0,1,2,3,4,5,6,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,7,--  
R9)  
0,1,2,3,4,5,6,7,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,7,  
8,--  
R10)  
0,1,2,3,4,5,6,7,8,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,  
4,5,6,7,8,9,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,2, :  
LEN=4) 0,1,2,3, :  
LEN=5) 0,1,2,3,4, :  
LEN=6) 0,1,2,3,4,5, :  
LEN=7) 0,1,2,3,4,5,6, :  
LEN=8) 0,1,2,3,4,5,6,7, :  
LEN=9) 0,1,2,3,4,5,6,7,8, :  
LEN=10) 0,1,2,3,4,5,6,7,8,9, :  
Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class

133-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][100][101][120]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--0,1,1,--0,1,--  
R4) 0,1,1,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,1, :

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

134-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][100][101][201]]$

-----

--

Rules of  $T[L]$ :

R1)  $0, \rightarrow 0,0, \rightarrow 0,1, \rightarrow$

R2)  $0,0, \rightarrow$

R3)  $0,1, \rightarrow 0,0, \rightarrow 0,1,1, \rightarrow 0,1,2, \rightarrow$

R4)  $0,1,1, \rightarrow 0,0, \rightarrow$

R5)  $0,1,2, \rightarrow 0,0, \rightarrow 0,1,1, \rightarrow 0,1,2,2, \rightarrow 0,1,2,3, \rightarrow$

R6)  $0,1,2,2, \rightarrow 0,0, \rightarrow 0,1,1, \rightarrow$

R7)  $0,1,2,3, \rightarrow 0,0, \rightarrow 0,1,1, \rightarrow 0,1,2,2, \rightarrow 0,1,2,3,3, \rightarrow 0,1,2,3,4, \rightarrow$

R8)  $0,1,2,3,3, \rightarrow 0,0, \rightarrow 0,1,1, \rightarrow 0,1,2,2, \rightarrow$

R9)  $0,1,2,3,4, \rightarrow 0,0, \rightarrow 0,1,1, \rightarrow 0,1,2,2, \rightarrow 0,1,2,3,3, \rightarrow 0,1,2,3,4,4, \rightarrow 0,1,2,3,4,5, \rightarrow$

R10)  $0,1,2,3,4,4, \rightarrow 0,0, \rightarrow 0,1,1, \rightarrow 0,1,2,2, \rightarrow 0,1,2,3,3, \rightarrow$

R11)

$0,1,2,3,4,5, \rightarrow 0,0, \rightarrow 0,1,1, \rightarrow 0,1,2,2, \rightarrow 0,1,2,3,3, \rightarrow 0,1,2,3,4,4, \rightarrow 0,1,2,3,4,5,5, \rightarrow 0,1,2,3,4,5,6, \rightarrow$

R12)  $0,1,2,3,4,5,5, \rightarrow 0,0, \rightarrow 0,1,1, \rightarrow 0,1,2,2, \rightarrow 0,1,2,3,3, \rightarrow 0,1,2,3,4,4, \rightarrow$

R13)

$0,1,2,3,4,5,6, \rightarrow 0,0, \rightarrow 0,1,1, \rightarrow 0,1,2,2, \rightarrow 0,1,2,3,3, \rightarrow 0,1,2,3,4,4, \rightarrow 0,1,2,3,4,5,5, \rightarrow 0,1,2,3,4,5,6,6, \rightarrow 0,1,2,3,4,5,6,7, \rightarrow$

R14)

$0,1,2,3,4,5,6,6, \rightarrow 0,0, \rightarrow 0,1,1, \rightarrow 0,1,2,2, \rightarrow 0,1,2,3,3, \rightarrow 0,1,2,3,4,4, \rightarrow 0,1,2,3,4,5,5, \rightarrow$

--

R15)

$0,1,2,3,4,5,6,7, \rightarrow 0,0, \rightarrow 0,1,1, \rightarrow 0,1,2,2, \rightarrow 0,1,2,3,3, \rightarrow 0,1,2,3,4,4, \rightarrow 0,1,2,3,4,5,5, \rightarrow 0,1,2,3,4,5,6,6, \rightarrow 0,1,2,3,4,5,6,7,7, \rightarrow 0,1,2,3,4,5,6,7,8, \rightarrow$

R16)

$0,1,2,3,4,5,6,7,7, \rightarrow 0,0, \rightarrow 0,1,1, \rightarrow 0,1,2,2, \rightarrow 0,1,2,3,3, \rightarrow 0,1,2,3,4,4, \rightarrow 0,1,2,3,4,5,5, \rightarrow 0,1,2,3,4,5,6,6, \rightarrow$

R17)

$0,1,2,3,4,5,6,7,8, \rightarrow 0,0, \rightarrow 0,1,1, \rightarrow 0,1,2,2, \rightarrow 0,1,2,3,3, \rightarrow 0,1,2,3,4,4, \rightarrow 0,1,2,3,4,5,5, \rightarrow 0,1,2,3,4,5,6,6, \rightarrow 0,1,2,3,4,5,6,7,7, \rightarrow 0,1,2,3,4,5,6,7,8,8, \rightarrow 0,1,2,3,4,5,6,7,8,9, \rightarrow$

--

List of different nodes in  $T[L]$

LEN=1)  $0, :$

LEN=2)  $0,0, : 0,1, :$

LEN=3)  $0,1,1, : 0,1,2, :$

LEN=4)  $0,1,2,2, : 0,1,2,3, :$

LEN=5)  $0,1,2,3,3, : 0,1,2,3,4, :$

LEN=6)  $0,1,2,3,4,4, : 0,1,2,3,4,5, :$

LEN=7)  $0,1,2,3,4,5,5, : 0,1,2,3,4,5,6, :$

LEN=8)  $0,1,2,3,4,5,6,6, : 0,1,2,3,4,5,6,7, :$

LEN=9)  $0,1,2,3,4,5,6,7,7, : 0,1,2,3,4,5,6,7,8, :$

LEN=10)  $0,1,2,3,4,5,6,7,8,8, : 0,1,2,3,4,5,6,7,8,9, :$

Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,



-----Class

135-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][100][101][210]]$

-----

--

Rules of  $T[L]$ :

R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

R2)  $0, 0, \rightarrow$

R3)  $0, 1, \rightarrow 0, 0, \rightarrow 0, 1, 1, \rightarrow 0, 1, 2, \rightarrow$

R4)  $0, 1, 1, \rightarrow 0, 0, \rightarrow$

R5)  $0, 1, 2, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 2, \rightarrow 0, 1, 2, 3, \rightarrow$

R6)  $0, 1, 2, 2, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow$

R7)  $0, 1, 2, 3, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 3, \rightarrow 0, 1, 2, 3, 4, \rightarrow$

R8)  $0, 1, 2, 3, 3, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow$

R9)  $0, 1, 2, 3, 4, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 4, \rightarrow 0, 1, 2, 3, 4, 5, \rightarrow$

R10)  $0, 1, 2, 3, 4, 4, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow$

R11)  $0, 1, 2, 3, 4, 5, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 5, 5, \rightarrow 0, 1, 2, 3, 4, 5, 6, \rightarrow$

R12)  $0, 1, 2, 3, 4, 5, 5, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow$

R13)

$0, 1, 2, 3, 4, 5, 6, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 5, 6, 6, \rightarrow 0, 1, 2, 3, 4, 5, 6, 7, \rightarrow$

R14)  $0, 1, 2, 3, 4, 5, 6, 6, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow$

R15)

$0, 1, 2, 3, 4, 5, 6, 7, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 5, 6, 7, 7, \rightarrow 0, 1, 2, 3, 4, 5, 6, 7, 8, \rightarrow$

R16)  $0, 1, 2, 3, 4, 5, 6, 7, 7, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow$

R17)

$0, 1, 2, 3, 4, 5, 6, 7, 8, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 5, 6, 7, 8, 8, \rightarrow 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, \rightarrow$

List of different nodes in  $T[L]$

LEN=1)  $0, :$

LEN=2)  $0, 0, : 0, 1, :$

LEN=3)  $0, 1, 1, : 0, 1, 2, :$

LEN=4)  $0, 1, 2, 2, : 0, 1, 2, 3, :$

LEN=5)  $0, 1, 2, 3, 3, : 0, 1, 2, 3, 4, :$

LEN=6)  $0, 1, 2, 3, 4, 4, : 0, 1, 2, 3, 4, 5, :$

LEN=7)  $0, 1, 2, 3, 4, 5, 5, : 0, 1, 2, 3, 4, 5, 6, :$

LEN=8)  $0, 1, 2, 3, 4, 5, 6, 6, : 0, 1, 2, 3, 4, 5, 6, 7, :$

LEN=9)  $0, 1, 2, 3, 4, 5, 6, 7, 7, : 0, 1, 2, 3, 4, 5, 6, 7, 8, :$

LEN=10)  $0, 1, 2, 3, 4, 5, 6, 7, 8, 8, : 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, :$

Number new nodes in level  $n$  is given by :  $1, 2, 2, 2, 2, 2, 2, 2, 2, 2,$

-----Class

136-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][100][102][110]]$

-----

--

Rules of  $T[L]$ :

R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

R2) 0,0,-->  
R3) 0,1,-->0,0,--0,0,--0,1,2,--  
R4) 0,1,2,-->0,0,--0,0,--0,0,--0,1,2,3,--  
R5) 0,1,2,3,-->0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,--  
R6) 0,1,2,3,4,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,--  
R7) 0,1,2,3,4,5,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,--  
R8) 0,1,2,3,4,5,6,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,7,--  
R9)  
0,1,2,3,4,5,6,7,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,7,  
8,--  
R10)  
0,1,2,3,4,5,6,7,8,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,  
4,5,6,7,8,9,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,2, :  
LEN=4) 0,1,2,3, :  
LEN=5) 0,1,2,3,4, :  
LEN=6) 0,1,2,3,4,5, :  
LEN=7) 0,1,2,3,4,5,6, :  
LEN=8) 0,1,2,3,4,5,6,7, :  
LEN=9) 0,1,2,3,4,5,6,7,8, :  
LEN=10) 0,1,2,3,4,5,6,7,8,9, :  
Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class

137-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding L=[[000][001][100][102][120]]

-----

--  
Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--0,1,1,--0,1,--  
R4) 0,1,1,-->0,0,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,1, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

138-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding L=[[000][001][100][102][201]]

-----

--  
Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->

R3) 0,1,-->0,0,--0,1,1,--0,1,2,--  
 R4) 0,1,1,-->0,0,--  
 R5) 0,1,2,-->0,0,--0,1,1,--0,1,2,2,--0,1,2,3,--  
 R6) 0,1,2,2,-->0,0,--0,1,1,--  
 R7) 0,1,2,3,-->0,0,--0,1,1,--0,1,2,2,--0,1,2,3,3,--0,1,2,3,4,--  
 R8) 0,1,2,3,3,-->0,0,--0,1,1,--0,1,2,2,--  
 R9) 0,1,2,3,4,-->0,0,--0,1,1,--0,1,2,2,--0,1,2,3,3,--0,1,2,3,4,4,--0,1,2,3,4,5,--  
 R10) 0,1,2,3,4,4,-->0,0,--0,1,1,--0,1,2,2,--0,1,2,3,3,--  
 R11)  
 0,1,2,3,4,5,-->0,0,--0,1,1,--0,1,2,2,--0,1,2,3,3,--0,1,2,3,4,4,--0,1,2,3,4,5,5,--0,  
 1,2,3,4,5,6,--  
 R12) 0,1,2,3,4,5,5,-->0,0,--0,1,1,--0,1,2,2,--0,1,2,3,3,--0,1,2,3,4,4,--  
 R13)  
 0,1,2,3,4,5,6,-->0,0,--0,1,1,--0,1,2,2,--0,1,2,3,3,--0,1,2,3,4,4,--0,1,2,3,4,5,5,--  
 0,1,2,3,4,5,6,6,--0,1,2,3,4,5,6,7,--  
 R14)  
 0,1,2,3,4,5,6,6,-->0,0,--0,1,1,--0,1,2,2,--0,1,2,3,3,--0,1,2,3,4,4,--0,1,2,3,4,5,5,  
 --  
 R15)  
 0,1,2,3,4,5,6,7,-->0,0,--0,1,1,--0,1,2,2,--0,1,2,3,3,--0,1,2,3,4,4,--0,1,2,3,4,5,5,  
 --0,1,2,3,4,5,6,6,--0,1,2,3,4,5,6,7,7,--0,1,2,3,4,5,6,7,8,--  
 R16)  
 0,1,2,3,4,5,6,7,7,-->0,0,--0,1,1,--0,1,2,2,--0,1,2,3,3,--0,1,2,3,4,4,--0,1,2,3,4,5,  
 5,--0,1,2,3,4,5,6,6,--  
 R17)  
 0,1,2,3,4,5,6,7,8,-->0,0,--0,1,1,--0,1,2,2,--0,1,2,3,3,--0,1,2,3,4,4,--0,1,2,3,4,5,  
 5,--0,1,2,3,4,5,6,6,--0,1,2,3,4,5,6,7,7,--0,1,2,3,4,5,6,7,8,8,--0,1,2,3,4,5,6,7,8,9,  
 ,--

List of different nodes in T[L]

LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,1,1, : 0,1,2, :  
 LEN=4) 0,1,2,2, : 0,1,2,3, :  
 LEN=5) 0,1,2,3,3, : 0,1,2,3,4, :  
 LEN=6) 0,1,2,3,4,4, : 0,1,2,3,4,5, :  
 LEN=7) 0,1,2,3,4,5,5, : 0,1,2,3,4,5,6, :  
 LEN=8) 0,1,2,3,4,5,6,6, : 0,1,2,3,4,5,6,7, :  
 LEN=9) 0,1,2,3,4,5,6,7,7, : 0,1,2,3,4,5,6,7,8, :  
 LEN=10) 0,1,2,3,4,5,6,7,8,8, : 0,1,2,3,4,5,6,7,8,9, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,

-----Class

139-----  
 Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][001][100][102][210]]

-----  
 Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->  
 R3) 0,1,-->0,0,--0,1,1,--0,1,2,--

R4) 0,1,1,-->0,0,--  
R5) 0,1,2,-->0,0,--0,0,--0,1,2,2,--0,1,2,3,--  
R6) 0,1,2,2,-->0,0,--0,0,--  
R7) 0,1,2,3,-->0,0,--0,0,--0,0,--0,1,2,3,3,--0,1,2,3,4,--  
R8) 0,1,2,3,3,-->0,0,--0,0,--0,0,--  
R9) 0,1,2,3,4,-->0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,4,--0,1,2,3,4,5,--  
R10) 0,1,2,3,4,4,-->0,0,--0,0,--0,0,--0,0,--  
R11) 0,1,2,3,4,5,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,5,--0,1,2,3,4,5,6,--  
R12) 0,1,2,3,4,5,5,-->0,0,--0,0,--0,0,--0,0,--0,0,--  
R13)  
0,1,2,3,4,5,6,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,6,--0,1,2,3,4,5,6,7,--  
R14) 0,1,2,3,4,5,6,6,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--  
R15)  
0,1,2,3,4,5,6,7,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,7,7,--0,1,2,3,4,5,6,7,8,--  
R16) 0,1,2,3,4,5,6,7,7,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--  
R17)  
0,1,2,3,4,5,6,7,8,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,7,8,8,--0,1,2,3,4,5,6,7,8,9,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,1, : 0,1,2, :  
LEN=4) 0,1,2,2, : 0,1,2,3, :  
LEN=5) 0,1,2,3,3, : 0,1,2,3,4, :  
LEN=6) 0,1,2,3,4,4, : 0,1,2,3,4,5, :  
LEN=7) 0,1,2,3,4,5,5, : 0,1,2,3,4,5,6, :  
LEN=8) 0,1,2,3,4,5,6,6, : 0,1,2,3,4,5,6,7, :  
LEN=9) 0,1,2,3,4,5,6,7,7, : 0,1,2,3,4,5,6,7,8, :  
LEN=10) 0,1,2,3,4,5,6,7,8,8, : 0,1,2,3,4,5,6,7,8,9, :  
Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class  
140-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][100][110][120]]$   
-----

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--0,0,--0,1,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
Number new nodes in level n is given by : 1,2, DONE

-----Class  
141-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][100][110][201]]$

-----  
--  
Rules of T[L]:

R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

R2)  $0, 0, \rightarrow$

R3)  $0, 1, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, \rightarrow$

R4)  $0, 1, 2, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, \rightarrow$

R5)  $0, 1, 2, 3, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, \rightarrow$

R6)  $0, 1, 2, 3, 4, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 5, \rightarrow$

R7)  $0, 1, 2, 3, 4, 5, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 5, 6, \rightarrow$

R8)  $0, 1, 2, 3, 4, 5, 6, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 5, 6, 7, \rightarrow$

R9)

$0, 1, 2, 3, 4, 5, 6, 7, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 5, 6, 7, 8, \rightarrow$

R10)

$0, 1, 2, 3, 4, 5, 6, 7, 8, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 0, : 0, 1, :$

LEN=3)  $0, 1, 2, :$

LEN=4)  $0, 1, 2, 3, :$

LEN=5)  $0, 1, 2, 3, 4, :$

LEN=6)  $0, 1, 2, 3, 4, 5, :$

LEN=7)  $0, 1, 2, 3, 4, 5, 6, :$

LEN=8)  $0, 1, 2, 3, 4, 5, 6, 7, :$

LEN=9)  $0, 1, 2, 3, 4, 5, 6, 7, 8, :$

LEN=10)  $0, 1, 2, 3, 4, 5, 6, 7, 8, 9, :$

Number new nodes in level n is given by :  $1, 2, 1, 1, 1, 1, 1, 1, 1, 1, 1,$

-----Class

142-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][100][110][210]]$

-----

--  
Rules of T[L]:

R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

R2)  $0, 0, \rightarrow$

R3)  $0, 1, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, \rightarrow$

R4)  $0, 1, 2, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, \rightarrow$

R5)  $0, 1, 2, 3, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, \rightarrow$

R6)  $0, 1, 2, 3, 4, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 5, \rightarrow$

R7)  $0, 1, 2, 3, 4, 5, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 5, 6, \rightarrow$

R8)  $0, 1, 2, 3, 4, 5, 6, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 5, 6, 7, \rightarrow$

R9)

$0, 1, 2, 3, 4, 5, 6, 7, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 5, 6, 7, 8, \rightarrow$

R10)

$0, 1, 2, 3, 4, 5, 6, 7, 8, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, \rightarrow$

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,1,2,:

LEN=4) 0,1,2,3,:

LEN=5) 0,1,2,3,4,:

LEN=6) 0,1,2,3,4,5,:

LEN=7) 0,1,2,3,4,5,6,:

LEN=8) 0,1,2,3,4,5,6,7,:

LEN=9) 0,1,2,3,4,5,6,7,8,:

LEN=10) 0,1,2,3,4,5,6,7,8,9,:

Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class

143-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding L=[[000][001][100][120][201]]

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->

R3) 0,1,-->0,0,--0,1,1,--0,1,--

R4) 0,1,1,-->0,0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,1,1,:

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

144-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding L=[[000][001][100][120][210]]

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->

R3) 0,1,-->0,0,--0,1,1,--0,1,--

R4) 0,1,1,-->0,0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,1,1,:

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

145-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding L=[[000][001][100][201][210]]

-----

--

Rules of T[L]:

- R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$
- R2)  $0, 0, \rightarrow$
- R3)  $0, 1, \rightarrow 0, 0, \rightarrow 0, 1, 1, \rightarrow 0, 1, 2, \rightarrow$
- R4)  $0, 1, 1, \rightarrow 0, 0, \rightarrow$
- R5)  $0, 1, 2, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 2, \rightarrow 0, 1, 2, 3, \rightarrow$
- R6)  $0, 1, 2, 2, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow$
- R7)  $0, 1, 2, 3, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 3, \rightarrow 0, 1, 2, 3, 4, \rightarrow$
- R8)  $0, 1, 2, 3, 3, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow$
- R9)  $0, 1, 2, 3, 4, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 4, \rightarrow 0, 1, 2, 3, 4, 5, \rightarrow$
- R10)  $0, 1, 2, 3, 4, 4, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow$
- R11)  $0, 1, 2, 3, 4, 5, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 5, 5, \rightarrow 0, 1, 2, 3, 4, 5, 6, \rightarrow$
- R12)  $0, 1, 2, 3, 4, 5, 5, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow$
- R13)  $0, 1, 2, 3, 4, 5, 6, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 5, 6, 6, \rightarrow 0, 1, 2, 3, 4, 5, 6, 7, \rightarrow$
- R14)  $0, 1, 2, 3, 4, 5, 6, 6, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow$
- R15)  $0, 1, 2, 3, 4, 5, 6, 7, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 5, 6, 7, 7, \rightarrow 0, 1, 2, 3, 4, 5, 6, 7, 8, \rightarrow$
- R16)  $0, 1, 2, 3, 4, 5, 6, 7, 7, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow$
- R17)  $0, 1, 2, 3, 4, 5, 6, 7, 8, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 5, 6, 7, 8, 8, \rightarrow 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, \rightarrow$

List of different nodes in T[L]

- LEN=1)  $0, :$
  - LEN=2)  $0, 0, : 0, 1, :$
  - LEN=3)  $0, 1, 1, : 0, 1, 2, :$
  - LEN=4)  $0, 1, 2, 2, : 0, 1, 2, 3, :$
  - LEN=5)  $0, 1, 2, 3, 3, : 0, 1, 2, 3, 4, :$
  - LEN=6)  $0, 1, 2, 3, 4, 4, : 0, 1, 2, 3, 4, 5, :$
  - LEN=7)  $0, 1, 2, 3, 4, 5, 5, : 0, 1, 2, 3, 4, 5, 6, :$
  - LEN=8)  $0, 1, 2, 3, 4, 5, 6, 6, : 0, 1, 2, 3, 4, 5, 6, 7, :$
  - LEN=9)  $0, 1, 2, 3, 4, 5, 6, 7, 7, : 0, 1, 2, 3, 4, 5, 6, 7, 8, :$
  - LEN=10)  $0, 1, 2, 3, 4, 5, 6, 7, 8, 8, : 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, :$
- Number new nodes in level n is given by :  $1, 2, 2, 2, 2, 2, 2, 2, 2, 2,$

-----Class

146-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][101][102][110]]$

-----

Rules of T[L]:

- R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$
- R2)  $0, 0, \rightarrow$
- R3)  $0, 1, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, \rightarrow$
- R4)  $0, 1, 2, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, \rightarrow$
- R5)  $0, 1, 2, 3, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, \rightarrow$
- R6)  $0, 1, 2, 3, 4, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 5, \rightarrow$
- R7)  $0, 1, 2, 3, 4, 5, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 5, 6, \rightarrow$

R8) 0,1,2,3,4,5,6,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,7,--  
R9) 0,1,2,3,4,5,6,7,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,7,8,--  
R10) 0,1,2,3,4,5,6,7,8,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,7,8,9,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,2, :  
LEN=4) 0,1,2,3, :  
LEN=5) 0,1,2,3,4, :  
LEN=6) 0,1,2,3,4,5, :  
LEN=7) 0,1,2,3,4,5,6, :  
LEN=8) 0,1,2,3,4,5,6,7, :  
LEN=9) 0,1,2,3,4,5,6,7,8, :  
LEN=10) 0,1,2,3,4,5,6,7,8,9, :  
Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,1,

-----Class  
147-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][101][102][120]]$   
-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--0,1,1,--0,1,--  
R4) 0,1,1,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,1, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class  
148-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][101][102][201]]$   
-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--0,1,1,--0,1,2,--  
R4) 0,1,1,-->0,0,--  
R5) 0,1,2,-->0,0,--0,1,1,--0,1,2,2,--0,1,2,3,--  
R6) 0,1,2,2,-->0,0,--0,1,1,--  
R7) 0,1,2,3,-->0,0,--0,1,1,--0,1,2,2,--0,1,2,3,3,--0,1,2,3,4,--  
R8) 0,1,2,3,3,-->0,0,--0,1,1,--0,1,2,2,--



R9) 0,1,2,3,4,-->0,0,--0,1,1,--0,1,2,2,--0,1,2,3,3,--0,1,2,3,4,4,--0,1,2,3,4,5,--  
R10) 0,1,2,3,4,4,-->0,0,--0,1,1,--0,1,2,2,--0,1,2,3,3,--  
R11)  
0,1,2,3,4,5,-->0,0,--0,1,1,--0,1,2,2,--0,1,2,3,3,--0,1,2,3,4,4,--0,1,2,3,4,5,5,--0,  
1,2,3,4,5,6,--  
R12) 0,1,2,3,4,5,5,-->0,0,--0,1,1,--0,1,2,2,--0,1,2,3,3,--0,1,2,3,4,4,--  
R13)  
0,1,2,3,4,5,6,-->0,0,--0,1,1,--0,1,2,2,--0,1,2,3,3,--0,1,2,3,4,4,--0,1,2,3,4,5,5,--  
0,1,2,3,4,5,6,6,--0,1,2,3,4,5,6,7,--  
R14)  
0,1,2,3,4,5,6,6,-->0,0,--0,1,1,--0,1,2,2,--0,1,2,3,3,--0,1,2,3,4,4,--0,1,2,3,4,5,5,  
--  
R15)  
0,1,2,3,4,5,6,7,-->0,0,--0,1,1,--0,1,2,2,--0,1,2,3,3,--0,1,2,3,4,4,--0,1,2,3,4,5,5,  
--0,1,2,3,4,5,6,6,--0,1,2,3,4,5,6,7,7,--0,1,2,3,4,5,6,7,8,--  
R16)  
0,1,2,3,4,5,6,7,7,-->0,0,--0,1,1,--0,1,2,2,--0,1,2,3,3,--0,1,2,3,4,4,--0,1,2,3,4,5,  
5,--0,1,2,3,4,5,6,6,--  
R17)  
0,1,2,3,4,5,6,7,8,-->0,0,--0,1,1,--0,1,2,2,--0,1,2,3,3,--0,1,2,3,4,4,--0,1,2,3,4,5,  
5,--0,1,2,3,4,5,6,6,--0,1,2,3,4,5,6,7,7,--0,1,2,3,4,5,6,7,8,8,--0,1,2,3,4,5,6,7,8,9,  
,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,1, : 0,1,2, :  
LEN=4) 0,1,2,2, : 0,1,2,3, :  
LEN=5) 0,1,2,3,3, : 0,1,2,3,4, :  
LEN=6) 0,1,2,3,4,4, : 0,1,2,3,4,5, :  
LEN=7) 0,1,2,3,4,5,5, : 0,1,2,3,4,5,6, :  
LEN=8) 0,1,2,3,4,5,6,6, : 0,1,2,3,4,5,6,7, :  
LEN=9) 0,1,2,3,4,5,6,7,7, : 0,1,2,3,4,5,6,7,8, :  
LEN=10) 0,1,2,3,4,5,6,7,8,8, : 0,1,2,3,4,5,6,7,8,9, :  
Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,

-----Class

149-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][101][102][210]]$

-----

--  
Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--0,1,1,--0,1,2,--  
R4) 0,1,1,-->0,0,--  
R5) 0,1,2,-->0,0,--0,0,--0,1,2,2,--0,1,2,3,--  
R6) 0,1,2,2,-->0,0,--0,0,--  
R7) 0,1,2,3,-->0,0,--0,0,--0,0,--0,1,2,3,3,--0,1,2,3,4,--  
R8) 0,1,2,3,3,-->0,0,--0,0,--0,0,--  
R9) 0,1,2,3,4,-->0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,4,--0,1,2,3,4,5,--

R10) 0,1,2,3,4,4,-->0,0,--0,0,--0,0,--0,0,--  
R11) 0,1,2,3,4,5,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,5,--0,1,2,3,4,5,6,--  
R12) 0,1,2,3,4,5,5,-->0,0,--0,0,--0,0,--0,0,--0,0,--  
R13)  
0,1,2,3,4,5,6,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,6,--0,1,2,3,4,5,  
6,7,--  
R14) 0,1,2,3,4,5,6,6,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--  
R15)  
0,1,2,3,4,5,6,7,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,7,7,--0,  
1,2,3,4,5,6,7,8,--  
R16) 0,1,2,3,4,5,6,7,7,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--  
R17)  
0,1,2,3,4,5,6,7,8,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,  
7,8,8,--0,1,2,3,4,5,6,7,8,9,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,1, : 0,1,2, :  
LEN=4) 0,1,2,2, : 0,1,2,3, :  
LEN=5) 0,1,2,3,3, : 0,1,2,3,4, :  
LEN=6) 0,1,2,3,4,4, : 0,1,2,3,4,5, :  
LEN=7) 0,1,2,3,4,5,5, : 0,1,2,3,4,5,6, :  
LEN=8) 0,1,2,3,4,5,6,6, : 0,1,2,3,4,5,6,7, :  
LEN=9) 0,1,2,3,4,5,6,7,7, : 0,1,2,3,4,5,6,7,8, :  
LEN=10) 0,1,2,3,4,5,6,7,8,8, : 0,1,2,3,4,5,6,7,8,9, :  
Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,

-----Class

150-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][101][110][120]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--0,0,--0,1,--  
List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
Number new nodes in level n is given by : 1,2, DONE

-----Class

151-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][101][110][201]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--0,0,--0,1,2,--

R4) 0,1,2,-->0,0,--0,0,--0,0,--0,1,2,3,--  
R5) 0,1,2,3,-->0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,--  
R6) 0,1,2,3,4,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,--  
R7) 0,1,2,3,4,5,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,--  
R8) 0,1,2,3,4,5,6,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,7,--  
R9)  
0,1,2,3,4,5,6,7,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,7,  
8,--  
R10)  
0,1,2,3,4,5,6,7,8,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,  
4,5,6,7,8,9,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,2, :  
LEN=4) 0,1,2,3, :  
LEN=5) 0,1,2,3,4, :  
LEN=6) 0,1,2,3,4,5, :  
LEN=7) 0,1,2,3,4,5,6, :  
LEN=8) 0,1,2,3,4,5,6,7, :  
LEN=9) 0,1,2,3,4,5,6,7,8, :  
LEN=10) 0,1,2,3,4,5,6,7,8,9, :  
Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,1,

-----Class

152-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][101][110][210]]$

-----

--  
Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--0,0,--0,1,2,--  
R4) 0,1,2,-->0,0,--0,0,--0,0,--0,0,--0,1,2,3,--  
R5) 0,1,2,3,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,--  
R6) 0,1,2,3,4,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,--  
R7) 0,1,2,3,4,5,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,--  
R8) 0,1,2,3,4,5,6,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,7,--  
R9)  
0,1,2,3,4,5,6,7,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,7,  
8,--  
R10)  
0,1,2,3,4,5,6,7,8,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,  
4,5,6,7,8,9,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,2, :  
LEN=4) 0,1,2,3, :  
LEN=5) 0,1,2,3,4, :

LEN=6) 0,1,2,3,4,5, :  
 LEN=7) 0,1,2,3,4,5,6, :  
 LEN=8) 0,1,2,3,4,5,6,7, :  
 LEN=9) 0,1,2,3,4,5,6,7,8, :  
 LEN=10) 0,1,2,3,4,5,6,7,8,9, :  
 Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class

153-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][101][120][201]]$

--  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->  
 R3) 0,1,-->0,0,--0,1,1,--0,1,--  
 R4) 0,1,1,-->0,0,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,1,1, :  
 Number new nodes in level n is given by : 1,2,1,    DONE

-----Class

154-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][101][120][210]]$

--  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->  
 R3) 0,1,-->0,0,--0,1,1,--0,1,--  
 R4) 0,1,1,-->0,0,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,1,1, :  
 Number new nodes in level n is given by : 1,2,1,    DONE

-----Class

155-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][101][201][210]]$

--  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->  
 R3) 0,1,-->0,0,--0,1,1,--0,1,2,--  
 R4) 0,1,1,-->0,0,--  
 R5) 0,1,2,-->0,0,--0,0,--0,1,2,2,--0,1,2,3,--

R6) 0,1,2,2,-->0,0,--0,0,--  
R7) 0,1,2,3,-->0,0,--0,0,--0,0,--0,1,2,3,3,--0,1,2,3,4,--  
R8) 0,1,2,3,3,-->0,0,--0,0,--0,0,--  
R9) 0,1,2,3,4,-->0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,4,--0,1,2,3,4,5,--  
R10) 0,1,2,3,4,4,-->0,0,--0,0,--0,0,--0,0,--  
R11) 0,1,2,3,4,5,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,5,--0,1,2,3,4,5,6,--  
R12) 0,1,2,3,4,5,5,-->0,0,--0,0,--0,0,--0,0,--0,0,--  
R13)  
0,1,2,3,4,5,6,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,6,--0,1,2,3,4,5,6,7,--  
R14) 0,1,2,3,4,5,6,6,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--  
R15)  
0,1,2,3,4,5,6,7,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,7,7,--0,1,2,3,4,5,6,7,8,--  
R16) 0,1,2,3,4,5,6,7,7,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--  
R17)  
0,1,2,3,4,5,6,7,8,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,7,8,8,--0,1,2,3,4,5,6,7,8,9,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,1, : 0,1,2, :  
LEN=4) 0,1,2,2, : 0,1,2,3, :  
LEN=5) 0,1,2,3,3, : 0,1,2,3,4, :  
LEN=6) 0,1,2,3,4,4, : 0,1,2,3,4,5, :  
LEN=7) 0,1,2,3,4,5,5, : 0,1,2,3,4,5,6, :  
LEN=8) 0,1,2,3,4,5,6,6, : 0,1,2,3,4,5,6,7, :  
LEN=9) 0,1,2,3,4,5,6,7,7, : 0,1,2,3,4,5,6,7,8, :  
LEN=10) 0,1,2,3,4,5,6,7,8,8, : 0,1,2,3,4,5,6,7,8,9, :  
Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

156-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][001][102][110][120]]  
-----

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->  
R3) 0,1,-->0,0,--0,0,--0,1,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
Number new nodes in level n is given by : 1,2, DONE

-----Class

157-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][001][102][110][201]]  
-----

--

Rules of T[L]:

R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

R2)  $0, 0, \rightarrow$

R3)  $0, 1, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, \rightarrow$

R4)  $0, 1, 2, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, \rightarrow$

R5)  $0, 1, 2, 3, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, \rightarrow$

R6)  $0, 1, 2, 3, 4, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 5, \rightarrow$

R7)  $0, 1, 2, 3, 4, 5, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 5, 6, \rightarrow$

R8)  $0, 1, 2, 3, 4, 5, 6, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 5, 6, 7, \rightarrow$

R9)

$0, 1, 2, 3, 4, 5, 6, 7, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 5, 6, 7, 8, \rightarrow$

R10)

$0, 1, 2, 3, 4, 5, 6, 7, 8, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 0, : 0, 1, :$

LEN=3)  $0, 1, 2, :$

LEN=4)  $0, 1, 2, 3, :$

LEN=5)  $0, 1, 2, 3, 4, :$

LEN=6)  $0, 1, 2, 3, 4, 5, :$

LEN=7)  $0, 1, 2, 3, 4, 5, 6, :$

LEN=8)  $0, 1, 2, 3, 4, 5, 6, 7, :$

LEN=9)  $0, 1, 2, 3, 4, 5, 6, 7, 8, :$

LEN=10)  $0, 1, 2, 3, 4, 5, 6, 7, 8, 9, :$

Number new nodes in level n is given by :  $1, 2, 1, 1, 1, 1, 1, 1, 1, 1, 1,$

-----Class

158-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][102][110][210]]$

-----

--

Rules of T[L]:

R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

R2)  $0, 0, \rightarrow$

R3)  $0, 1, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, \rightarrow$

R4)  $0, 1, 2, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, \rightarrow$

R5)  $0, 1, 2, 3, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, \rightarrow$

R6)  $0, 1, 2, 3, 4, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 5, \rightarrow$

R7)  $0, 1, 2, 3, 4, 5, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 5, 6, \rightarrow$

R8)  $0, 1, 2, 3, 4, 5, 6, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 5, 6, 7, \rightarrow$

R9)

$0, 1, 2, 3, 4, 5, 6, 7, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 5, 6, 7, 8, \rightarrow$

R10)

$0, 1, 2, 3, 4, 5, 6, 7, 8, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2) 0,0,: 0,1,:  
 LEN=3) 0,1,2,:  
 LEN=4) 0,1,2,3,:  
 LEN=5) 0,1,2,3,4,:  
 LEN=6) 0,1,2,3,4,5,:  
 LEN=7) 0,1,2,3,4,5,6,:  
 LEN=8) 0,1,2,3,4,5,6,7,:  
 LEN=9) 0,1,2,3,4,5,6,7,8,:  
 LEN=10) 0,1,2,3,4,5,6,7,8,9,:  
 Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class

159-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][102][120][201]]$

--  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->  
 R3) 0,1,-->0,0,--0,1,1,--0,1,--  
 R4) 0,1,1,-->0,0,--  
 List of different nodes in T[L]  
 LEN=1) 0,:  
 LEN=2) 0,0,: 0,1,:  
 LEN=3) 0,1,1,:

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

160-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][102][120][210]]$

--  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->  
 R3) 0,1,-->0,0,--0,1,1,--0,1,--  
 R4) 0,1,1,-->0,0,--  
 List of different nodes in T[L]  
 LEN=1) 0,:  
 LEN=2) 0,0,: 0,1,:  
 LEN=3) 0,1,1,:

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

161-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][102][201][210]]$

--  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--

R2) 0,0,-->  
 R3) 0,1,-->0,0,--0,1,1,--0,1,2,--  
 R4) 0,1,1,-->0,0,--  
 R5) 0,1,2,-->0,0,--0,0,--0,1,2,2,--0,1,2,3,--  
 R6) 0,1,2,2,-->0,0,--0,0,--  
 R7) 0,1,2,3,-->0,0,--0,0,--0,0,--0,1,2,3,3,--0,1,2,3,4,--  
 R8) 0,1,2,3,3,-->0,0,--0,0,--0,0,--  
 R9) 0,1,2,3,4,-->0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,4,--0,1,2,3,4,5,--  
 R10) 0,1,2,3,4,4,-->0,0,--0,0,--0,0,--0,0,--  
 R11) 0,1,2,3,4,5,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,5,--0,1,2,3,4,5,6,--  
 R12) 0,1,2,3,4,5,5,-->0,0,--0,0,--0,0,--0,0,--0,0,--  
 R13)  
 0,1,2,3,4,5,6,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,6,--0,1,2,3,4,5,  
 6,7,--  
 R14) 0,1,2,3,4,5,6,6,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--  
 R15)  
 0,1,2,3,4,5,6,7,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,7,7,--0,  
 1,2,3,4,5,6,7,8,--  
 R16) 0,1,2,3,4,5,6,7,7,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--  
 R17)  
 0,1,2,3,4,5,6,7,8,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,  
 7,8,8,--0,1,2,3,4,5,6,7,8,9,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,1,1, : 0,1,2, :  
 LEN=4) 0,1,2,2, : 0,1,2,3, :  
 LEN=5) 0,1,2,3,3, : 0,1,2,3,4, :  
 LEN=6) 0,1,2,3,4,4, : 0,1,2,3,4,5, :  
 LEN=7) 0,1,2,3,4,5,5, : 0,1,2,3,4,5,6, :  
 LEN=8) 0,1,2,3,4,5,6,6, : 0,1,2,3,4,5,6,7, :  
 LEN=9) 0,1,2,3,4,5,6,7,7, : 0,1,2,3,4,5,6,7,8, :  
 LEN=10) 0,1,2,3,4,5,6,7,8,8, : 0,1,2,3,4,5,6,7,8,9, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,

-----Class

162-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][110][120][201]]$

--  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->  
 R3) 0,1,-->0,0,--0,0,--0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 Number new nodes in level n is given by : 1,2, DONE

-----Class



163-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][110][120][210]]$

-----  
--  
Rules of  $T[L]$ :

- R1)  $0, -- \rightarrow 0, 0, -- 0, 1, --$
  - R2)  $0, 0, -- \rightarrow$
  - R3)  $0, 1, -- \rightarrow 0, 0, -- 0, 0, -- 0, 1, --$
- List of different nodes in  $T[L]$

- LEN=1)  $0, :$
  - LEN=2)  $0, 0, : 0, 1, :$
- Number new nodes in level n is given by : 1,2,    DONE

-----Class

164-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][110][201][210]]$

-----  
--  
Rules of  $T[L]$ :

- R1)  $0, -- \rightarrow 0, 0, -- 0, 1, --$
- R2)  $0, 0, -- \rightarrow$
- R3)  $0, 1, -- \rightarrow 0, 0, -- 0, 0, -- 0, 1, 2, --$
- R4)  $0, 1, 2, -- \rightarrow 0, 0, -- 0, 0, -- 0, 0, -- 0, 1, 2, 3, --$
- R5)  $0, 1, 2, 3, -- \rightarrow 0, 0, -- 0, 0, -- 0, 0, -- 0, 0, -- 0, 1, 2, 3, 4, --$
- R6)  $0, 1, 2, 3, 4, -- \rightarrow 0, 0, -- 0, 0, -- 0, 0, -- 0, 0, -- 0, 0, -- 0, 1, 2, 3, 4, 5, --$
- R7)  $0, 1, 2, 3, 4, 5, -- \rightarrow 0, 0, -- 0, 0, -- 0, 0, -- 0, 0, -- 0, 0, -- 0, 0, -- 0, 1, 2, 3, 4, 5, 6, --$
- R8)  $0, 1, 2, 3, 4, 5, 6, -- \rightarrow 0, 0, -- 0, 0, -- 0, 0, -- 0, 0, -- 0, 0, -- 0, 0, -- 0, 0, -- 0, 1, 2, 3, 4, 5, 6, 7, --$
- R9)  $0, 1, 2, 3, 4, 5, 6, 7, -- \rightarrow 0, 0, -- 0, 0, -- 0, 0, -- 0, 0, -- 0, 0, -- 0, 0, -- 0, 0, -- 0, 0, -- 0, 0, -- 0, 1, 2, 3, 4, 5, 6, 7, 8, --$
- R10)  $0, 1, 2, 3, 4, 5, 6, 7, 8, -- \rightarrow 0, 0, -- 0, 0, -- 0, 0, -- 0, 0, -- 0, 0, -- 0, 0, -- 0, 0, -- 0, 0, -- 0, 0, -- 0, 0, -- 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, --$

List of different nodes in  $T[L]$

- LEN=1)  $0, :$
  - LEN=2)  $0, 0, : 0, 1, :$
  - LEN=3)  $0, 1, 2, :$
  - LEN=4)  $0, 1, 2, 3, :$
  - LEN=5)  $0, 1, 2, 3, 4, :$
  - LEN=6)  $0, 1, 2, 3, 4, 5, :$
  - LEN=7)  $0, 1, 2, 3, 4, 5, 6, :$
  - LEN=8)  $0, 1, 2, 3, 4, 5, 6, 7, :$
  - LEN=9)  $0, 1, 2, 3, 4, 5, 6, 7, 8, :$
  - LEN=10)  $0, 1, 2, 3, 4, 5, 6, 7, 8, 9, :$
- Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,1,

-----Class

165-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][120][201][210]]$

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->
R3) 0,1,-->0,0,--0,1,1,--0,1,--
R4) 0,1,1,-->0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,1,1,:
Number new nodes in level n is given by : 1,2,1,  DONE

```

-----Class

166-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][012][021]]$

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,1,--0,1,--
R3) 0,1,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
Number new nodes in level n is given by : 1,2,  DONE

```

-----Class

167-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][012][100]]$

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,1,--0,0,2,--
R3) 0,1,-->
R4) 0,0,2,-->0,1,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,0,2,:
Number new nodes in level n is given by : 1,2,1,  DONE

```

-----Class

168-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][012][101]]$

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,1,--0,0,2,--

```

R3) 0,1,-->  
R4) 0,0,2,-->0,1,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
LEN=3) 0,0,2,:  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

169-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][012][102]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,1,--0,0,2,--  
R3) 0,1,-->  
R4) 0,0,2,-->0,1,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
LEN=3) 0,0,2,:  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

170-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][012][110]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,1,--0,0,2,--  
R3) 0,1,-->  
R4) 0,0,2,-->0,1,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
LEN=3) 0,0,2,:  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

171-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][012][120]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,1,--0,0,2,--  
R3) 0,1,-->  
R4) 0,0,2,-->0,1,--

List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,2, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

172-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][012][201]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,1,--0,0,2,--  
R3) 0,1,-->  
R4) 0,0,2,-->0,1,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,2, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

173-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][012][210]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,1,--0,0,2,--  
R3) 0,1,-->  
R4) 0,0,2,-->0,1,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,2, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

174-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][021][100]]$

--  
Rules of T[L]:  
R1) 0,-->0,--0,1,--  
R2) 0,1,-->0,1,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,1, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

175-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][021][101]]$

-----

--

Rules of  $T[L]$ :

R1)  $0,-->0,--0,1,--$

R2)  $0,1,-->0,1,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,1,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

176-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][021][102]]$

-----

--

Rules of  $T[L]$ :

R1)  $0,-->0,--0,1,--$

R2)  $0,1,-->0,1,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,1,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

177-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][021][110]]$

-----

--

Rules of  $T[L]$ :

R1)  $0,-->0,--0,1,--$

R2)  $0,1,-->0,1,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,1,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

178-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][021][120]]$

-----

--

Rules of  $T[L]$ :

R1)  $0,-->0,--0,1,--$

R2)  $0,1,-->0,1,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2) 0,1,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class

179-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][010][011][021][201]]

-----

--  
Rules of T[L]:

R1) 0,-->0,--0,1,--

R2) 0,1,-->0,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,1,:

Number new nodes in level n is given by : 1,1, DONE

-----Class

180-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][010][011][021][210]]

-----

--  
Rules of T[L]:

R1) 0,-->0,--0,1,--

R2) 0,1,-->0,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,1,:

Number new nodes in level n is given by : 1,1, DONE

-----Class

181-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][010][011][100][101]]

-----

--  
Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,--0,0,--

R3) 0,1,-->0,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

Number new nodes in level n is given by : 1,2, DONE

-----Class

182-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][010][011][100][102]]

-----

--  
Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,--0,0,2,--  
R3) 0,1,-->0,1,--  
R4) 0,0,2,-->0,0,2,1,--0,0,2,--  
R5) 0,0,2,1,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,2, :  
LEN=4) 0,0,2,1, :  
Number new nodes in level n is given by : 1,2,1,1, DONE

-----Class

183-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][100][110]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--0,0,--  
R3) 0,1,-->0,1,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
Number new nodes in level n is given by : 1,2, DONE

-----Class

184-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][100][120]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--0,0,--  
R3) 0,1,-->0,1,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
Number new nodes in level n is given by : 1,2, DONE

-----Class

185-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][100][201]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--0,0,--  
R3) 0,1,-->0,1,--  
List of different nodes in T[L]  
LEN=1) 0, :

LEN=2) 0,0,: 0,1,  
Number new nodes in level n is given by : 1,2, DONE

-----Class

186-----

Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][010][011][100][210]]

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,--0,0,--

R3) 0,1,-->0,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

Number new nodes in level n is given by : 1,2, DONE

-----Class

187-----

Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][010][011][101][102]]

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,--0,0,2,--

R3) 0,1,-->0,1,--

R4) 0,0,2,-->0,0,2,1,--0,0,2,--

R5) 0,0,2,1,-->

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,2,:

LEN=4) 0,0,2,1,:

Number new nodes in level n is given by : 1,2,1,1, DONE

-----Class

188-----

Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][010][011][101][110]]

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,--0,0,--

R3) 0,1,-->0,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

Number new nodes in level n is given by : 1,2, DONE

-----Class



189-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][101][120]]$

-----  
--  
Rules of  $T[L]$ :  
R1)  $0,-->0,0,--0,1,--$   
R2)  $0,0,-->0,0,--0,--$   
R3)  $0,1,-->0,1,--$   
List of different nodes in  $T[L]$   
LEN=1)  $0,:$   
LEN=2)  $0,0,: 0,1,:$   
Number new nodes in level n is given by : 1,2, DONE

-----Class  
190-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][101][201]]$

-----  
--  
Rules of  $T[L]$ :  
R1)  $0,-->0,0,--0,1,--$   
R2)  $0,0,-->0,0,--0,0,--$   
R3)  $0,1,-->0,1,--$   
List of different nodes in  $T[L]$   
LEN=1)  $0,:$   
LEN=2)  $0,0,: 0,1,:$   
Number new nodes in level n is given by : 1,2, DONE

-----Class  
191-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][101][210]]$

-----  
--  
Rules of  $T[L]$ :  
R1)  $0,-->0,0,--0,1,--$   
R2)  $0,0,-->0,0,--0,0,--$   
R3)  $0,1,-->0,1,--$   
List of different nodes in  $T[L]$   
LEN=1)  $0,:$   
LEN=2)  $0,0,: 0,1,:$   
Number new nodes in level n is given by : 1,2, DONE

-----Class  
192-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][102][110]]$

-----  
--  
Rules of  $T[L]$ :  
R1)  $0,-->0,0,--0,1,--$   
R2)  $0,0,-->0,0,--0,0,2,--$   
R3)  $0,1,-->0,1,--$

R4) 0,0,2,-->0,0,2,1,--0,0,2,--  
R5) 0,0,2,1,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,2, :  
LEN=4) 0,0,2,1, :  
Number new nodes in level n is given by : 1,2,1,1, DONE

-----Class

193-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][102][120]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--0,0,2,--  
R3) 0,1,-->0,1,--  
R4) 0,0,2,-->0,0,2,1,--0,1,--  
R5) 0,0,2,1,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,2, :  
LEN=4) 0,0,2,1, :  
Number new nodes in level n is given by : 1,2,1,1, DONE

-----Class

194-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][102][201]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--0,0,2,--  
R3) 0,1,-->0,1,--  
R4) 0,0,2,-->0,0,2,1,--0,0,2,--  
R5) 0,0,2,1,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,2, :  
LEN=4) 0,0,2,1, :  
Number new nodes in level n is given by : 1,2,1,1, DONE

-----Class

195-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][102][210]]$

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,--0,0,2,--
- R3) 0,1,-->0,1,--
- R4) 0,0,2,-->0,0,2,1,--0,0,2,--
- R5) 0,0,2,1,-->

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,: 0,1,:
- LEN=3) 0,0,2,:
- LEN=4) 0,0,2,1,:

Number new nodes in level n is given by : 1,2,1,1, DONE

-----Class

196-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding L=[[000][010][011][110][120]]

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
  - R2) 0,0,-->0,0,--0,--
  - R3) 0,1,-->0,1,--
- List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,: 0,1,:

Number new nodes in level n is given by : 1,2, DONE

-----Class

197-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding L=[[000][010][011][110][201]]

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
  - R2) 0,0,-->0,0,--0,0,--
  - R3) 0,1,-->0,1,--
- List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,: 0,1,:

Number new nodes in level n is given by : 1,2, DONE

-----Class

198-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding L=[[000][010][011][110][210]]

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,--0,0,--
- R3) 0,1,-->0,1,--

List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
Number new nodes in level n is given by : 1,2, DONE

-----Class

199-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][120][201]]$

--  
Rules of T[L]:  
R1) 0, -->0,0, --0,1, --  
R2) 0,0, -->0,0, --0, --  
R3) 0,1, -->0,1, --  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
Number new nodes in level n is given by : 1,2, DONE

-----Class

200-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][120][210]]$

--  
Rules of T[L]:  
R1) 0, -->0,0, --0,1, --  
R2) 0,0, -->0,0, --0, --  
R3) 0,1, -->0,1, --  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
Number new nodes in level n is given by : 1,2, DONE

-----Class

201-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][201][210]]$

--  
Rules of T[L]:  
R1) 0, -->0,0, --0,1, --  
R2) 0,0, -->0,0, --0,0, --  
R3) 0,1, -->0,1, --  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
Number new nodes in level n is given by : 1,2, DONE

-----Class

202-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][021][100]]$

```

-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,1,--0,1,--
R3) 0,1,-->0,1,1,--
R4) 0,1,1,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,1,1,:
Number new nodes in level n is given by : 1,2,1,  DONE

```

```

-----Class
203-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][010][012][021][101]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,1,--0,1,--
R3) 0,1,-->0,1,1,--
R4) 0,1,1,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,1,1,:
Number new nodes in level n is given by : 1,2,1,  DONE

```

```

-----Class
204-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][010][012][021][102]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,1,--0,1,--
R3) 0,1,-->0,1,1,--
R4) 0,1,1,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,1,1,:
Number new nodes in level n is given by : 1,2,1,  DONE

```

```

-----Class
205-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][010][012][021][110]]
-----

```

```

--

```

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,1,--0,1,--
- R3) 0,1,-->0,1,1,--
- R4) 0,1,1,-->

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,: 0,1,:
- LEN=3) 0,1,1,:

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

206-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][021][120]]$

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,1,--0,1,--
- R3) 0,1,-->0,1,1,--
- R4) 0,1,1,-->

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,: 0,1,:
- LEN=3) 0,1,1,:

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

207-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][021][201]]$

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,1,--0,1,--
- R3) 0,1,-->0,1,1,--
- R4) 0,1,1,-->

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,: 0,1,:
- LEN=3) 0,1,1,:

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

208-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][021][210]]$

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,1,--0,1,--  
R3) 0,1,-->0,1,1,--  
R4) 0,1,1,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,1, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

209-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][100][101]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,1,--0,0,2,--  
R3) 0,1,-->0,1,1,--  
R4) 0,0,2,-->0,1,1,--0,1,--  
R5) 0,1,1,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,2, : 0,1,1, :  
Number new nodes in level n is given by : 1,2,2, DONE

-----Class

210-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][100][102]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,1,--0,0,2,--  
R3) 0,1,-->0,1,1,--  
R4) 0,0,2,-->0,1,1,--0,1,--  
R5) 0,1,1,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,2, : 0,1,1, :  
Number new nodes in level n is given by : 1,2,2, DONE

-----Class

211-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][100][110]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,1,--0,0,2,--  
R3) 0,1,-->0,1,1,--  
R4) 0,0,2,-->0,1,1,--0,1,1,--  
R5) 0,1,1,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,2, : 0,1,1, :  
Number new nodes in level n is given by : 1,2,2, DONE

-----Class

212-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][100][120]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,1,--0,0,2,--  
R3) 0,1,-->0,1,1,--  
R4) 0,0,2,-->0,1,1,--0,1,--  
R5) 0,1,1,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,2, : 0,1,1, :  
Number new nodes in level n is given by : 1,2,2, DONE

-----Class

213-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][100][201]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,1,--0,0,2,--  
R3) 0,1,-->0,1,1,--  
R4) 0,0,2,-->0,1,1,--0,1,--  
R5) 0,1,1,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,2, : 0,1,1, :  
Number new nodes in level n is given by : 1,2,2, DONE

-----Class

214-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][100][210]]$

--  
Rules of T[L]:



R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,1,--0,0,2,--  
 R3) 0,1,-->0,1,1,--  
 R4) 0,0,2,-->0,1,1,--0,1,--  
 R5) 0,1,1,-->  
 List of different nodes in T[L]  
 LEN=1) 0,:  
 LEN=2) 0,0,: 0,1,:  
 LEN=3) 0,0,2,: 0,1,1,:  
 Number new nodes in level n is given by : 1,2,2, DONE

-----Class

215-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][101][102]]$

--  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,1,--0,0,2,--  
 R3) 0,1,-->0,1,1,--  
 R4) 0,0,2,-->0,1,--0,0,2,2,--  
 R5) 0,1,1,-->  
 R6) 0,0,2,2,-->0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0,:  
 LEN=2) 0,0,: 0,1,:  
 LEN=3) 0,0,2,: 0,1,1,:  
 LEN=4) 0,0,2,2,:  
 Number new nodes in level n is given by : 1,2,2,1, DONE

-----Class

216-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][101][110]]$

--  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,1,--0,0,2,--  
 R3) 0,1,-->0,1,1,--  
 R4) 0,0,2,-->0,1,--0,1,1,--  
 R5) 0,1,1,-->  
 List of different nodes in T[L]  
 LEN=1) 0,:  
 LEN=2) 0,0,: 0,1,:  
 LEN=3) 0,0,2,: 0,1,1,:  
 Number new nodes in level n is given by : 1,2,2, DONE

-----Class

217-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][101][120]]$

```

-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,1,--0,0,2,--
R3) 0,1,-->0,1,1,--
R4) 0,0,2,-->0,1,--0,0,2,2,--
R5) 0,1,1,-->
R6) 0,0,2,2,-->0,1,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,0,2,: 0,1,1,:
LEN=4) 0,0,2,2,:
Number new nodes in level n is given by : 1,2,2,1,  DONE

```

```

-----Class
218-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][010][012][101][201]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,1,--0,0,2,--
R3) 0,1,-->0,1,1,--
R4) 0,0,2,-->0,1,--0,0,2,2,--
R5) 0,1,1,-->
R6) 0,0,2,2,-->0,1,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,0,2,: 0,1,1,:
LEN=4) 0,0,2,2,:
Number new nodes in level n is given by : 1,2,2,1,  DONE

```

```

-----Class
219-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][010][012][101][210]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,1,--0,0,2,--
R3) 0,1,-->0,1,1,--
R4) 0,0,2,-->0,1,--0,0,2,2,--
R5) 0,1,1,-->
R6) 0,0,2,2,-->0,1,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:

```

LEN=3) 0,0,2,: 0,1,1,:  
LEN=4) 0,0,2,2,:  
Number new nodes in level n is given by : 1,2,2,1, DONE

-----Class

220-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][102][110]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,1,--0,0,2,--  
R3) 0,1,-->0,1,1,--  
R4) 0,0,2,-->0,1,--0,1,1,--  
R5) 0,1,1,-->  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
LEN=3) 0,0,2,: 0,1,1,:

Number new nodes in level n is given by : 1,2,2, DONE

-----Class

221-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][102][120]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,1,--0,0,2,--  
R3) 0,1,-->0,1,1,--  
R4) 0,0,2,-->0,1,--0,0,2,2,--  
R5) 0,1,1,-->  
R6) 0,0,2,2,-->0,1,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
LEN=3) 0,0,2,: 0,1,1,:

LEN=4) 0,0,2,2,:  
Number new nodes in level n is given by : 1,2,2,1, DONE

-----Class

222-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][102][201]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,1,--0,0,2,--  
R3) 0,1,-->0,1,1,--  
R4) 0,0,2,-->0,1,--0,0,2,2,--

```

R5) 0,1,1,-->
R6) 0,0,2,2,-->0,1,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,0,2,: 0,1,1,:
LEN=4) 0,0,2,2,:
  Number new nodes in level n is given by : 1,2,2,1,  DONE

```

-----Class

```

223-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][010][012][102][210]]
-----

```

--  
Rules of T[L]:

```

R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,1,--0,0,2,--
R3) 0,1,-->0,1,1,--
R4) 0,0,2,-->0,1,--0,0,2,2,--
R5) 0,1,1,-->
R6) 0,0,2,2,-->0,1,--

```

List of different nodes in T[L]

```

LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,0,2,: 0,1,1,:
LEN=4) 0,0,2,2,:

```

Number new nodes in level n is given by : 1,2,2,1, DONE

-----Class

```

224-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][010][012][110][120]]
-----

```

--  
Rules of T[L]:

```

R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,1,--0,0,2,--
R3) 0,1,-->0,1,1,--
R4) 0,0,2,-->0,1,--0,1,1,--
R5) 0,1,1,-->

```

List of different nodes in T[L]

```

LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,0,2,: 0,1,1,:

```

Number new nodes in level n is given by : 1,2,2, DONE

-----Class

```

225-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][010][012][110][201]]
-----

```

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,1,--0,0,2,--
- R3) 0,1,-->0,1,1,--
- R4) 0,0,2,-->0,1,--0,1,1,--
- R5) 0,1,1,-->

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,: 0,1,:
- LEN=3) 0,0,2,: 0,1,1,:

Number new nodes in level n is given by : 1,2,2, DONE

-----Class

226-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding L=[[000][010][012][110][210]]

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,1,--0,0,2,--
- R3) 0,1,-->0,1,1,--
- R4) 0,0,2,-->0,1,--0,1,1,--
- R5) 0,1,1,-->

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,: 0,1,:
- LEN=3) 0,0,2,: 0,1,1,:

Number new nodes in level n is given by : 1,2,2, DONE

-----Class

227-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding L=[[000][010][012][120][201]]

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,1,--0,0,2,--
- R3) 0,1,-->0,1,1,--
- R4) 0,0,2,-->0,1,--0,0,2,2,--
- R5) 0,1,1,-->
- R6) 0,0,2,2,-->0,1,--

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,: 0,1,:
- LEN=3) 0,0,2,: 0,1,1,:
- LEN=4) 0,0,2,2,:

Number new nodes in level n is given by : 1,2,2,1, DONE

-----Class

228-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][120][210]]$

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,1,--0,0,2,--
- R3) 0,1,-->0,1,1,--
- R4) 0,0,2,-->0,1,--0,0,2,2,--
- R5) 0,1,1,-->
- R6) 0,0,2,2,-->0,1,--

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,: 0,1,:
- LEN=3) 0,0,2,: 0,1,1,:
- LEN=4) 0,0,2,2,:

Number new nodes in level n is given by : 1,2,2,1, DONE

-----Class

229-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][201][210]]$

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,1,--0,0,2,--
- R3) 0,1,-->0,1,1,--
- R4) 0,0,2,-->0,1,--0,0,2,2,--
- R5) 0,1,1,-->
- R6) 0,0,2,2,-->0,1,--

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,: 0,1,:
- LEN=3) 0,0,2,: 0,1,1,:
- LEN=4) 0,0,2,2,:

Number new nodes in level n is given by : 1,2,2,1, DONE

-----Class

230-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][100][101]]$

--

Rules of T[L]:

- R1) 0,-->0,0,--0,--
- R2) 0,0,-->0,0,1,--0,--
- R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,--
- R4) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,--
- R5) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,--
- R6) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--
- R7) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--
- R8) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--

R9)  
0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,  
1,1,2,--0,0,1,--0,--

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,:
- LEN=3) 0,0,1,:
- LEN=4) 0,0,1,1,:
- LEN=5) 0,0,1,1,2,:
- LEN=6) 0,0,1,1,2,2,:
- LEN=7) 0,0,1,1,2,2,3,:
- LEN=8) 0,0,1,1,2,2,3,3,:
- LEN=9) 0,0,1,1,2,2,3,3,4,:
- LEN=10) 0,0,1,1,2,2,3,3,4,4,:

Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

231-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][100][102]]$

-----

--  
Rules of T[L]:

- R1) 0,-->0,0,--0,--
- R2) 0,0,-->0,0,1,--0,--
- R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,--
- R4) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,--
- R5) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,--
- R6) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--
- R7) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--
- R8) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--
- R9)  
0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,  
1,1,2,--0,0,1,--0,--

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,:
- LEN=3) 0,0,1,:
- LEN=4) 0,0,1,1,:
- LEN=5) 0,0,1,1,2,:
- LEN=6) 0,0,1,1,2,2,:
- LEN=7) 0,0,1,1,2,2,3,:
- LEN=8) 0,0,1,1,2,2,3,3,:
- LEN=9) 0,0,1,1,2,2,3,3,4,:
- LEN=10) 0,0,1,1,2,2,3,3,4,4,:

Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

232-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][100][110]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,--
- R2) 0,0,-->0,0,1,--0,--
- R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,--
- R4) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,--
- R5) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,--
- R6) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--
- R7) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--
- R8) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--
- R9) 0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--

List of different nodes in T[L]

- LEN=1) 0,:
  - LEN=2) 0,0,:
  - LEN=3) 0,0,1,:
  - LEN=4) 0,0,1,1,:
  - LEN=5) 0,0,1,1,2,:
  - LEN=6) 0,0,1,1,2,2,:
  - LEN=7) 0,0,1,1,2,2,3,:
  - LEN=8) 0,0,1,1,2,2,3,3,:
  - LEN=9) 0,0,1,1,2,2,3,3,4,:
  - LEN=10) 0,0,1,1,2,2,3,3,4,4,:
- Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,

-----Class

233-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding L=[[000][010][021][100][120]]

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,--
- R2) 0,0,-->0,0,1,--0,--
- R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,--
- R4) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,--
- R5) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,--
- R6) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--
- R7) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--
- R8) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--
- R9) 0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,:
- LEN=3) 0,0,1,:
- LEN=4) 0,0,1,1,:
- LEN=5) 0,0,1,1,2,:
- LEN=6) 0,0,1,1,2,2,:



LEN=7) 0,0,1,1,2,2,3, :  
 LEN=8) 0,0,1,1,2,2,3,3, :  
 LEN=9) 0,0,1,1,2,2,3,3,4, :  
 LEN=10) 0,0,1,1,2,2,3,3,4,4, :  
 Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,

-----Class

234-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][100][201]]$

--  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,--  
 R2) 0,0,-->0,0,1,--0,--  
 R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,--  
 R4) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,--  
 R5) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,--  
 R6) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--  
 R7) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--  
 R8) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--  
 R9) 0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--

List of different nodes in T[L]

LEN=1) 0, :  
 LEN=2) 0,0, :  
 LEN=3) 0,0,1, :  
 LEN=4) 0,0,1,1, :  
 LEN=5) 0,0,1,1,2, :  
 LEN=6) 0,0,1,1,2,2, :  
 LEN=7) 0,0,1,1,2,2,3, :  
 LEN=8) 0,0,1,1,2,2,3,3, :  
 LEN=9) 0,0,1,1,2,2,3,3,4, :  
 LEN=10) 0,0,1,1,2,2,3,3,4,4, :  
 Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,

-----Class

235-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][100][210]]$

--  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,--  
 R2) 0,0,-->0,0,1,--0,--  
 R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,--  
 R4) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,--  
 R5) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,--  
 R6) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--  
 R7) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--  
 R8) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--

R9)  
0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,  
1,1,2,--0,0,1,--0,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, :  
LEN=3) 0,0,1, :  
LEN=4) 0,0,1,1, :  
LEN=5) 0,0,1,1,2, :  
LEN=6) 0,0,1,1,2,2, :  
LEN=7) 0,0,1,1,2,2,3, :  
LEN=8) 0,0,1,1,2,2,3,3, :  
LEN=9) 0,0,1,1,2,2,3,3,4, :  
LEN=10) 0,0,1,1,2,2,3,3,4,4, :

Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

236-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][101][102]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,1,--0,--  
R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,--  
R4) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,--  
R5) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,--  
R6) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--  
R7) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--  
R8) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--  
R9)  
0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,  
1,1,2,--0,0,1,--0,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, :  
LEN=3) 0,0,1, :  
LEN=4) 0,0,1,1, :  
LEN=5) 0,0,1,1,2, :  
LEN=6) 0,0,1,1,2,2, :  
LEN=7) 0,0,1,1,2,2,3, :  
LEN=8) 0,0,1,1,2,2,3,3, :  
LEN=9) 0,0,1,1,2,2,3,3,4, :  
LEN=10) 0,0,1,1,2,2,3,3,4,4, :

Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

237-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][101][110]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,--
- R2) 0,0,-->0,0,1,--0,--
- R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,--
- R4) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,--
- R5) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,--
- R6) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--
- R7) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--
- R8) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--
- R9) 0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--

List of different nodes in T[L]

- LEN=1) 0, :
  - LEN=2) 0,0, :
  - LEN=3) 0,0,1, :
  - LEN=4) 0,0,1,1, :
  - LEN=5) 0,0,1,1,2, :
  - LEN=6) 0,0,1,1,2,2, :
  - LEN=7) 0,0,1,1,2,2,3, :
  - LEN=8) 0,0,1,1,2,2,3,3, :
  - LEN=9) 0,0,1,1,2,2,3,3,4, :
  - LEN=10) 0,0,1,1,2,2,3,3,4,4, :
- Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,

-----Class

238-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding L=[[000][010][021][101][120]]

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,--
- R2) 0,0,-->0,0,1,--0,--
- R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,--
- R4) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,--
- R5) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,--
- R6) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--
- R7) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--
- R8) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--
- R9) 0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, :
- LEN=3) 0,0,1, :
- LEN=4) 0,0,1,1, :
- LEN=5) 0,0,1,1,2, :
- LEN=6) 0,0,1,1,2,2, :

LEN=7) 0,0,1,1,2,2,3, :  
 LEN=8) 0,0,1,1,2,2,3,3, :  
 LEN=9) 0,0,1,1,2,2,3,3,4, :  
 LEN=10) 0,0,1,1,2,2,3,3,4,4, :  
 Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,

-----Class

239-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][101][201]]$

-----  
 --

Rules of T[L]:

- R1) 0,-->0,0,--0,--
- R2) 0,0,-->0,0,1,--0,--
- R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,--
- R4) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,--
- R5) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,--
- R6) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--
- R7) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--
- R8) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--
- R9) 0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, :
- LEN=3) 0,0,1, :
- LEN=4) 0,0,1,1, :
- LEN=5) 0,0,1,1,2, :
- LEN=6) 0,0,1,1,2,2, :
- LEN=7) 0,0,1,1,2,2,3, :
- LEN=8) 0,0,1,1,2,2,3,3, :
- LEN=9) 0,0,1,1,2,2,3,3,4, :
- LEN=10) 0,0,1,1,2,2,3,3,4,4, :  
 Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,

-----Class

240-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][101][210]]$

-----  
 --

Rules of T[L]:

- R1) 0,-->0,0,--0,--
- R2) 0,0,-->0,0,1,--0,--
- R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,--
- R4) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,--
- R5) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,--
- R6) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--
- R7) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--
- R8) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--

R9)  
0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,  
1,1,2,--0,0,1,--0,--

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,:
- LEN=3) 0,0,1,:
- LEN=4) 0,0,1,1,:
- LEN=5) 0,0,1,1,2,:
- LEN=6) 0,0,1,1,2,2,:
- LEN=7) 0,0,1,1,2,2,3,:
- LEN=8) 0,0,1,1,2,2,3,3,:
- LEN=9) 0,0,1,1,2,2,3,3,4,:
- LEN=10) 0,0,1,1,2,2,3,3,4,4,:

Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

241-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][102][110]]$

--

Rules of T[L]:

- R1) 0,-->0,0,--0,--
- R2) 0,0,-->0,0,1,--0,--
- R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,--
- R4) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,--
- R5) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,--
- R6) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--
- R7) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--
- R8) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--
- R9)  
0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,  
1,1,2,--0,0,1,--0,--

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,:
- LEN=3) 0,0,1,:
- LEN=4) 0,0,1,1,:
- LEN=5) 0,0,1,1,2,:
- LEN=6) 0,0,1,1,2,2,:
- LEN=7) 0,0,1,1,2,2,3,:
- LEN=8) 0,0,1,1,2,2,3,3,:
- LEN=9) 0,0,1,1,2,2,3,3,4,:
- LEN=10) 0,0,1,1,2,2,3,3,4,4,:

Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

242-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][102][120]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,1,--0,--

R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,--

R4) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,--

R5) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,--

R6) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--

R7) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--

R8) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--

R9)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,

1,1,2,--0,0,1,--0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

LEN=3) 0,0,1,:

LEN=4) 0,0,1,1,:

LEN=5) 0,0,1,1,2,:

LEN=6) 0,0,1,1,2,2,:

LEN=7) 0,0,1,1,2,2,3,:

LEN=8) 0,0,1,1,2,2,3,3,:

LEN=9) 0,0,1,1,2,2,3,3,4,:

LEN=10) 0,0,1,1,2,2,3,3,4,4,:

Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,

-----Class

243-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][102][201]]$

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,1,--0,--

R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,--

R4) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,--

R5) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,--

R6) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--

R7) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--

R8) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--

R9)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,

1,1,2,--0,0,1,--0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

LEN=3) 0,0,1,:

LEN=4) 0,0,1,1,:

LEN=5) 0,0,1,1,2,:

LEN=6) 0,0,1,1,2,2,:

LEN=7) 0,0,1,1,2,2,3, :  
 LEN=8) 0,0,1,1,2,2,3,3, :  
 LEN=9) 0,0,1,1,2,2,3,3,4, :  
 LEN=10) 0,0,1,1,2,2,3,3,4,4, :  
 Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,

-----Class

244-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][102][210]]$

-----  
 --  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,--  
 R2) 0,0,-->0,0,1,--0,--  
 R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,--  
 R4) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,--  
 R5) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,--  
 R6) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--  
 R7) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--  
 R8) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--  
 R9) 0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--

List of different nodes in T[L]

LEN=1) 0, :  
 LEN=2) 0,0, :  
 LEN=3) 0,0,1, :  
 LEN=4) 0,0,1,1, :  
 LEN=5) 0,0,1,1,2, :  
 LEN=6) 0,0,1,1,2,2, :  
 LEN=7) 0,0,1,1,2,2,3, :  
 LEN=8) 0,0,1,1,2,2,3,3, :  
 LEN=9) 0,0,1,1,2,2,3,3,4, :  
 LEN=10) 0,0,1,1,2,2,3,3,4,4, :  
 Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,

-----Class

245-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][110][120]]$

-----  
 --  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,--  
 R2) 0,0,-->0,0,1,--0,--  
 R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,--  
 R4) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,--  
 R5) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,--  
 R6) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--  
 R7) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--  
 R8) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--

R9)  
0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,  
1,1,2,--0,0,1,--0,--

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,:
- LEN=3) 0,0,1,:
- LEN=4) 0,0,1,1,:
- LEN=5) 0,0,1,1,2,:
- LEN=6) 0,0,1,1,2,2,:
- LEN=7) 0,0,1,1,2,2,3,:
- LEN=8) 0,0,1,1,2,2,3,3,:
- LEN=9) 0,0,1,1,2,2,3,3,4,:
- LEN=10) 0,0,1,1,2,2,3,3,4,4,:

Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

246-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][110][201]]$

--

Rules of T[L]:

- R1) 0,-->0,0,--0,--
- R2) 0,0,-->0,0,1,--0,--
- R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,--
- R4) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,--
- R5) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,--
- R6) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--
- R7) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--
- R8) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--
- R9)  
0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,  
1,1,2,--0,0,1,--0,--

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,:
- LEN=3) 0,0,1,:
- LEN=4) 0,0,1,1,:
- LEN=5) 0,0,1,1,2,:
- LEN=6) 0,0,1,1,2,2,:
- LEN=7) 0,0,1,1,2,2,3,:
- LEN=8) 0,0,1,1,2,2,3,3,:
- LEN=9) 0,0,1,1,2,2,3,3,4,:
- LEN=10) 0,0,1,1,2,2,3,3,4,4,:

Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

247-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][110][210]]$

-----



--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,1,--0,--

R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,--

R4) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,--

R5) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,--

R6) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--

R7) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--

R8) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--

R9)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,

1,1,2,--0,0,1,--0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

LEN=3) 0,0,1,:

LEN=4) 0,0,1,1,:

LEN=5) 0,0,1,1,2,:

LEN=6) 0,0,1,1,2,2,:

LEN=7) 0,0,1,1,2,2,3,:

LEN=8) 0,0,1,1,2,2,3,3,:

LEN=9) 0,0,1,1,2,2,3,3,4,:

LEN=10) 0,0,1,1,2,2,3,3,4,4,:

Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,

-----Class

248-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][120][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,1,--0,--

R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,--

R4) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,--

R5) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,--

R6) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--

R7) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--

R8) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--

R9)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,

1,1,2,--0,0,1,--0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

LEN=3) 0,0,1,:

LEN=4) 0,0,1,1,:

LEN=5) 0,0,1,1,2,:

LEN=6) 0,0,1,1,2,2,:

LEN=7) 0,0,1,1,2,2,3, :  
 LEN=8) 0,0,1,1,2,2,3,3, :  
 LEN=9) 0,0,1,1,2,2,3,3,4, :  
 LEN=10) 0,0,1,1,2,2,3,3,4,4, :  
 Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,

-----Class

249-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][120][210]]$

-----  
 --

Rules of T[L]:

- R1) 0,-->0,0,--0,--
- R2) 0,0,-->0,0,1,--0,--
- R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,--
- R4) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,--
- R5) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,--
- R6) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--
- R7) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--
- R8) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--
- R9) 0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, :
- LEN=3) 0,0,1, :
- LEN=4) 0,0,1,1, :
- LEN=5) 0,0,1,1,2, :
- LEN=6) 0,0,1,1,2,2, :
- LEN=7) 0,0,1,1,2,2,3, :
- LEN=8) 0,0,1,1,2,2,3,3, :
- LEN=9) 0,0,1,1,2,2,3,3,4, :
- LEN=10) 0,0,1,1,2,2,3,3,4,4, :  
 Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,

-----Class

250-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][201][210]]$

-----  
 --

Rules of T[L]:

- R1) 0,-->0,0,--0,--
- R2) 0,0,-->0,0,1,--0,--
- R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,--
- R4) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,--
- R5) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,--
- R6) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--
- R7) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--
- R8) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,--

R9)  
0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,  
1,1,2,--0,0,1,--0,--

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,:
- LEN=3) 0,0,1,:
- LEN=4) 0,0,1,1,:
- LEN=5) 0,0,1,1,2,:
- LEN=6) 0,0,1,1,2,2,:
- LEN=7) 0,0,1,1,2,2,3,:
- LEN=8) 0,0,1,1,2,2,3,3,:
- LEN=9) 0,0,1,1,2,2,3,3,4,:
- LEN=10) 0,0,1,1,2,2,3,3,4,4,:

Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

251-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][100][101][102]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,--
- R2) 0,0,-->0,0,1,--0,0,2,--
- R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--
- R4) 0,0,2,-->0,0,2,1,--0,0,2,2,--0,0,2,--
- R5) 0,0,1,1,-->0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--
- R6) 0,0,2,1,-->
- R7) 0,0,2,2,-->0,0,2,1,--0,0,1,1,3,--0,0,2,2,4,--
- R8) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--
- R9) 0,0,1,1,3,-->0,0,2,1,--0,0,1,1,3,3,--0,0,1,1,3,--0,0,2,2,4,--
- R10) 0,0,1,1,4,-->0,0,1,1,4,2,--0,0,1,1,4,2,--0,0,1,1,4,4,--0,0,1,1,4,--
- R11) 0,0,2,2,4,-->0,0,2,1,--0,0,1,1,4,2,--0,0,2,2,4,4,--0,0,2,2,4,--
- R12)  
0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--
- R13) 0,0,1,1,3,3,-->0,0,2,1,--0,0,1,1,2,2,4,--0,0,1,1,3,3,5,--0,0,1,1,3,3,6,--
- R14) 0,0,1,1,4,2,-->0,0,2,1,--
- R15) 0,0,1,1,4,4,-->0,0,1,1,4,2,--0,0,1,1,4,2,--0,0,1,1,2,2,5,--0,0,1,1,4,4,6,--
- R16) 0,0,2,2,4,4,-->0,0,2,1,--0,0,1,1,4,2,--0,0,1,1,3,3,5,--0,0,2,2,4,4,6,--
- R17)  
0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--  
0,0,1,1,2,2,6,--
- R18)  
0,0,1,1,2,2,4,-->0,0,2,1,--0,0,1,1,2,2,4,4,--0,0,1,1,2,2,4,--0,0,1,1,3,3,5,--0,0,1,  
1,3,3,6,--
- R19)  
0,0,1,1,2,2,5,-->0,0,1,1,4,2,--0,0,1,1,4,2,--0,0,1,1,2,2,5,5,--0,0,1,1,2,2,5,--0,0,  
1,1,4,4,6,--
- R20)  
0,0,1,1,2,2,6,-->0,0,1,1,2,2,6,3,--0,0,1,1,2,2,6,4,--0,0,1,1,2,2,6,3,--0,0,1,1,2,2,

6,6,--0,0,1,1,2,2,6,--

R21)

0,0,1,1,3,3,5,-->0,0,2,1,--0,0,1,1,4,2,--0,0,1,1,3,3,5,5,--0,0,1,1,3,3,5,--0,0,2,2,4,4,6,--

R22)

0,0,1,1,3,3,6,-->0,0,2,1,--0,0,1,1,2,2,6,4,--0,0,1,1,2,2,6,4,--0,0,1,1,3,3,6,6,--0,0,1,1,3,3,6,--

R23)

0,0,1,1,4,4,6,-->0,0,1,1,4,2,--0,0,1,1,4,2,--0,0,1,1,2,2,6,3,--0,0,1,1,4,4,6,6,--0,0,1,1,4,4,6,--

R24)

0,0,2,2,4,4,6,-->0,0,2,1,--0,0,1,1,4,2,--0,0,1,1,2,2,6,4,--0,0,2,2,4,4,6,6,--0,0,2,2,4,4,6,--

R25)

0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R26)

0,0,1,1,2,2,4,4,-->0,0,2,1,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,4,4,6,--0,0,1,1,2,2,4,4,7,--0,0,1,1,2,2,4,4,8,--

R27)

0,0,1,1,2,2,5,5,-->0,0,1,1,4,2,--0,0,1,1,4,2,--0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,5,5,7,--0,0,1,1,2,2,5,5,8,--

R28) 0,0,1,1,2,2,6,3,-->0,0,1,1,4,2,--0,0,1,1,4,2,--

R29) 0,0,1,1,2,2,6,4,-->0,0,2,1,--0,0,1,1,4,2,--

R30)

0,0,1,1,2,2,6,6,-->0,0,1,1,2,2,6,3,--0,0,1,1,2,2,6,4,--0,0,1,1,2,2,6,3,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,6,6,8,--

R31)

0,0,1,1,3,3,5,5,-->0,0,2,1,--0,0,1,1,4,2,--0,0,1,1,2,2,4,4,6,--0,0,1,1,3,3,5,5,7,--0,0,1,1,3,3,5,5,8,--

R32)

0,0,1,1,3,3,6,6,-->0,0,2,1,--0,0,1,1,2,2,6,4,--0,0,1,1,2,2,6,4,--0,0,1,1,2,2,4,4,7,--0,0,1,1,3,3,6,6,8,--

R33)

0,0,1,1,4,4,6,6,-->0,0,1,1,4,2,--0,0,1,1,4,2,--0,0,1,1,2,2,6,3,--0,0,1,1,2,2,5,5,7,--0,0,1,1,4,4,6,6,8,--

R34)

0,0,2,2,4,4,6,6,-->0,0,2,1,--0,0,1,1,4,2,--0,0,1,1,2,2,6,4,--0,0,1,1,3,3,5,5,7,--0,0,2,2,4,4,6,6,8,--

R35)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R36)

0,0,1,1,2,2,3,3,5,-->0,0,2,1,--0,0,1,1,2,2,3,3,5,5,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,2,4,4,6,--0,0,1,1,2,2,4,4,7,--0,0,1,1,2,2,4,4,8,--

R37)

0,0,1,1,2,2,3,3,6,-->0,0,1,1,4,2,--0,0,1,1,4,2,--0,0,1,1,2,2,3,3,6,6,--0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,5,5,7,--0,0,1,1,2,2,5,5,8,--

R38)

0,0,1,1,2,2,3,3,7,-->0,0,1,1,2,2,6,3,--0,0,1,1,2,2,6,4,--0,0,1,1,2,2,6,3,--0,0,1,1,

2,2,3,3,7,7,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,6,6,8,--  
R39)  
0,0,1,1,2,2,3,3,8,-->0,0,1,1,2,2,3,3,8,4,--0,0,1,1,2,2,3,3,8,5,--0,0,1,1,2,2,3,3,8,  
6,--0,0,1,1,2,2,3,3,8,4,--0,0,1,1,2,2,3,3,8,8,--0,0,1,1,2,2,3,3,8,--  
R40)  
0,0,1,1,2,2,4,4,6,-->0,0,2,1,--0,0,1,1,4,2,--0,0,1,1,2,2,4,4,6,6,--0,0,1,1,2,2,4,4,  
6,--0,0,1,1,3,3,5,5,7,--0,0,1,1,3,3,5,5,8,--  
R41)  
0,0,1,1,2,2,4,4,7,-->0,0,2,1,--0,0,1,1,2,2,6,4,--0,0,1,1,2,2,6,4,--0,0,1,1,2,2,4,4,  
7,7,--0,0,1,1,2,2,4,4,7,--0,0,1,1,3,3,6,6,8,--  
R42)  
0,0,1,1,2,2,4,4,8,-->0,0,2,1,--0,0,1,1,2,2,3,3,8,5,--0,0,1,1,2,2,4,4,8,6,--0,0,1,1,  
2,2,3,3,8,5,--0,0,1,1,2,2,4,4,8,8,--0,0,1,1,2,2,4,4,8,--  
R43)  
0,0,1,1,2,2,5,5,7,-->0,0,1,1,4,2,--0,0,1,1,4,2,--0,0,1,1,2,2,6,3,--0,0,1,1,2,2,5,5,  
7,7,--0,0,1,1,2,2,5,5,7,--0,0,1,1,4,4,6,6,8,--  
R44)  
0,0,1,1,2,2,5,5,8,-->0,0,1,1,4,2,--0,0,1,1,4,2,--0,0,1,1,2,2,3,3,8,6,--0,0,1,1,2,2,  
3,3,8,6,--0,0,1,1,2,2,5,5,8,8,--0,0,1,1,2,2,5,5,8,--  
R45)  
0,0,1,1,2,2,6,6,8,-->0,0,1,1,2,2,6,3,--0,0,1,1,2,2,6,4,--0,0,1,1,2,2,6,3,--0,0,1,1,  
2,2,3,3,8,4,--0,0,1,1,2,2,6,6,8,8,--0,0,1,1,2,2,6,6,8,--  
R46)  
0,0,1,1,3,3,5,5,7,-->0,0,2,1,--0,0,1,1,4,2,--0,0,1,1,2,2,6,4,--0,0,1,1,3,3,5,5,7,7,  
--0,0,1,1,3,3,5,5,7,--0,0,2,2,4,4,6,6,8,--  
R47)  
0,0,1,1,3,3,5,5,8,-->0,0,2,1,--0,0,1,1,4,2,--0,0,1,1,2,2,4,4,8,6,--0,0,1,1,2,2,4,4,  
8,6,--0,0,1,1,3,3,5,5,8,8,--0,0,1,1,3,3,5,5,8,--  
R48)  
0,0,1,1,3,3,6,6,8,-->0,0,2,1,--0,0,1,1,2,2,6,4,--0,0,1,1,2,2,6,4,--0,0,1,1,2,2,3,3,  
8,5,--0,0,1,1,3,3,6,6,8,8,--0,0,1,1,3,3,6,6,8,--  
R49)  
0,0,1,1,4,4,6,6,8,-->0,0,1,1,4,2,--0,0,1,1,4,2,--0,0,1,1,2,2,6,3,--0,0,1,1,2,2,3,3,  
8,6,--0,0,1,1,4,4,6,6,8,8,--0,0,1,1,4,4,6,6,8,--  
R50)

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, :  
LEN=3) 0,0,1, : 0,0,2, :  
LEN=4) 0,0,1,1, : 0,0,2,1, : 0,0,2,2, :  
LEN=5) 0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, : 0,0,2,2,4, :  
LEN=6) 0,0,1,1,2,2, : 0,0,1,1,3,3, : 0,0,1,1,4,2, : 0,0,1,1,4,4, : 0,0,2,2,4,4, :  
LEN=7) 0,0,1,1,2,2,3, : 0,0,1,1,2,2,4, : 0,0,1,1,2,2,5, : 0,0,1,1,2,2,6, :  
0,0,1,1,3,3,5, : 0,0,1,1,3,3,6, : 0,0,1,1,4,4,6, : 0,0,2,2,4,4,6, :  
LEN=8) 0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,4,4, : 0,0,1,1,2,2,5,5, : 0,0,1,1,2,2,6,3, :  
0,0,1,1,2,2,6,4, : 0,0,1,1,2,2,6,6, : 0,0,1,1,3,3,5,5, : 0,0,1,1,3,3,6,6, :  
0,0,1,1,4,4,6,6, : 0,0,2,2,4,4,6,6, :  
LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,3,5, : 0,0,1,1,2,2,3,3,6, :

0,0,1,1,2,2,3,3,7,: 0,0,1,1,2,2,3,3,8,: 0,0,1,1,2,2,4,4,6,: 0,0,1,1,2,2,4,4,7,:  
 0,0,1,1,2,2,4,4,8,: 0,0,1,1,2,2,5,5,7,: 0,0,1,1,2,2,5,5,8,: 0,0,1,1,2,2,6,6,8,:  
 0,0,1,1,3,3,5,5,7,: 0,0,1,1,3,3,5,5,8,: 0,0,1,1,3,3,6,6,8,: 0,0,1,1,4,4,6,6,8,:  
 0,0,2,2,4,4,6,6,8,:  
 LEN=10) 0,0,1,1,2,2,3,3,4,4,: 0,0,1,1,2,2,3,3,5,5,: 0,0,1,1,2,2,3,3,6,6,:  
 0,0,1,1,2,2,3,3,7,7,: 0,0,1,1,2,2,3,3,8,4,: 0,0,1,1,2,2,3,3,8,5,:  
 0,0,1,1,2,2,3,3,8,6,: 0,0,1,1,2,2,3,3,8,8,: 0,0,1,1,2,2,4,4,6,6,:  
 0,0,1,1,2,2,4,4,7,7,: 0,0,1,1,2,2,4,4,8,6,: 0,0,1,1,2,2,4,4,8,8,:  
 0,0,1,1,2,2,5,5,7,7,: 0,0,1,1,2,2,5,5,8,8,: 0,0,1,1,2,2,6,6,8,8,:  
 0,0,1,1,3,3,5,5,7,7,: 0,0,1,1,3,3,5,5,8,8,: 0,0,1,1,3,3,6,6,8,8,:  
 0,0,1,1,4,4,6,6,8,8,: 0,0,2,2,4,4,6,6,8,8,:  
 Number new nodes in level n is given by : 1,1,2,3,4,5,8,10,16,20,

-----Class

252-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][100][101][110]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,--
- R2) 0,0,-->0,0,1,--0,0,2,--
- R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--
- R4) 0,0,2,-->0,0,--0,0,--0,0,2,--
- R5) 0,0,1,1,-->0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--
- R6) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--
- R7) 0,0,1,1,3,-->0,0,1,1,--0,0,1,1,--0,0,1,1,3,--0,0,1,1,4,--
- R8) 0,0,1,1,4,-->0,0,1,1,4,2,--0,0,1,1,4,2,--0,0,--0,0,1,1,4,--
- R9) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--
- R10) 0,0,1,1,4,2,-->0,0,1,1,--0,0,1,1,3,--0,0,1,1,4,--
- R11)  
 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--  
 0,0,1,1,2,2,6,--
- R12)  
 0,0,1,1,2,2,4,-->0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,  
 1,2,2,6,--
- R13)  
 0,0,1,1,2,2,5,-->0,0,1,1,2,2,5,3,--0,0,1,1,2,2,5,3,--0,0,1,1,--0,0,1,1,2,2,5,--0,0,  
 1,1,2,2,6,--
- R14)  
 0,0,1,1,2,2,6,-->0,0,1,1,2,2,6,3,--0,0,1,1,2,2,6,3,--0,0,1,1,2,2,6,3,--0,0,--0,0,1,  
 1,2,2,6,--
- R15)  
 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,  
 1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--
- R16)  
 0,0,1,1,2,2,5,3,-->0,0,1,1,2,2,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--
- R17)  
 0,0,1,1,2,2,6,3,-->0,0,1,1,2,2,5,3,--0,0,1,1,2,2,5,3,--0,0,1,1,2,2,5,--0,0,1,1,2,2,  
 6,--
- R18)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--  
0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R19)

0,0,1,1,2,2,3,3,5,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,5,--0,0,1,  
1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R20)

0,0,1,1,2,2,3,3,6,-->0,0,1,1,2,2,3,3,6,4,--0,0,1,1,2,2,3,3,6,4,--0,0,1,1,2,2,--0,0,  
1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R21)

0,0,1,1,2,2,3,3,7,-->0,0,1,1,2,2,3,3,7,4,--0,0,1,1,2,2,3,3,7,4,--0,0,1,1,2,2,3,3,7,  
4,--0,0,1,1,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R22)

0,0,1,1,2,2,3,3,8,-->0,0,1,1,2,2,3,3,8,4,--0,0,1,1,2,2,3,3,8,4,--0,0,1,1,2,2,3,3,8,  
4,--0,0,1,1,2,2,3,3,8,4,--0,0,--0,0,1,1,2,2,3,3,8,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, :

LEN=3) 0,0,1, : 0,0,2, :

LEN=4) 0,0,1,1, :

LEN=5) 0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, :

LEN=6) 0,0,1,1,2,2, : 0,0,1,1,4,2, :

LEN=7) 0,0,1,1,2,2,3, : 0,0,1,1,2,2,4, : 0,0,1,1,2,2,5, : 0,0,1,1,2,2,6, :

LEN=8) 0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,5,3, : 0,0,1,1,2,2,6,3, :

LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,3,5, : 0,0,1,1,2,2,3,3,6, :

0,0,1,1,2,2,3,3,7, : 0,0,1,1,2,2,3,3,8, :

LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,6,4, : 0,0,1,1,2,2,3,3,7,4, :

0,0,1,1,2,2,3,3,8,4, :

Number new nodes in level n is given by : 1,1,2,1,3,2,4,3,5,4,

-----Class

253-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][100][101][120]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,1,--0,0,2,--

R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--

R4) 0,0,2,-->0,0,--0,0,1,--0,--

R5) 0,0,1,1,-->0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--

R6) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--

R7) 0,0,1,1,3,-->0,0,1,1,--0,0,1,1,2,--0,0,1,--0,0,2,--

R8) 0,0,1,1,4,-->0,0,1,--0,0,1,--0,0,1,1,4,4,--0,--

R9) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--

R10) 0,0,1,1,4,4,-->0,0,1,1,2,--0,0,1,1,2,--0,0,1,--0,0,2,--

R11)

0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--  
0,0,1,1,2,2,6,--

R12)

0,0,1,1,2,2,4,-->0,0,1,1,2,2,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--

R13) 0,0,1,1,2,2,5,-->0,0,1,1,2,--0,0,1,1,2,--0,0,1,1,2,2,5,5,--0,0,1,--0,0,2,--  
R14)  
0,0,1,1,2,2,6,-->0,0,1,1,4,4,--0,0,1,1,2,2,6,4,--0,0,1,1,4,4,--0,0,1,1,2,2,6,6,--0,  
--  
R15)  
0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,  
1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--  
R16)  
0,0,1,1,2,2,5,5,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,  
4,--  
R17) 0,0,1,1,2,2,6,4,-->0,0,1,1,2,--0,0,1,1,--0,0,1,--0,0,2,--  
R18)  
0,0,1,1,2,2,6,6,-->0,0,1,1,2,2,5,5,--0,0,1,1,2,2,6,6,4,--0,0,1,1,2,2,5,5,--0,0,1,--  
0,0,2,--  
R19)  
0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--  
0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--  
R20)  
0,0,1,1,2,2,3,3,5,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,  
2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--  
R21)  
0,0,1,1,2,2,3,3,6,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,3,3,6,6,--0,0,1,1,  
2,--0,0,1,1,3,--0,0,1,1,4,--  
R22)  
0,0,1,1,2,2,3,3,7,-->0,0,1,1,2,2,5,5,--0,0,1,1,2,2,6,6,4,--0,0,1,1,2,2,5,5,--0,0,1,  
1,2,2,3,3,7,7,--0,0,1,--0,0,2,--  
R23)  
0,0,1,1,2,2,3,3,8,-->0,0,1,1,2,2,6,6,--0,0,1,1,2,2,3,3,8,5,--0,0,1,1,2,2,3,3,8,6,--  
0,0,1,1,2,2,6,6,--0,0,1,1,2,2,3,3,8,8,--0,--  
R24)  
0,0,1,1,2,2,6,6,4,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,  
4,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, :  
LEN=3) 0,0,1, : 0,0,2, :  
LEN=4) 0,0,1,1, :  
LEN=5) 0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, :  
LEN=6) 0,0,1,1,2,2, : 0,0,1,1,4,4, :  
LEN=7) 0,0,1,1,2,2,3, : 0,0,1,1,2,2,4, : 0,0,1,1,2,2,5, : 0,0,1,1,2,2,6, :  
LEN=8) 0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,5,5, : 0,0,1,1,2,2,6,4, : 0,0,1,1,2,2,6,6, :  
LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,3,5, : 0,0,1,1,2,2,3,3,6, :  
0,0,1,1,2,2,3,3,7, : 0,0,1,1,2,2,3,3,8, : 0,0,1,1,2,2,6,6,4, :  
LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,6,6, : 0,0,1,1,2,2,3,3,7,7, :  
0,0,1,1,2,2,3,3,8,5, : 0,0,1,1,2,2,3,3,8,6, : 0,0,1,1,2,2,3,3,8,8, :  
Number new nodes in level n is given by : 1,1,2,1,3,2,4,4,6,6,

-----Class

254-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][100][101][201]]$





```

--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--
R25)
0,0,1,1,2,2,3,3,8,-->0,0,--0,0,2,2,--0,0,1,1,4,4,--0,0,1,1,2,2,6,6,--0,0,1,1,2,2,3,
3,8,8,--0,0,1,1,2,2,3,3,8,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
LEN=3) 0,0,1,: 0,0,2,:
LEN=4) 0,0,1,1,: 0,0,2,2,:
LEN=5) 0,0,1,1,2,: 0,0,1,1,3,: 0,0,1,1,4,:
LEN=6) 0,0,1,1,2,2,: 0,0,1,1,3,3,: 0,0,1,1,4,4,:
LEN=7) 0,0,1,1,2,2,3,: 0,0,1,1,2,2,4,: 0,0,1,1,2,2,5,: 0,0,1,1,2,2,6,:
LEN=8) 0,0,1,1,2,2,3,3,: 0,0,1,1,2,2,4,4,: 0,0,1,1,2,2,5,5,: 0,0,1,1,2,2,6,6,:
LEN=9) 0,0,1,1,2,2,3,3,4,: 0,0,1,1,2,2,3,3,5,: 0,0,1,1,2,2,3,3,6,:
0,0,1,1,2,2,3,3,7,: 0,0,1,1,2,2,3,3,8,:
LEN=10) 0,0,1,1,2,2,3,3,4,4,: 0,0,1,1,2,2,3,3,5,5,: 0,0,1,1,2,2,3,3,6,6,:
0,0,1,1,2,2,3,3,7,7,: 0,0,1,1,2,2,3,3,8,8,:
Number new nodes in level n is given by : 1,1,2,2,3,3,4,4,5,5,

```

-----Class

255-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][100][101][210]]$

-----  
--  
Rules of T[L]:

```

R1) 0,-->0,0,--0,--
R2) 0,0,-->0,0,1,--0,0,2,--
R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--
R4) 0,0,2,-->0,0,--0,0,2,2,--0,0,2,--
R5) 0,0,1,1,-->0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--
R6) 0,0,2,2,-->0,0,1,1,--0,0,1,1,3,--0,0,1,1,4,--
R7) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--
R8) 0,0,1,1,3,-->0,0,1,1,--0,0,1,1,3,3,--0,0,1,1,3,--0,0,1,1,4,--
R9) 0,0,1,1,4,-->0,0,2,2,--0,0,--0,0,1,1,4,4,--0,0,1,1,4,--
R10)
0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--
R11) 0,0,1,1,3,3,-->0,0,1,1,2,2,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--
R12) 0,0,1,1,4,4,-->0,0,1,1,3,3,--0,0,1,1,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--
R13)
0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--
0,0,1,1,2,2,6,--
R14)
0,0,1,1,2,2,4,-->0,0,1,1,2,2,--0,0,1,1,2,2,4,4,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,
0,1,1,2,2,6,--
R15)
0,0,1,1,2,2,5,-->0,0,1,1,3,3,--0,0,1,1,--0,0,1,1,2,2,5,5,--0,0,1,1,2,2,5,--0,0,1,1,
2,2,6,--
R16)
0,0,1,1,2,2,6,-->0,0,1,1,4,4,--0,0,2,2,--0,0,--0,0,1,1,2,2,6,6,--0,0,1,1,2,2,6,--
R17)

```

0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R18)

0,0,1,1,2,2,4,4,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R19)

0,0,1,1,2,2,5,5,-->0,0,1,1,2,2,4,4,--0,0,1,1,2,2,--0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R20)

0,0,1,1,2,2,6,6,-->0,0,1,1,2,2,5,5,--0,0,1,1,3,3,--0,0,1,1,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R21)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R22)

0,0,1,1,2,2,3,3,5,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,5,5,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R23)

0,0,1,1,2,2,3,3,6,-->0,0,1,1,2,2,4,4,--0,0,1,1,2,2,--0,0,1,1,2,2,3,3,6,6,--0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R24)

0,0,1,1,2,2,3,3,7,-->0,0,1,1,2,2,5,5,--0,0,1,1,3,3,--0,0,1,1,--0,0,1,1,2,2,3,3,7,7,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R25)

0,0,1,1,2,2,3,3,8,-->0,0,1,1,2,2,6,6,--0,0,1,1,4,4,--0,0,2,2,--0,0,--0,0,1,1,2,2,3,3,8,8,--0,0,1,1,2,2,3,3,8,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, :

LEN=3) 0,0,1, : 0,0,2, :

LEN=4) 0,0,1,1, : 0,0,2,2, :

LEN=5) 0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, :

LEN=6) 0,0,1,1,2,2, : 0,0,1,1,3,3, : 0,0,1,1,4,4, :

LEN=7) 0,0,1,1,2,2,3, : 0,0,1,1,2,2,4, : 0,0,1,1,2,2,5, : 0,0,1,1,2,2,6, :

LEN=8) 0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,4,4, : 0,0,1,1,2,2,5,5, : 0,0,1,1,2,2,6,6, :

LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,3,5, : 0,0,1,1,2,2,3,3,6, :

0,0,1,1,2,2,3,3,7, : 0,0,1,1,2,2,3,3,8, :

LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,5,5, : 0,0,1,1,2,2,3,3,6,6, :

0,0,1,1,2,2,3,3,7,7, : 0,0,1,1,2,2,3,3,8,8, :

Number new nodes in level n is given by : 1,1,2,2,3,3,4,4,5,5,

-----Class

256-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][010][100][102][110]]

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,1,--0,0,2,--

R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--

R4) 0,0,2,-->0,0,2,1,--0,0,--0,0,2,3,--  
R5) 0,0,1,1,-->0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--  
R6) 0,0,2,1,-->0,0,2,1,2,--  
R7) 0,0,2,3,-->0,0,2,1,2,--0,0,--0,0,2,3,--  
R8) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--  
R9) 0,0,1,1,3,-->0,0,2,1,--0,0,1,1,--0,0,1,1,3,4,--0,0,1,1,3,5,--  
R10) 0,0,1,1,4,-->0,0,1,1,4,2,--0,0,1,1,4,3,--0,0,--0,0,1,1,4,5,--  
R11) 0,0,2,1,2,-->  
R12)  
0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--  
R13) 0,0,1,1,3,4,-->0,0,2,1,2,--0,0,1,1,--0,0,1,1,3,4,--0,0,1,1,3,5,--  
R14) 0,0,1,1,3,5,-->0,0,2,1,2,--0,0,1,1,4,3,--0,0,--0,0,1,1,3,5,6,--  
R15) 0,0,1,1,4,2,-->0,0,2,1,--0,0,2,1,2,--  
R16) 0,0,1,1,4,3,-->0,0,2,1,2,--0,0,2,1,2,--  
R17) 0,0,1,1,4,5,-->0,0,2,1,--0,0,2,1,--0,0,--0,0,1,1,4,5,--  
R18)  
0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--  
0,0,1,1,2,2,6,--  
R19)  
0,0,1,1,2,2,4,-->0,0,2,1,--0,0,1,1,2,2,--0,0,1,1,2,2,4,5,--0,0,1,1,2,2,4,6,--0,0,1,  
1,2,2,4,7,--  
R20)  
0,0,1,1,2,2,5,-->0,0,1,1,4,2,--0,0,1,1,4,3,--0,0,1,1,--0,0,1,1,2,2,5,6,--0,0,1,1,2,  
2,5,7,--  
R21)  
0,0,1,1,2,2,6,-->0,0,1,1,2,2,6,3,--0,0,1,1,2,2,6,4,--0,0,1,1,2,2,6,5,--0,0,--0,0,1,  
1,2,2,6,7,--  
R22) 0,0,1,1,3,5,6,-->0,0,2,1,2,--0,0,2,1,--0,0,--0,0,1,1,3,5,6,--  
R23)  
0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,  
1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--  
R24)  
0,0,1,1,2,2,4,5,-->0,0,2,1,2,--0,0,1,1,2,2,--0,0,1,1,2,2,4,5,--0,0,1,1,2,2,4,6,--0,  
0,1,1,2,2,4,7,--  
R25)  
0,0,1,1,2,2,4,6,-->0,0,2,1,2,--0,0,1,1,4,3,--0,0,1,1,--0,0,1,1,2,2,4,6,7,--0,0,1,1,  
2,2,4,6,8,--  
R26)  
0,0,1,1,2,2,4,7,-->0,0,2,1,2,--0,0,1,1,2,2,6,4,--0,0,1,1,2,2,4,7,6,--0,0,--0,0,1,1,  
2,2,4,7,8,--  
R27)  
0,0,1,1,2,2,5,6,-->0,0,2,1,--0,0,2,1,--0,0,1,1,--0,0,1,1,2,2,5,6,--0,0,1,1,2,2,5,7,  
--  
R28)  
0,0,1,1,2,2,5,7,-->0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,6,5,--0,0,--0,0,1,1,2,2,5,7,8,--  
R29) 0,0,1,1,2,2,6,3,-->0,0,1,1,4,2,--0,0,1,1,4,3,--0,0,2,1,2,--  
R30) 0,0,1,1,2,2,6,4,-->0,0,2,1,2,--0,0,1,1,4,3,--0,0,2,1,2,--  
R31) 0,0,1,1,2,2,6,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,2,--  
R32)  
0,0,1,1,2,2,6,7,-->0,0,1,1,2,2,6,7,3,--0,0,1,1,2,2,6,7,4,--0,0,1,1,2,2,6,7,3,--0,0,

--0,0,1,1,2,2,6,7,--

R33)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--  
0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R34)

0,0,1,1,2,2,3,3,5,-->0,0,2,1,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,5,6,--0,0,1,1,2,2,  
3,3,5,7,--0,0,1,1,2,2,3,3,5,8,--0,0,1,1,2,2,3,3,5,9,--

R35)

0,0,1,1,2,2,3,3,6,-->0,0,1,1,4,2,--0,0,1,1,4,3,--0,0,1,1,2,2,--0,0,1,1,2,2,3,3,6,7,  
--0,0,1,1,2,2,3,3,6,8,--0,0,1,1,2,2,3,3,6,9,--

R36)

0,0,1,1,2,2,3,3,7,-->0,0,1,1,2,2,6,3,--0,0,1,1,2,2,6,4,--0,0,1,1,2,2,6,5,--0,0,1,1,  
--0,0,1,1,2,2,3,3,7,8,--0,0,1,1,2,2,3,3,7,9,--

R37)

0,0,1,1,2,2,3,3,8,-->0,0,1,1,2,2,3,3,8,4,--0,0,1,1,2,2,3,3,8,5,--0,0,1,1,2,2,3,3,8,  
6,--0,0,1,1,2,2,3,3,8,7,--0,0,--0,0,1,1,2,2,3,3,8,9,--

R38)

0,0,1,1,2,2,4,6,7,-->0,0,2,1,2,--0,0,2,1,--0,0,1,1,--0,0,1,1,2,2,4,6,7,--0,0,1,1,2,  
2,4,6,8,--

R39)

0,0,1,1,2,2,4,6,8,-->0,0,2,1,2,--0,0,2,1,--0,0,1,1,2,2,4,7,6,--0,0,--0,0,1,1,2,2,4,  
6,8,9,--

R40) 0,0,1,1,2,2,4,7,6,-->0,0,2,1,2,--0,0,2,1,--0,0,2,1,2,--

R41)

0,0,1,1,2,2,4,7,8,-->0,0,2,1,2,--0,0,1,1,2,2,6,7,4,--0,0,1,1,2,2,6,7,4,--0,0,--0,0,  
1,1,2,2,4,7,8,--

R42)

0,0,1,1,2,2,5,7,8,-->0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,6,7,3,--0,0,--0,0,1,1,2,2,5,7,  
8,--

R43) 0,0,1,1,2,2,6,7,3,-->0,0,2,1,--0,0,2,1,--

R44) 0,0,1,1,2,2,6,7,4,-->0,0,2,1,2,--0,0,2,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

LEN=3) 0,0,1,: 0,0,2,:

LEN=4) 0,0,1,1,: 0,0,2,1,: 0,0,2,3,:

LEN=5) 0,0,1,1,2,: 0,0,1,1,3,: 0,0,1,1,4,: 0,0,2,1,2,:

LEN=6) 0,0,1,1,2,2,: 0,0,1,1,3,4,: 0,0,1,1,3,5,: 0,0,1,1,4,2,: 0,0,1,1,4,3,:

0,0,1,1,4,5,:

LEN=7) 0,0,1,1,2,2,3,: 0,0,1,1,2,2,4,: 0,0,1,1,2,2,5,: 0,0,1,1,2,2,6,:

0,0,1,1,3,5,6,:

LEN=8) 0,0,1,1,2,2,3,3,: 0,0,1,1,2,2,4,5,: 0,0,1,1,2,2,4,6,: 0,0,1,1,2,2,4,7,:

0,0,1,1,2,2,5,6,: 0,0,1,1,2,2,5,7,: 0,0,1,1,2,2,6,3,: 0,0,1,1,2,2,6,4,:

0,0,1,1,2,2,6,5,: 0,0,1,1,2,2,6,7,:

LEN=9) 0,0,1,1,2,2,3,3,4,: 0,0,1,1,2,2,3,3,5,: 0,0,1,1,2,2,3,3,6,:

0,0,1,1,2,2,3,3,7,: 0,0,1,1,2,2,3,3,8,: 0,0,1,1,2,2,4,6,7,: 0,0,1,1,2,2,4,6,8,:

0,0,1,1,2,2,4,7,6,: 0,0,1,1,2,2,4,7,8,: 0,0,1,1,2,2,5,7,8,: 0,0,1,1,2,2,6,7,3,:

0,0,1,1,2,2,6,7,4,:

LEN=10) 0,0,1,1,2,2,3,3,4,4,: 0,0,1,1,2,2,3,3,5,6,: 0,0,1,1,2,2,3,3,5,7,:

0,0,1,1,2,2,3,3,5,8,: 0,0,1,1,2,2,3,3,5,9,: 0,0,1,1,2,2,3,3,6,7,:

0,0,1,1,2,2,3,3,6,8, : 0,0,1,1,2,2,3,3,6,9, : 0,0,1,1,2,2,3,3,7,8, :  
 0,0,1,1,2,2,3,3,7,9, : 0,0,1,1,2,2,3,3,8,4, : 0,0,1,1,2,2,3,3,8,5, :  
 0,0,1,1,2,2,3,3,8,6, : 0,0,1,1,2,2,3,3,8,7, : 0,0,1,1,2,2,3,3,8,9, :  
 0,0,1,1,2,2,4,6,8,9, :

Number new nodes in level n is given by : 1,1,2,3,4,6,5,10,12,16,

-----Class

257-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][100][102][120]]$

-----

--

Rules of T[L]:

- R1) 0, -->0,0, --0, --
- R2) 0,0, -->0,0,1, --0,0,2, --
- R3) 0,0,1, -->0,0,1,1, --0,0,1, --0,0,2, --
- R4) 0,0,2, -->0,0,2,1, --0,0,2,2, --0, --
- R5) 0,0,1,1, -->0,0,1,1,2, --0,0,1,1,3, --0,0,1,1,4, --
- R6) 0,0,2,1, -->0,0,2,1,2, --
- R7) 0,0,2,2, -->0,0,2,1,2, --0,0,1, --0,0,2, --
- R8) 0,0,1,1,2, -->0,0,1,1,2,2, --0,0,1,1,2, --0,0,1,1,3, --0,0,1,1,4, --
- R9) 0,0,1,1,3, -->0,0,2,1, --0,0,1,1,3,3, --0,0,1, --0,0,2, --
- R10) 0,0,1,1,4, -->0,0,1,1,4,2, --0,0,1,1,4,3, --0,0,1,1,4,4, --0, --
- R11) 0,0,2,1,2, -->
- R12)
- 0,0,1,1,2,2, -->0,0,1,1,2,2,3, --0,0,1,1,2,2,4, --0,0,1,1,2,2,5, --0,0,1,1,2,2,6, --
- R13) 0,0,1,1,3,3, -->0,0,2,1,2, --0,0,1,1,2, --0,0,1,1,3, --0,0,1,1,4, --
- R14) 0,0,1,1,4,2, -->0,0,2,1, --0,0,2,1, --
- R15) 0,0,1,1,4,3, -->0,0,2,1,2, --0,0,2,1,2, --
- R16) 0,0,1,1,4,4, -->0,0,2,1, --0,0,2,1, --0,0,1, --0,0,2, --
- R17)
- 0,0,1,1,2,2,3, -->0,0,1,1,2,2,3,3, --0,0,1,1,2,2,3, --0,0,1,1,2,2,4, --0,0,1,1,2,2,5, --
- 0,0,1,1,2,2,6, --
- R18)
- 0,0,1,1,2,2,4, -->0,0,2,1, --0,0,1,1,2,2,4,4, --0,0,1,1,2, --0,0,1,1,3, --0,0,1,1,4, --
- R19)
- 0,0,1,1,2,2,5, -->0,0,1,1,4,2, --0,0,1,1,4,3, --0,0,1,1,2,2,5,5, --0,0,1, --0,0,2, --
- R20)
- 0,0,1,1,2,2,6, -->0,0,1,1,2,2,6,3, --0,0,1,1,2,2,6,4, --0,0,1,1,2,2,6,5, --0,0,1,1,2,2,6,6, --0, --
- R21)
- 0,0,1,1,2,2,3,3, -->0,0,1,1,2,2,3,3,4, --0,0,1,1,2,2,3,3,5, --0,0,1,1,2,2,3,3,6, --0,0,1,1,2,2,3,3,7, --0,0,1,1,2,2,3,3,8, --
- R22)
- 0,0,1,1,2,2,4,4, -->0,0,2,1,2, --0,0,1,1,2,2,3, --0,0,1,1,2,2,4, --0,0,1,1,2,2,5, --0,0,1,1,2,2,6, --
- R23) 0,0,1,1,2,2,5,5, -->0,0,2,1, --0,0,2,1, --0,0,1,1,2, --0,0,1,1,3, --0,0,1,1,4, --
- R24) 0,0,1,1,2,2,6,3, -->0,0,1,1,4,2, --0,0,1,1,4,3, --0,0,1,1,4,2, --
- R25) 0,0,1,1,2,2,6,4, -->0,0,2,1,2, --0,0,2,1, --0,0,2,1, --
- R26) 0,0,1,1,2,2,6,5, -->0,0,2,1, --0,0,2,1, --0,0,2,1,2, --
- R27) 0,0,1,1,2,2,6,6, -->0,0,1,1,4,2, --0,0,1,1,4,3, --0,0,1,1,4,2, --0,0,1, --0,0,2, --

R28)  
 $0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3,3,4,4, \rightarrow 0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3,3,5, \rightarrow 0,0,1,1,2,2,3,3,6, \rightarrow 0,0,1,1,2,2,3,3,7, \rightarrow 0,0,1,1,2,2,3,3,8, \rightarrow$

R29)  
 $0,0,1,1,2,2,3,3,5, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,2,2,3,3,5,5, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2,2,4, \rightarrow 0,0,1,1,2,2,5, \rightarrow 0,0,1,1,2,2,6, \rightarrow$

R30)  
 $0,0,1,1,2,2,3,3,6, \rightarrow 0,0,1,1,4,2, \rightarrow 0,0,1,1,4,3, \rightarrow 0,0,1,1,2,2,3,3,6,6, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1,1,3, \rightarrow 0,0,1,1,4, \rightarrow$

R31)  
 $0,0,1,1,2,2,3,3,7, \rightarrow 0,0,1,1,2,2,6,3, \rightarrow 0,0,1,1,2,2,6,4, \rightarrow 0,0,1,1,2,2,6,5, \rightarrow 0,0,1,1,2,2,3,3,7,7, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$

R32)  
 $0,0,1,1,2,2,3,3,8, \rightarrow 0,0,1,1,2,2,3,3,8,4, \rightarrow 0,0,1,1,2,2,3,3,8,5, \rightarrow 0,0,1,1,2,2,3,3,8,6, \rightarrow 0,0,1,1,2,2,3,3,8,7, \rightarrow 0,0,1,1,2,2,3,3,8,8, \rightarrow 0, \rightarrow$

List of different nodes in  $T[L]$

- LEN=1)  $0, :$
  - LEN=2)  $0,0, :$
  - LEN=3)  $0,0,1, : 0,0,2, :$
  - LEN=4)  $0,0,1,1, : 0,0,2,1, : 0,0,2,2, :$
  - LEN=5)  $0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, : 0,0,2,1,2, :$
  - LEN=6)  $0,0,1,1,2,2, : 0,0,1,1,3,3, : 0,0,1,1,4,2, : 0,0,1,1,4,3, : 0,0,1,1,4,4, :$
  - LEN=7)  $0,0,1,1,2,2,3, : 0,0,1,1,2,2,4, : 0,0,1,1,2,2,5, : 0,0,1,1,2,2,6, :$
  - LEN=8)  $0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,4,4, : 0,0,1,1,2,2,5,5, : 0,0,1,1,2,2,6,3, : 0,0,1,1,2,2,6,4, : 0,0,1,1,2,2,6,5, : 0,0,1,1,2,2,6,6, :$
  - LEN=9)  $0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,3,5, : 0,0,1,1,2,2,3,3,6, : 0,0,1,1,2,2,3,3,7, : 0,0,1,1,2,2,3,3,8, :$
  - LEN=10)  $0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,5,5, : 0,0,1,1,2,2,3,3,6,6, : 0,0,1,1,2,2,3,3,7,7, : 0,0,1,1,2,2,3,3,8,4, : 0,0,1,1,2,2,3,3,8,5, : 0,0,1,1,2,2,3,3,8,6, : 0,0,1,1,2,2,3,3,8,7, : 0,0,1,1,2,2,3,3,8,8, :$
- Number new nodes in level n is given by :  $1,1,2,3,4,5,4,7,5,9,$

-----Class

258-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][100][102][201]]$

- --  
 Rules of  $T[L]$ :
- R1)  $0, \rightarrow 0,0, \rightarrow 0, \rightarrow$
  - R2)  $0,0, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$
  - R3)  $0,0,1, \rightarrow 0,0,1,1, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$
  - R4)  $0,0,2, \rightarrow 0,0,2,1, \rightarrow 0,0,2,2, \rightarrow 0,0,2,3, \rightarrow$
  - R5)  $0,0,1,1, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1,1,3, \rightarrow 0,0,1,1,4, \rightarrow$
  - R6)  $0,0,2,1, \rightarrow 0,0,2,1,2, \rightarrow$
  - R7)  $0,0,2,2, \rightarrow 0,0,2,1,2, \rightarrow 0,0,2,2,3, \rightarrow 0,0,2,2,4, \rightarrow$
  - R8)  $0,0,2,3, \rightarrow 0,0,2,1,2, \rightarrow 0,0,2,2, \rightarrow 0,0,2,3, \rightarrow$
  - R9)  $0,0,1,1,2, \rightarrow 0,0,1,1,2,2, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1,1,3, \rightarrow 0,0,1,1,4, \rightarrow$
  - R10)  $0,0,1,1,3, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,3,3, \rightarrow 0,0,2,2,3, \rightarrow 0,0,2,2,4, \rightarrow$
  - R11)  $0,0,1,1,4, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,4,3, \rightarrow 0,0,1,1,4,4, \rightarrow 0,0,1,1,4,5, \rightarrow$
  - R12)  $0,0,2,1,2, \rightarrow$

R13) 0,0,2,2,3,-->0,0,2,1,2,--0,0,1,1,3,3,--0,0,2,2,3,--0,0,2,2,4,--  
R14) 0,0,2,2,4,-->0,0,2,1,2,--0,0,1,1,4,3,--0,0,1,1,4,4,--0,0,1,1,4,5,--  
R15)  
0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--  
R16) 0,0,1,1,3,3,-->0,0,2,1,2,--0,0,1,1,3,3,4,--0,0,1,1,3,3,5,--0,0,1,1,3,3,6,--  
R17) 0,0,1,1,4,3,-->0,0,2,1,2,--0,0,2,1,--  
R18) 0,0,1,1,4,4,-->0,0,2,1,2,--0,0,2,1,--0,0,1,1,4,4,5,--0,0,1,1,4,4,6,--  
R19) 0,0,1,1,4,5,-->0,0,2,1,2,--0,0,2,1,--0,0,1,1,4,4,--0,0,1,1,4,5,--  
R20)  
0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--  
0,0,1,1,2,2,6,--  
R21)  
0,0,1,1,2,2,4,-->0,0,2,1,--0,0,1,1,2,2,4,4,--0,0,1,1,3,3,4,--0,0,1,1,3,3,5,--0,0,1,  
1,3,3,6,--  
R22)  
0,0,1,1,2,2,5,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,5,5,--0,0,1,1,4,4,5,--0,0,1,1,  
4,4,6,--  
R23)  
0,0,1,1,2,2,6,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,6,5,--0,0,1,1,2,2,6,6,--0,0,1,  
1,2,2,6,7,--  
R24)  
0,0,1,1,3,3,4,-->0,0,2,1,2,--0,0,1,1,2,2,4,4,--0,0,1,1,3,3,4,--0,0,1,1,3,3,5,--0,0,  
1,1,3,3,6,--  
R25)  
0,0,1,1,3,3,5,-->0,0,2,1,2,--0,0,1,1,4,3,--0,0,1,1,2,2,5,5,--0,0,1,1,4,4,5,--0,0,1,  
1,4,4,6,--  
R26)  
0,0,1,1,3,3,6,-->0,0,2,1,2,--0,0,1,1,4,3,--0,0,1,1,2,2,6,5,--0,0,1,1,2,2,6,6,--0,0,  
1,1,2,2,6,7,--  
R27)  
0,0,1,1,4,4,5,-->0,0,2,1,2,--0,0,2,1,--0,0,1,1,2,2,5,5,--0,0,1,1,4,4,5,--0,0,1,1,4,  
4,6,--  
R28)  
0,0,1,1,4,4,6,-->0,0,2,1,2,--0,0,2,1,--0,0,1,1,2,2,6,5,--0,0,1,1,2,2,6,6,--0,0,1,1,  
2,2,6,7,--  
R29)  
0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,  
1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--  
R30)  
0,0,1,1,2,2,4,4,-->0,0,2,1,2,--0,0,1,1,2,2,4,4,5,--0,0,1,1,2,2,4,4,6,--0,0,1,1,2,2,  
4,4,7,--0,0,1,1,2,2,4,4,8,--  
R31)  
0,0,1,1,2,2,5,5,-->0,0,2,1,2,--0,0,2,1,--0,0,1,1,2,2,5,5,6,--0,0,1,1,2,2,5,5,7,--0,  
0,1,1,2,2,5,5,8,--  
R32) 0,0,1,1,2,2,6,5,-->0,0,2,1,2,--0,0,2,1,--0,0,1,1,4,3,--  
R33)  
0,0,1,1,2,2,6,6,-->0,0,2,1,2,--0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,6,6,7,--0,0,1,1,  
2,2,6,6,8,--  
R34)  
0,0,1,1,2,2,6,7,-->0,0,2,1,2,--0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,6,6,--0,0,1,1,2,



2,6,7,--  
R35)  
0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--  
0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--  
R36)  
0,0,1,1,2,2,3,3,5,-->0,0,2,1,--0,0,1,1,2,2,3,3,5,5,--0,0,1,1,2,2,4,4,5,--0,0,1,1,2,  
2,4,4,6,--0,0,1,1,2,2,4,4,7,--0,0,1,1,2,2,4,4,8,--  
R37)  
0,0,1,1,2,2,3,3,6,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,3,3,6,6,--0,0,1,1,2,2,5,5,  
6,--0,0,1,1,2,2,5,5,7,--0,0,1,1,2,2,5,5,8,--  
R38)  
0,0,1,1,2,2,3,3,7,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,6,5,--0,0,1,1,2,2,3,3,7,7,  
--0,0,1,1,2,2,6,6,7,--0,0,1,1,2,2,6,6,8,--  
R39)  
0,0,1,1,2,2,3,3,8,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,6,5,--0,0,1,1,2,2,3,3,8,7,  
--0,0,1,1,2,2,3,3,8,8,--0,0,1,1,2,2,3,3,8,9,--  
R40)  
0,0,1,1,2,2,4,4,5,-->0,0,2,1,2,--0,0,1,1,2,2,3,3,5,5,--0,0,1,1,2,2,4,4,5,--0,0,1,1,  
2,2,4,4,6,--0,0,1,1,2,2,4,4,7,--0,0,1,1,2,2,4,4,8,--  
R41)  
0,0,1,1,2,2,4,4,6,-->0,0,2,1,2,--0,0,1,1,4,3,--0,0,1,1,2,2,3,3,6,6,--0,0,1,1,2,2,5,  
5,6,--0,0,1,1,2,2,5,5,7,--0,0,1,1,2,2,5,5,8,--  
R42)  
0,0,1,1,2,2,4,4,7,-->0,0,2,1,2,--0,0,1,1,4,3,--0,0,1,1,2,2,6,5,--0,0,1,1,2,2,3,3,7,  
7,--0,0,1,1,2,2,6,6,7,--0,0,1,1,2,2,6,6,8,--  
R43)  
0,0,1,1,2,2,4,4,8,-->0,0,2,1,2,--0,0,1,1,4,3,--0,0,1,1,2,2,6,5,--0,0,1,1,2,2,3,3,8,  
7,--0,0,1,1,2,2,3,3,8,8,--0,0,1,1,2,2,3,3,8,9,--  
R44)  
0,0,1,1,2,2,5,5,6,-->0,0,2,1,2,--0,0,2,1,--0,0,1,1,2,2,3,3,6,6,--0,0,1,1,2,2,5,5,6,  
--0,0,1,1,2,2,5,5,7,--0,0,1,1,2,2,5,5,8,--  
R45)  
0,0,1,1,2,2,5,5,7,-->0,0,2,1,2,--0,0,2,1,--0,0,1,1,2,2,6,5,--0,0,1,1,2,2,3,3,7,7,--  
0,0,1,1,2,2,6,6,7,--0,0,1,1,2,2,6,6,8,--  
R46)  
0,0,1,1,2,2,5,5,8,-->0,0,2,1,2,--0,0,2,1,--0,0,1,1,2,2,6,5,--0,0,1,1,2,2,3,3,8,7,--  
0,0,1,1,2,2,3,3,8,8,--0,0,1,1,2,2,3,3,8,9,--  
R47)  
0,0,1,1,2,2,6,6,7,-->0,0,2,1,2,--0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,3,3,7,7,--0,0,  
1,1,2,2,6,6,7,--0,0,1,1,2,2,6,6,8,--  
R48)  
0,0,1,1,2,2,6,6,8,-->0,0,2,1,2,--0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,3,3,8,7,--0,0,  
1,1,2,2,3,3,8,8,--0,0,1,1,2,2,3,3,8,9,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
LEN=3) 0,0,1, : 0,0,2, :  
LEN=4) 0,0,1,1, : 0,0,2,1, : 0,0,2,2, : 0,0,2,3, :  
LEN=5) 0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, : 0,0,2,1,2, : 0,0,2,2,3, : 0,0,2,2,4, :  
LEN=6) 0,0,1,1,2,2, : 0,0,1,1,3,3, : 0,0,1,1,4,3, : 0,0,1,1,4,4, : 0,0,1,1,4,5, :

LEN=7) 0,0,1,1,2,2,3,: 0,0,1,1,2,2,4,: 0,0,1,1,2,2,5,: 0,0,1,1,2,2,6,:  
 0,0,1,1,3,3,4,: 0,0,1,1,3,3,5,: 0,0,1,1,3,3,6,: 0,0,1,1,4,4,5,: 0,0,1,1,4,4,6,:  
 LEN=8) 0,0,1,1,2,2,3,3,: 0,0,1,1,2,2,4,4,: 0,0,1,1,2,2,5,5,: 0,0,1,1,2,2,6,5,:  
 0,0,1,1,2,2,6,6,: 0,0,1,1,2,2,6,7,:  
 LEN=9) 0,0,1,1,2,2,3,3,4,: 0,0,1,1,2,2,3,3,5,: 0,0,1,1,2,2,3,3,6,:  
 0,0,1,1,2,2,3,3,7,: 0,0,1,1,2,2,3,3,8,: 0,0,1,1,2,2,4,4,5,: 0,0,1,1,2,2,4,4,6,:  
 0,0,1,1,2,2,4,4,7,: 0,0,1,1,2,2,4,4,8,: 0,0,1,1,2,2,5,5,6,: 0,0,1,1,2,2,5,5,7,:  
 0,0,1,1,2,2,5,5,8,: 0,0,1,1,2,2,6,6,7,: 0,0,1,1,2,2,6,6,8,:  
 LEN=10) 0,0,1,1,2,2,3,3,4,4,: 0,0,1,1,2,2,3,3,5,5,: 0,0,1,1,2,2,3,3,6,6,:  
 0,0,1,1,2,2,3,3,7,7,: 0,0,1,1,2,2,3,3,8,7,: 0,0,1,1,2,2,3,3,8,8,:  
 0,0,1,1,2,2,3,3,8,9,:  
 Number new nodes in level n is given by : 1,1,2,4,6,5,9,6,14,7,

-----Class

259-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][100][102][210]]$

-----

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,--
- R2) 0,0,-->0,0,1,--0,0,2,--
- R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--
- R4) 0,0,2,-->0,0,2,1,--0,0,2,2,--0,0,2,3,--
- R5) 0,0,1,1,-->0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--
- R6) 0,0,2,1,-->0,0,2,1,2,--
- R7) 0,0,2,2,-->0,0,2,1,2,--0,0,2,2,3,--0,0,2,2,4,--
- R8) 0,0,2,3,-->0,0,2,1,2,--0,0,2,2,--0,0,2,3,--
- R9) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--
- R10) 0,0,1,1,3,-->0,0,2,1,--0,0,1,1,3,3,--0,0,2,2,3,--0,0,2,2,4,--
- R11) 0,0,1,1,4,-->0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,4,4,--0,0,1,1,4,5,--
- R12) 0,0,2,1,2,-->
- R13) 0,0,2,2,3,-->0,0,2,1,2,--0,0,1,1,3,3,--0,0,2,2,3,--0,0,2,2,4,--
- R14) 0,0,2,2,4,-->0,0,2,1,2,--0,0,2,1,--0,0,2,2,4,4,--0,0,2,2,4,5,--
- R15) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--
- R16) 0,0,1,1,3,3,-->0,0,2,1,2,--0,0,1,1,3,3,4,--0,0,1,1,3,3,5,--0,0,1,1,3,3,6,--
- R17) 0,0,1,1,4,2,-->0,0,2,1,--0,0,2,1,--
- R18) 0,0,1,1,4,4,-->0,0,2,1,--0,0,2,1,2,--0,0,1,1,4,4,5,--0,0,1,1,4,4,6,--
- R19) 0,0,1,1,4,5,-->0,0,2,1,--0,0,2,1,2,--0,0,1,1,4,4,--0,0,1,1,4,5,--
- R20) 0,0,2,2,4,4,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,2,4,4,5,--0,0,2,2,4,4,6,--
- R21) 0,0,2,2,4,5,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,2,4,4,--0,0,2,2,4,5,--
- R22) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--  
0,0,1,1,2,2,6,--
- R23) 0,0,1,1,2,2,4,-->0,0,2,1,--0,0,1,1,2,2,4,4,--0,0,1,1,3,3,4,--0,0,1,1,3,3,5,--0,0,1,  
1,3,3,6,--
- R24) 0,0,1,1,2,2,5,-->0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,5,5,--0,0,1,1,4,4,5,--0,0,1,1,  
4,4,6,--

R25)

0,0,1,1,2,2,6,-->0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,6,6,--0,0,1,1,2,2,6,7,--

R26)

0,0,1,1,3,3,4,-->0,0,2,1,2,--0,0,1,1,2,2,4,4,--0,0,1,1,3,3,4,--0,0,1,1,3,3,5,--0,0,1,1,3,3,6,--

R27)

0,0,1,1,3,3,5,-->0,0,2,1,2,--0,0,2,1,--0,0,1,1,3,3,5,5,--0,0,2,2,4,4,5,--0,0,2,2,4,4,6,--

R28)

0,0,1,1,3,3,6,-->0,0,2,1,2,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,3,3,6,6,--0,0,1,1,3,3,6,7,--

R29)

0,0,1,1,4,4,5,-->0,0,2,1,--0,0,2,1,2,--0,0,1,1,2,2,5,5,--0,0,1,1,4,4,5,--0,0,1,1,4,4,6,--

R30)

0,0,1,1,4,4,6,-->0,0,2,1,--0,0,2,1,2,--0,0,2,1,--0,0,1,1,4,4,6,6,--0,0,1,1,4,4,6,7,--

R31)

0,0,2,2,4,4,5,-->0,0,2,1,2,--0,0,2,1,2,--0,0,1,1,3,3,5,5,--0,0,2,2,4,4,5,--0,0,2,2,4,4,6,--

R32)

0,0,2,2,4,4,6,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,--0,0,2,2,4,4,6,6,--0,0,2,2,4,4,6,7,--

R33)

0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R34)

0,0,1,1,2,2,4,4,-->0,0,2,1,2,--0,0,1,1,2,2,4,4,5,--0,0,1,1,2,2,4,4,6,--0,0,1,1,2,2,4,4,7,--0,0,1,1,2,2,4,4,8,--

R35)

0,0,1,1,2,2,5,5,-->0,0,2,1,--0,0,2,1,2,--0,0,1,1,2,2,5,5,6,--0,0,1,1,2,2,5,5,7,--0,0,1,1,2,2,5,5,8,--

R36) 0,0,1,1,2,2,6,3,-->0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,6,3,6,--

R37)

0,0,1,1,2,2,6,6,-->0,0,1,1,2,2,6,3,6,--0,0,2,1,--0,0,2,1,2,--0,0,1,1,2,2,6,6,7,--0,0,1,1,2,2,6,6,8,--

R38)

0,0,1,1,2,2,6,7,-->0,0,1,1,2,2,6,3,6,--0,0,2,1,--0,0,2,1,2,--0,0,1,1,2,2,6,6,--0,0,1,1,2,2,6,7,--

R39)

0,0,1,1,3,3,5,5,-->0,0,2,1,2,--0,0,2,1,2,--0,0,1,1,3,3,5,5,6,--0,0,1,1,3,3,5,5,7,--0,0,1,1,3,3,5,5,8,--

R40)

0,0,1,1,3,3,6,6,-->0,0,2,1,2,--0,0,2,1,--0,0,2,1,2,--0,0,1,1,3,3,6,6,7,--0,0,1,1,3,3,6,6,8,--

R41)

0,0,1,1,3,3,6,7,-->0,0,2,1,2,--0,0,2,1,--0,0,2,1,2,--0,0,1,1,3,3,6,6,--0,0,1,1,3,3,6,7,--

R42)

0,0,1,1,4,4,6,6,-->0,0,2,1,--0,0,2,1,2,--0,0,2,1,2,--0,0,1,1,4,4,6,6,7,--0,0,1,1,4,4,6,6,8,--

R43)

0,0,1,1,4,4,6,7,-->0,0,2,1,--0,0,2,1,2,--0,0,2,1,2,--0,0,1,1,4,4,6,6,--0,0,1,1,4,4,6,7,--

R44)

0,0,2,2,4,4,6,6,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,2,2,4,4,6,6,7,--0,0,2,2,4,4,6,6,8,--

R45)

0,0,2,2,4,4,6,7,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,2,2,4,4,6,6,--0,0,2,2,4,4,6,7,--

R46)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R47)

0,0,1,1,2,2,3,3,5,-->0,0,2,1,--0,0,1,1,2,2,3,3,5,5,--0,0,1,1,2,2,4,4,5,--0,0,1,1,2,2,4,4,6,--0,0,1,1,2,2,4,4,7,--0,0,1,1,2,2,4,4,8,--

R48)

0,0,1,1,2,2,3,3,6,-->0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,3,3,6,6,--0,0,1,1,2,2,5,5,6,--0,0,1,1,2,2,5,5,7,--0,0,1,1,2,2,5,5,8,--

R49)

0,0,1,1,2,2,3,3,7,-->0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,3,3,7,7,--0,0,1,1,2,2,6,6,7,--0,0,1,1,2,2,6,6,8,--

R50)

0,0,1,1,2,2,3,3,8,-->0,0,1,1,2,2,3,3,8,4,--0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,3,3,8,8,--0,0,1,1,2,2,3,3,8,9,--

R51)

0,0,1,1,2,2,4,4,5,-->0,0,2,1,2,--0,0,1,1,2,2,3,3,5,5,--0,0,1,1,2,2,4,4,5,--0,0,1,1,2,2,4,4,6,--0,0,1,1,2,2,4,4,7,--0,0,1,1,2,2,4,4,8,--

R52)

0,0,1,1,2,2,4,4,6,-->0,0,2,1,2,--0,0,2,1,--0,0,1,1,2,2,4,4,6,6,--0,0,1,1,3,3,5,5,6,--0,0,1,1,3,3,5,5,7,--0,0,1,1,3,3,5,5,8,--

R53)

0,0,1,1,2,2,4,4,7,-->0,0,2,1,2,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,4,4,7,7,--0,0,1,1,3,3,6,6,7,--0,0,1,1,3,3,6,6,8,--

R54)

0,0,1,1,2,2,4,4,8,-->0,0,2,1,2,--0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,4,4,8,8,--0,0,1,1,2,2,4,4,8,9,--

R55)

0,0,1,1,2,2,5,5,6,-->0,0,2,1,--0,0,2,1,2,--0,0,1,1,2,2,3,3,6,6,--0,0,1,1,2,2,5,5,6,--0,0,1,1,2,2,5,5,7,--0,0,1,1,2,2,5,5,8,--

R56)

0,0,1,1,2,2,5,5,7,-->0,0,2,1,--0,0,2,1,2,--0,0,2,1,--0,0,1,1,2,2,5,5,7,7,--0,0,1,1,4,4,6,6,7,--0,0,1,1,4,4,6,6,8,--

R57)

0,0,1,1,2,2,5,5,8,-->0,0,2,1,--0,0,2,1,2,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,5,5,8,8,--0,0,1,1,2,2,5,5,8,9,--

R58) 0,0,1,1,2,2,6,3,6,-->0,0,2,1,--0,0,2,1,2,--

R59)

0,0,1,1,2,2,6,6,7,-->0,0,1,1,2,2,6,3,6,--0,0,2,1,--0,0,2,1,2,--0,0,1,1,2,2,3,3,7,7,

--0,0,1,1,2,2,6,6,7,--0,0,1,1,2,2,6,6,8,--

R60)

0,0,1,1,2,2,6,6,8,-->0,0,1,1,2,2,6,3,6,--0,0,2,1,--0,0,2,1,2,--0,0,2,1,--0,0,1,1,2,2,6,6,8,8,--0,0,1,1,2,2,6,6,8,9,--

R61)

0,0,1,1,3,3,5,5,6,-->0,0,2,1,2,--0,0,2,1,2,--0,0,1,1,2,2,4,4,6,6,--0,0,1,1,3,3,5,5,6,--0,0,1,1,3,3,5,5,7,--0,0,1,1,3,3,5,5,8,--

R62)

0,0,1,1,3,3,5,5,7,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,--0,0,1,1,3,3,5,5,7,7,--0,0,2,2,4,4,6,6,7,--0,0,2,2,4,4,6,6,8,--

R63)

0,0,1,1,3,3,5,5,8,-->0,0,2,1,2,--0,0,2,1,2,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,3,3,5,5,8,8,--0,0,1,1,3,3,5,5,8,9,--

R64)

0,0,1,1,3,3,6,6,7,-->0,0,2,1,2,--0,0,2,1,--0,0,2,1,2,--0,0,1,1,2,2,4,4,7,7,--0,0,1,1,3,3,6,6,7,--0,0,1,1,3,3,6,6,8,--

R65)

0,0,1,1,3,3,6,6,8,-->0,0,2,1,2,--0,0,2,1,--0,0,2,1,2,--0,0,2,1,--0,0,1,1,3,3,6,6,8,8,--0,0,1,1,3,3,6,6,8,9,--

R66)

0,0,1,1,4,4,6,6,7,-->0,0,2,1,--0,0,2,1,2,--0,0,2,1,2,--0,0,1,1,2,2,5,5,7,7,--0,0,1,1,4,4,6,6,7,--0,0,1,1,4,4,6,6,8,--

R67)

0,0,1,1,4,4,6,6,8,-->0,0,2,1,--0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,--0,0,1,1,4,4,6,6,8,8,--0,0,1,1,4,4,6,6,8,9,--

R68)

0,0,2,2,4,4,6,6,7,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,1,1,3,3,5,5,7,7,--0,0,2,2,4,4,6,6,7,--0,0,2,2,4,4,6,6,8,--

R69)

0,0,2,2,4,4,6,6,8,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,--0,0,2,2,4,4,6,6,8,8,--0,0,2,2,4,4,6,6,8,9,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, :

LEN=3) 0,0,1, : 0,0,2, :

LEN=4) 0,0,1,1, : 0,0,2,1, : 0,0,2,2, : 0,0,2,3, :

LEN=5) 0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, : 0,0,2,1,2, : 0,0,2,2,3, : 0,0,2,2,4, :

LEN=6) 0,0,1,1,2,2, : 0,0,1,1,3,3, : 0,0,1,1,4,2, : 0,0,1,1,4,4, : 0,0,1,1,4,5, :

0,0,2,2,4,4, : 0,0,2,2,4,5, :

LEN=7) 0,0,1,1,2,2,3, : 0,0,1,1,2,2,4, : 0,0,1,1,2,2,5, : 0,0,1,1,2,2,6, :

0,0,1,1,3,3,4, : 0,0,1,1,3,3,5, : 0,0,1,1,3,3,6, : 0,0,1,1,4,4,5, : 0,0,1,1,4,4,6, :

0,0,2,2,4,4,5, : 0,0,2,2,4,4,6, :

LEN=8) 0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,4,4, : 0,0,1,1,2,2,5,5, : 0,0,1,1,2,2,6,3, :

0,0,1,1,2,2,6,6, : 0,0,1,1,2,2,6,7, : 0,0,1,1,3,3,5,5, : 0,0,1,1,3,3,6,6, :

0,0,1,1,3,3,6,7, : 0,0,1,1,4,4,6,6, : 0,0,1,1,4,4,6,7, : 0,0,2,2,4,4,6,6, :

0,0,2,2,4,4,6,7, :

LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,3,5, : 0,0,1,1,2,2,3,3,6, :

0,0,1,1,2,2,3,3,7, : 0,0,1,1,2,2,3,3,8, : 0,0,1,1,2,2,4,4,5, : 0,0,1,1,2,2,4,4,6, :

0,0,1,1,2,2,4,4,7, : 0,0,1,1,2,2,4,4,8, : 0,0,1,1,2,2,5,5,6, : 0,0,1,1,2,2,5,5,7, :

0,0,1,1,2,2,5,5,8, : 0,0,1,1,2,2,6,3,6, : 0,0,1,1,2,2,6,6,7, : 0,0,1,1,2,2,6,6,8, :

0,0,1,1,3,3,5,5,6,: 0,0,1,1,3,3,5,5,7,: 0,0,1,1,3,3,5,5,8,: 0,0,1,1,3,3,6,6,7,:  
 0,0,1,1,3,3,6,6,8,: 0,0,1,1,4,4,6,6,7,: 0,0,1,1,4,4,6,6,8,: 0,0,2,2,4,4,6,6,7,:  
 0,0,2,2,4,4,6,6,8,:  
 LEN=10) 0,0,1,1,2,2,3,3,4,4,: 0,0,1,1,2,2,3,3,5,5,: 0,0,1,1,2,2,3,3,6,6,:  
 0,0,1,1,2,2,3,3,7,7,: 0,0,1,1,2,2,3,3,8,4,: 0,0,1,1,2,2,3,3,8,8,:  
 0,0,1,1,2,2,3,3,8,9,: 0,0,1,1,2,2,4,4,6,6,: 0,0,1,1,2,2,4,4,7,7,:  
 0,0,1,1,2,2,4,4,8,8,: 0,0,1,1,2,2,4,4,8,9,: 0,0,1,1,2,2,5,5,7,7,:  
 0,0,1,1,2,2,5,5,8,8,: 0,0,1,1,2,2,5,5,8,9,: 0,0,1,1,2,2,6,6,8,8,:  
 0,0,1,1,2,2,6,6,8,9,: 0,0,1,1,3,3,5,5,7,7,: 0,0,1,1,3,3,5,5,8,8,:  
 0,0,1,1,3,3,5,5,8,9,: 0,0,1,1,3,3,6,6,8,8,: 0,0,1,1,3,3,6,6,8,9,:  
 0,0,1,1,4,4,6,6,8,8,: 0,0,1,1,4,4,6,6,8,9,: 0,0,2,2,4,4,6,6,8,8,:  
 0,0,2,2,4,4,6,6,8,9,:

Number new nodes in level n is given by : 1,1,2,4,6,7,11,13,24,25,

-----Class

260-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][010][100][110][120]]

-----  
--

Rules of T[L]:

- R1) 0,-->0,0,--0,--
- R2) 0,0,-->0,0,1,--0,0,2,--
- R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--
- R4) 0,0,2,-->0,0,1,--0,0,--0,--
- R5) 0,0,1,1,-->0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--
- R6) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--
- R7) 0,0,1,1,3,-->0,0,1,1,2,--0,0,1,1,--0,0,1,--0,0,2,--
- R8) 0,0,1,1,4,-->0,0,1,1,3,--0,0,1,1,3,--0,0,--0,--
- R9) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--
- R10) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--
- R11) 0,0,1,1,2,2,4,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--
- R12) 0,0,1,1,2,2,5,-->0,0,1,1,2,2,4,--0,0,1,1,2,2,4,--0,0,1,1,--0,0,1,--0,0,2,--
- R13) 0,0,1,1,2,2,6,-->0,0,1,1,2,2,5,--0,0,1,1,2,2,6,4,--0,0,1,1,2,2,5,--0,0,--0,--
- R14) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--
- R15) 0,0,1,1,2,2,6,4,-->0,0,1,1,2,2,4,--0,0,1,1,2,--0,0,1,1,--0,0,1,--0,0,2,--
- R16) 0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--
- R17) 0,0,1,1,2,2,3,3,5,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--
- R18) 0,0,1,1,2,2,3,3,6,-->0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--
- R19)

0,0,1,1,2,2,3,3,7,-->0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,5,--0,0,1,1,2,2,3,3,6,--  
0,0,1,1,--0,0,1,--0,0,2,--

R20)

0,0,1,1,2,2,3,3,8,-->0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,5,--0,0,1,1,2,2,3,3,8,6,  
--0,0,1,1,2,2,3,3,7,--0,0,--0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

LEN=3) 0,0,1,: 0,0,2,:

LEN=4) 0,0,1,1,:

LEN=5) 0,0,1,1,2,: 0,0,1,1,3,: 0,0,1,1,4,:

LEN=6) 0,0,1,1,2,2,:

LEN=7) 0,0,1,1,2,2,3,: 0,0,1,1,2,2,4,: 0,0,1,1,2,2,5,: 0,0,1,1,2,2,6,:

LEN=8) 0,0,1,1,2,2,3,3,: 0,0,1,1,2,2,6,4,:

LEN=9) 0,0,1,1,2,2,3,3,4,: 0,0,1,1,2,2,3,3,5,: 0,0,1,1,2,2,3,3,6,:

0,0,1,1,2,2,3,3,7,: 0,0,1,1,2,2,3,3,8,:

LEN=10) 0,0,1,1,2,2,3,3,4,4,: 0,0,1,1,2,2,3,3,7,5,: 0,0,1,1,2,2,3,3,8,5,:

0,0,1,1,2,2,3,3,8,6,:

Number new nodes in level n is given by : 1,1,2,1,3,1,4,2,5,4,

-----Class

261-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][100][110][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,1,--0,0,2,--

R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--

R4) 0,0,2,-->0,0,1,--0,0,--0,0,2,--

R5) 0,0,1,1,-->0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--

R6) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--

R7) 0,0,1,1,3,-->0,0,1,1,2,--0,0,1,1,--0,0,1,1,3,--0,0,1,1,4,--

R8) 0,0,1,1,4,-->0,0,1,--0,0,1,1,3,--0,0,--0,0,1,1,4,--

R9) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--

R10)

0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--

0,0,1,1,2,2,6,--

R11)

0,0,1,1,2,2,4,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,

1,1,2,2,6,--

R12)

0,0,1,1,2,2,5,-->0,0,1,1,2,--0,0,1,1,2,2,4,--0,0,1,1,--0,0,1,1,2,2,5,--0,0,1,1,2,2,

6,--

R13) 0,0,1,1,2,2,6,-->0,0,1,--0,0,1,1,3,--0,0,1,1,2,2,5,--0,0,--0,0,1,1,2,2,6,--

R14)

0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,

1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R15)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--

$0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--$   
R16)  
 $0,0,1,1,2,2,3,3,5,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,5,--0,0,$   
 $1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--$   
R17)  
 $0,0,1,1,2,2,3,3,6,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,--0,0,1,1,2,2,$   
 $3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--$   
R18)  
 $0,0,1,1,2,2,3,3,7,-->0,0,1,1,2,--0,0,1,1,2,2,4,--0,0,1,1,2,2,3,3,6,--0,0,1,1,--0,0,$   
 $1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--$   
R19)  
 $0,0,1,1,2,2,3,3,8,-->0,0,1,--0,0,1,1,3,--0,0,1,1,2,2,5,--0,0,1,1,2,2,3,3,7,--0,0,--$   
 $0,0,1,1,2,2,3,3,8,--$   
List of different nodes in  $T[L]$   
LEN=1)  $0,:$   
LEN=2)  $0,0,:$   
LEN=3)  $0,0,1,: 0,0,2,:$   
LEN=4)  $0,0,1,1,:$   
LEN=5)  $0,0,1,1,2,: 0,0,1,1,3,: 0,0,1,1,4,:$   
LEN=6)  $0,0,1,1,2,2,:$   
LEN=7)  $0,0,1,1,2,2,3,: 0,0,1,1,2,2,4,: 0,0,1,1,2,2,5,: 0,0,1,1,2,2,6,:$   
LEN=8)  $0,0,1,1,2,2,3,3,:$   
LEN=9)  $0,0,1,1,2,2,3,3,4,: 0,0,1,1,2,2,3,3,5,: 0,0,1,1,2,2,3,3,6,:$   
 $0,0,1,1,2,2,3,3,7,: 0,0,1,1,2,2,3,3,8,:$   
LEN=10)  $0,0,1,1,2,2,3,3,4,4,:$   
Number new nodes in level n is given by :  $1,1,2,1,3,1,4,1,5,1,$

-----Class

262-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][100][110][210]]$

-----

--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,--$   
R2)  $0,0,-->0,0,1,--0,0,2,--$   
R3)  $0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--$   
R4)  $0,0,2,-->0,0,1,--0,0,--0,0,2,--$   
R5)  $0,0,1,1,-->0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--$   
R6)  $0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--$   
R7)  $0,0,1,1,3,-->0,0,1,1,2,--0,0,1,1,--0,0,1,1,3,--0,0,1,1,4,--$   
R8)  $0,0,1,1,4,-->0,0,1,1,3,--0,0,1,--0,0,--0,0,1,1,4,--$   
R9)  $0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--$   
R10)  
 $0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--$   
 $0,0,1,1,2,2,6,--$   
R11)  
 $0,0,1,1,2,2,4,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,$   
 $1,1,2,2,6,--$   
R12)  
 $0,0,1,1,2,2,5,-->0,0,1,1,2,2,4,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,2,2,5,--0,0,1,1,2,2,$



6, --  
R13) 0,0,1,1,2,2,6, -->0,0,1,1,2,2,5, --0,0,1,1,3, --0,0,1, --0,0, --0,0,1,1,2,2,6, --  
R14)  
0,0,1,1,2,2,3,3, -->0,0,1,1,2,2,3,3,4, --0,0,1,1,2,2,3,3,5, --0,0,1,1,2,2,3,3,6, --0,0,  
1,1,2,2,3,3,7, --0,0,1,1,2,2,3,3,8, --  
R15)  
0,0,1,1,2,2,3,3,4, -->0,0,1,1,2,2,3,3,4,4, --0,0,1,1,2,2,3,3,4, --0,0,1,1,2,2,3,3,5, --  
0,0,1,1,2,2,3,3,6, --0,0,1,1,2,2,3,3,7, --0,0,1,1,2,2,3,3,8, --  
R16)  
0,0,1,1,2,2,3,3,5, -->0,0,1,1,2,2,3,3,4, --0,0,1,1,2,2,3,3, --0,0,1,1,2,2,3,3,5, --0,0,  
1,1,2,2,3,3,6, --0,0,1,1,2,2,3,3,7, --0,0,1,1,2,2,3,3,8, --  
R17)  
0,0,1,1,2,2,3,3,6, -->0,0,1,1,2,2,3,3,5, --0,0,1,1,2,2,3, --0,0,1,1,2,2, --0,0,1,1,2,2,  
3,3,6, --0,0,1,1,2,2,3,3,7, --0,0,1,1,2,2,3,3,8, --  
R18)  
0,0,1,1,2,2,3,3,7, -->0,0,1,1,2,2,3,3,6, --0,0,1,1,2,2,4, --0,0,1,1,2, --0,0,1,1, --0,0,  
1,1,2,2,3,3,7, --0,0,1,1,2,2,3,3,8, --  
R19)  
0,0,1,1,2,2,3,3,8, -->0,0,1,1,2,2,3,3,7, --0,0,1,1,2,2,5, --0,0,1,1,3, --0,0,1, --0,0, --  
0,0,1,1,2,2,3,3,8, --

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, :  
LEN=3) 0,0,1, : 0,0,2, :  
LEN=4) 0,0,1,1, :  
LEN=5) 0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, :  
LEN=6) 0,0,1,1,2,2, :  
LEN=7) 0,0,1,1,2,2,3, : 0,0,1,1,2,2,4, : 0,0,1,1,2,2,5, : 0,0,1,1,2,2,6, :  
LEN=8) 0,0,1,1,2,2,3,3, :  
LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,3,5, : 0,0,1,1,2,2,3,3,6, :  
0,0,1,1,2,2,3,3,7, : 0,0,1,1,2,2,3,3,8, :  
LEN=10) 0,0,1,1,2,2,3,3,4,4, :

Number new nodes in level n is given by : 1,1,2,1,3,1,4,1,5,1,

-----Class

263-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][100][120][201]]$

-----

--

Rules of T[L]:

R1) 0, -->0,0, --0, --  
R2) 0,0, -->0,0,1, --0,0,2, --  
R3) 0,0,1, -->0,0,1,1, --0,0,1, --0,0,2, --  
R4) 0,0,2, -->0,0,1, --0,0,1, --0, --  
R5) 0,0,1,1, -->0,0,1,1,2, --0,0,1,1,3, --0,0,1,1,4, --  
R6) 0,0,1,1,2, -->0,0,1,1,2,2, --0,0,1,1,2, --0,0,1,1,3, --0,0,1,1,4, --  
R7) 0,0,1,1,3, -->0,0,1,1,2, --0,0,1,1,2, --0,0,1, --0,0,2, --  
R8) 0,0,1,1,4, -->0,0,1, --0,0,1,1,4,3, --0,0,1,1,4,4, --0, --  
R9) 0,0,1,1,2,2, -->0,0,1,1,2,2,3, --0,0,1,1,2,2,4, --0,0,1,1,2,2,5, --0,0,1,1,2,2,6, --  
R10) 0,0,1,1,4,3, -->0,0,1,1,2, --0,0,1,1, --0,0,1, --0,0,2, --

R11) 0,0,1,1,4,4,-->0,0,1,1,--0,0,1,1,2,--0,0,1,--0,0,2,--  
R12)  
0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--  
0,0,1,1,2,2,6,--  
R13)  
0,0,1,1,2,2,4,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,  
--  
R14)  
0,0,1,1,2,2,5,-->0,0,1,1,2,--0,0,1,1,2,2,5,4,--0,0,1,1,2,2,5,5,--0,0,1,--0,0,2,--  
R15)  
0,0,1,1,2,2,6,-->0,0,1,--0,0,1,1,4,3,--0,0,1,1,2,2,6,5,--0,0,1,1,2,2,6,6,--0,--  
R16)  
0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,  
1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--  
R17)  
0,0,1,1,2,2,5,4,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,  
--  
R18)  
0,0,1,1,2,2,5,5,-->0,0,1,1,2,2,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,  
--  
R19) 0,0,1,1,2,2,6,5,-->0,0,1,1,2,--0,0,1,1,2,2,5,4,--0,0,1,1,--0,0,1,--0,0,2,--  
R20) 0,0,1,1,2,2,6,6,-->0,0,1,1,--0,0,1,1,2,--0,0,1,1,2,2,5,5,--0,0,1,--0,0,2,--  
R21)  
0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--  
0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--  
R22)  
0,0,1,1,2,2,3,3,5,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,  
1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--  
R23)  
0,0,1,1,2,2,3,3,6,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,3,3,6,5,--0,0,1,1,2,2,3,3,6,6,--0,  
0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--  
R24)  
0,0,1,1,2,2,3,3,7,-->0,0,1,1,2,--0,0,1,1,2,2,5,4,--0,0,1,1,2,2,3,3,7,6,--0,0,1,1,2,  
2,3,3,7,7,--0,0,1,--0,0,2,--  
R25)  
0,0,1,1,2,2,3,3,8,-->0,0,1,--0,0,1,1,4,3,--0,0,1,1,2,2,6,5,--0,0,1,1,2,2,3,3,8,7,--  
0,0,1,1,2,2,3,3,8,8,--0,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, :  
LEN=3) 0,0,1, : 0,0,2, :  
LEN=4) 0,0,1,1, :  
LEN=5) 0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, :  
LEN=6) 0,0,1,1,2,2, : 0,0,1,1,4,3, : 0,0,1,1,4,4, :  
LEN=7) 0,0,1,1,2,2,3, : 0,0,1,1,2,2,4, : 0,0,1,1,2,2,5, : 0,0,1,1,2,2,6, :  
LEN=8) 0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,5,4, : 0,0,1,1,2,2,5,5, : 0,0,1,1,2,2,6,5, :  
0,0,1,1,2,2,6,6, :  
LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,3,5, : 0,0,1,1,2,2,3,3,6, :  
0,0,1,1,2,2,3,3,7, : 0,0,1,1,2,2,3,3,8, :  
LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,6,5, : 0,0,1,1,2,2,3,3,6,6, :

0,0,1,1,2,2,3,3,7,6,: 0,0,1,1,2,2,3,3,7,7,: 0,0,1,1,2,2,3,3,8,7,:  
0,0,1,1,2,2,3,3,8,8,:

Number new nodes in level n is given by : 1,1,2,1,3,3,4,5,5,7,

-----Class

264-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][100][120][210]]$

--

Rules of  $T[L]$ :

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,1,--0,0,2,--

R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--

R4) 0,0,2,-->0,0,1,--0,0,1,--0,--

R5) 0,0,1,1,-->0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--

R6) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--

R7) 0,0,1,1,3,-->0,0,1,1,2,--0,0,1,1,2,--0,0,1,--0,0,2,--

R8) 0,0,1,1,4,-->0,0,1,1,3,--0,0,1,--0,0,1,1,4,4,--0,--

R9) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--

R10) 0,0,1,1,4,4,-->0,0,1,1,2,--0,0,1,1,--0,0,1,--0,0,2,--

R11)

0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--

0,0,1,1,2,2,6,--

R12)

0,0,1,1,2,2,4,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--

--

R13)

0,0,1,1,2,2,5,-->0,0,1,1,2,2,4,--0,0,1,1,2,--0,0,1,1,2,2,5,5,--0,0,1,--0,0,2,--

R14) 0,0,1,1,2,2,6,-->0,0,1,1,2,2,5,--0,0,1,1,3,--0,0,1,--0,0,1,1,2,2,6,6,--0,--

R15)

0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,

1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R16)

0,0,1,1,2,2,5,5,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--

--

R17) 0,0,1,1,2,2,6,6,-->0,0,1,1,2,2,5,5,--0,0,1,1,2,--0,0,1,1,--0,0,1,--0,0,2,--

R18)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--

0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R19)

0,0,1,1,2,2,3,3,5,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,

1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--

R20)

0,0,1,1,2,2,3,3,6,-->0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,--0,0,1,1,2,2,3,3,6,6,--0,0,

1,1,2,--0,0,1,1,3,--0,0,1,1,4,--

R21)

0,0,1,1,2,2,3,3,7,-->0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,4,--0,0,1,1,2,--0,0,1,1,2,2,3,

3,7,7,--0,0,1,--0,0,2,--

R22)

0,0,1,1,2,2,3,3,8,-->0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,5,--0,0,1,1,3,--0,0,1,--0,0,1,

1,2,2,3,3,8,8,--0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

LEN=3) 0,0,1,: 0,0,2,:

LEN=4) 0,0,1,1,:

LEN=5) 0,0,1,1,2,: 0,0,1,1,3,: 0,0,1,1,4,:

LEN=6) 0,0,1,1,2,2,: 0,0,1,1,4,4,:

LEN=7) 0,0,1,1,2,2,3,: 0,0,1,1,2,2,4,: 0,0,1,1,2,2,5,: 0,0,1,1,2,2,6,:

LEN=8) 0,0,1,1,2,2,3,3,: 0,0,1,1,2,2,5,5,: 0,0,1,1,2,2,6,6,:

LEN=9) 0,0,1,1,2,2,3,3,4,: 0,0,1,1,2,2,3,3,5,: 0,0,1,1,2,2,3,3,6,:

0,0,1,1,2,2,3,3,7,: 0,0,1,1,2,2,3,3,8,:

LEN=10) 0,0,1,1,2,2,3,3,4,4,: 0,0,1,1,2,2,3,3,6,6,: 0,0,1,1,2,2,3,3,7,7,:

0,0,1,1,2,2,3,3,8,8,:

Number new nodes in level n is given by : 1,1,2,1,3,2,4,3,5,4,

-----Class

265-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][100][201][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,1,--0,0,2,--

R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--

R4) 0,0,2,-->0,0,1,--0,0,2,2,--0,0,2,--

R5) 0,0,1,1,-->0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--

R6) 0,0,2,2,-->0,0,1,1,--0,0,1,1,3,--0,0,1,1,4,--

R7) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--

R8) 0,0,1,1,3,-->0,0,1,1,2,--0,0,1,1,3,3,--0,0,1,1,3,--0,0,1,1,4,--

R9) 0,0,1,1,4,-->0,0,1,--0,0,1,--0,0,1,1,4,4,--0,0,1,1,4,--

R10)

0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--

R11) 0,0,1,1,3,3,-->0,0,1,1,2,2,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--

R12) 0,0,1,1,4,4,-->0,0,1,1,--0,0,1,1,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--

R13)

0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--

0,0,1,1,2,2,6,--

R14)

0,0,1,1,2,2,4,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,4,4,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--

0,0,1,1,2,2,6,--

R15)

0,0,1,1,2,2,5,-->0,0,1,1,2,--0,0,1,1,2,--0,0,1,1,2,2,5,5,--0,0,1,1,2,2,5,--0,0,1,1,

2,2,6,--

R16) 0,0,1,1,2,2,6,-->0,0,1,--0,0,1,--0,0,1,--0,0,1,1,2,2,6,6,--0,0,1,1,2,2,6,--

R17)

0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,

1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R18)

0,0,1,1,2,2,4,4,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,1,

1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--  
R19)  
0,0,1,1,2,2,5,5,-->0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,  
7,--0,0,1,1,2,2,3,3,8,--  
R20)  
0,0,1,1,2,2,6,6,-->0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,  
3,8,--  
R21)  
0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--  
0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--  
R22)  
0,0,1,1,2,2,3,3,5,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,5,--0,0,1,1,2,2,3,3,5,--  
0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--  
R23)  
0,0,1,1,2,2,3,3,6,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,3,3,6,6,--0,0,1,1,  
2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--  
R24)  
0,0,1,1,2,2,3,3,7,-->0,0,1,1,2,--0,0,1,1,2,--0,0,1,1,2,--0,0,1,1,2,2,3,3,7,7,--0,0,  
1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--  
R25)  
0,0,1,1,2,2,3,3,8,-->0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,1,2,2,3,3,8,8,--0,0,1,1,  
2,2,3,3,8,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
LEN=3) 0,0,1, : 0,0,2, :  
LEN=4) 0,0,1,1, : 0,0,2,2, :  
LEN=5) 0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, :  
LEN=6) 0,0,1,1,2,2, : 0,0,1,1,3,3, : 0,0,1,1,4,4, :  
LEN=7) 0,0,1,1,2,2,3, : 0,0,1,1,2,2,4, : 0,0,1,1,2,2,5, : 0,0,1,1,2,2,6, :  
LEN=8) 0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,4,4, : 0,0,1,1,2,2,5,5, : 0,0,1,1,2,2,6,6, :  
LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,3,5, : 0,0,1,1,2,2,3,3,6, :  
0,0,1,1,2,2,3,3,7, : 0,0,1,1,2,2,3,3,8, :  
LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,5,5, : 0,0,1,1,2,2,3,3,6,6, :  
0,0,1,1,2,2,3,3,7,7, : 0,0,1,1,2,2,3,3,8,8, :  
Number new nodes in level n is given by : 1,1,2,2,3,3,4,4,5,5,

-----Class

266-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][101][102][110]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,--
- R2) 0,0,-->0,0,1,--0,0,2,--
- R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--
- R4) 0,0,2,-->0,0,2,1,--0,0,--0,0,2,--
- R5) 0,0,1,1,-->0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--
- R6) 0,0,2,1,-->0,0,2,1,1,--
- R7) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--

R8)  $0,0,1,1,3, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1, \rightarrow 0,0,1,1,3, \rightarrow 0,0,1,1,3,5, \rightarrow$   
R9)  $0,0,1,1,4, \rightarrow 0,0,1,1,4,2, \rightarrow 0,0,1,1,4,3, \rightarrow 0,0, \rightarrow 0,0,1,1,4, \rightarrow$   
R10)  $0,0,2,1,1, \rightarrow$   
R11)  
 $0,0,1,1,2,2, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2,2,4, \rightarrow 0,0,1,1,2,2,5, \rightarrow 0,0,1,1,2,2,6, \rightarrow$   
R12)  $0,0,1,1,3,5, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,4,3, \rightarrow 0,0, \rightarrow 0,0,1,1,3,5, \rightarrow$   
R13)  $0,0,1,1,4,2, \rightarrow 0,0,1,1,4,2,2, \rightarrow 0,0,2,1, \rightarrow$   
R14)  $0,0,1,1,4,3, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1,1, \rightarrow$   
R15)  
 $0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2,2,3,3, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2,2,4, \rightarrow 0,0,1,1,2,2,5, \rightarrow$   
 $0,0,1,1,2,2,6, \rightarrow$   
R16)  
 $0,0,1,1,2,2,4, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,2,2, \rightarrow 0,0,1,1,2,2,4, \rightarrow 0,0,1,1,2,2,4,6, \rightarrow 0,0,1,1,$   
 $2,2,4,7, \rightarrow$   
R17)  
 $0,0,1,1,2,2,5, \rightarrow 0,0,1,1,4,2, \rightarrow 0,0,1,1,4,3, \rightarrow 0,0,1,1, \rightarrow 0,0,1,1,2,2,5, \rightarrow 0,0,1,1,2,2,$   
 $5,7, \rightarrow$   
R18)  
 $0,0,1,1,2,2,6, \rightarrow 0,0,1,1,2,2,6,3, \rightarrow 0,0,1,1,2,2,6,4, \rightarrow 0,0,1,1,2,2,6,5, \rightarrow 0,0, \rightarrow 0,0,1,$   
 $1,2,2,6, \rightarrow$   
R19)  $0,0,1,1,4,2,2, \rightarrow 0,0,2,1, \rightarrow$   
R20)  
 $0,0,1,1,2,2,3,3, \rightarrow 0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3,3,5, \rightarrow 0,0,1,1,2,2,3,3,6, \rightarrow 0,0,$   
 $1,1,2,2,3,3,7, \rightarrow 0,0,1,1,2,2,3,3,8, \rightarrow$   
R21)  
 $0,0,1,1,2,2,4,6, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,4,3, \rightarrow 0,0,1,1, \rightarrow 0,0,1,1,2,2,4,6, \rightarrow 0,0,1,1,2,2,$   
 $4,6,8, \rightarrow$   
R22)  
 $0,0,1,1,2,2,4,7, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,2,2,6,4, \rightarrow 0,0,1,1,2,2,4,7,6, \rightarrow 0,0, \rightarrow 0,0,1,1,2,$   
 $2,4,7, \rightarrow$   
R23)  
 $0,0,1,1,2,2,5,7, \rightarrow 0,0,1,1,4,2, \rightarrow 0,0,1,1,4,3, \rightarrow 0,0,1,1,2,2,6,5, \rightarrow 0,0, \rightarrow 0,0,1,1,2,2,$   
 $5,7, \rightarrow$   
R24)  $0,0,1,1,2,2,6,3, \rightarrow 0,0,1,1,2,2,6,3,3, \rightarrow 0,0,1,1,4,2, \rightarrow 0,0,1,1,4,3, \rightarrow$   
R25)  $0,0,1,1,2,2,6,4, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,4,2,2, \rightarrow 0,0,1,1,4,3, \rightarrow$   
R26)  $0,0,1,1,2,2,6,5, \rightarrow 0,0,1,1,4,2, \rightarrow 0,0,1,1,4,3, \rightarrow 0,0,2,1,1, \rightarrow$   
R27)  
 $0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3,3,4,4, \rightarrow 0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3,3,5, \rightarrow$   
 $0,0,1,1,2,2,3,3,6, \rightarrow 0,0,1,1,2,2,3,3,7, \rightarrow 0,0,1,1,2,2,3,3,8, \rightarrow$   
R28)  
 $0,0,1,1,2,2,3,3,5, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,2,2,3,3, \rightarrow 0,0,1,1,2,2,3,3,5, \rightarrow 0,0,1,1,2,2,3,$   
 $3,5,7, \rightarrow 0,0,1,1,2,2,3,3,5,8, \rightarrow 0,0,1,1,2,2,3,3,5,9, \rightarrow$   
R29)  
 $0,0,1,1,2,2,3,3,6, \rightarrow 0,0,1,1,4,2, \rightarrow 0,0,1,1,4,3, \rightarrow 0,0,1,1,2,2, \rightarrow 0,0,1,1,2,2,3,3,6, \rightarrow$   
 $0,0,1,1,2,2,3,3,6,8, \rightarrow 0,0,1,1,2,2,3,3,6,9, \rightarrow$   
R30)  
 $0,0,1,1,2,2,3,3,7, \rightarrow 0,0,1,1,2,2,6,3, \rightarrow 0,0,1,1,2,2,6,4, \rightarrow 0,0,1,1,2,2,6,5, \rightarrow 0,0,1,1,$   
 $\rightarrow 0,0,1,1,2,2,3,3,7, \rightarrow 0,0,1,1,2,2,3,3,7,9, \rightarrow$   
R31)  
 $0,0,1,1,2,2,3,3,8, \rightarrow 0,0,1,1,2,2,3,3,8,4, \rightarrow 0,0,1,1,2,2,3,3,8,5, \rightarrow 0,0,1,1,2,2,3,3,8,$

6,--0,0,1,1,2,2,3,3,8,7,--0,0,--0,0,1,1,2,2,3,3,8,--  
R32) 0,0,1,1,2,2,4,6,8,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,4,7,6,--0,0,--0,0,1,1,2,2,4,6,8,--  
R33) 0,0,1,1,2,2,4,7,6,-->0,0,2,1,--0,0,1,1,4,3,--0,0,2,1,1,--  
R34) 0,0,1,1,2,2,6,3,3,-->0,0,1,1,4,2,--0,0,1,1,4,3,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
LEN=3) 0,0,1, : 0,0,2, :  
LEN=4) 0,0,1,1, : 0,0,2,1, :  
LEN=5) 0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, : 0,0,2,1,1, :  
LEN=6) 0,0,1,1,2,2, : 0,0,1,1,3,5, : 0,0,1,1,4,2, : 0,0,1,1,4,3, :  
LEN=7) 0,0,1,1,2,2,3, : 0,0,1,1,2,2,4, : 0,0,1,1,2,2,5, : 0,0,1,1,2,2,6, :  
0,0,1,1,4,2,2, :  
LEN=8) 0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,4,6, : 0,0,1,1,2,2,4,7, : 0,0,1,1,2,2,5,7, :  
0,0,1,1,2,2,6,3, : 0,0,1,1,2,2,6,4, : 0,0,1,1,2,2,6,5, :  
LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,3,5, : 0,0,1,1,2,2,3,3,6, :  
0,0,1,1,2,2,3,3,7, : 0,0,1,1,2,2,3,3,8, : 0,0,1,1,2,2,4,6,8, : 0,0,1,1,2,2,4,7,6, :  
0,0,1,1,2,2,6,3,3, :  
LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,5,7, : 0,0,1,1,2,2,3,3,5,8, :  
0,0,1,1,2,2,3,3,5,9, : 0,0,1,1,2,2,3,3,6,8, : 0,0,1,1,2,2,3,3,6,9, :  
0,0,1,1,2,2,3,3,7,9, : 0,0,1,1,2,2,3,3,8,4, : 0,0,1,1,2,2,3,3,8,5, :  
0,0,1,1,2,2,3,3,8,6, : 0,0,1,1,2,2,3,3,8,7, :  
Number new nodes in level n is given by : 1,1,2,2,4,4,5,7,8,11,

-----Class

267-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][101][102][120]]$

Rules of T[L]:

- R1) 0,-->0,0,--0,--
- R2) 0,0,-->0,0,1,--0,0,2,--
- R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--
- R4) 0,0,2,-->0,0,2,1,--0,0,2,2,--0,--
- R5) 0,0,1,1,-->0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--
- R6) 0,0,2,1,-->0,0,2,1,1,--
- R7) 0,0,2,2,-->0,0,2,1,--0,0,1,--0,0,2,--
- R8) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--
- R9) 0,0,1,1,3,-->0,0,2,1,--0,0,1,1,3,3,--0,0,1,--0,0,2,--
- R10) 0,0,1,1,4,-->0,0,1,1,4,2,--0,0,1,1,4,3,--0,0,1,1,4,4,--0,--
- R11) 0,0,2,1,1,-->
- R12)
- 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--
- R13) 0,0,1,1,3,3,-->0,0,2,1,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--
- R14) 0,0,1,1,4,2,-->0,0,1,1,4,2,2,--0,0,2,1,--
- R15) 0,0,1,1,4,3,-->0,0,2,1,--0,0,1,1,4,2,2,--
- R16) 0,0,1,1,4,4,-->0,0,1,1,4,2,--0,0,1,1,4,3,--0,0,1,--0,0,2,--
- R17)

0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--  
0,0,1,1,2,2,6,--

R18)

0,0,1,1,2,2,4,-->0,0,2,1,--0,0,1,1,2,2,4,4,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--

R19)

0,0,1,1,2,2,5,-->0,0,1,1,4,2,--0,0,1,1,4,3,--0,0,1,1,2,2,5,5,--0,0,1,--0,0,2,--

R20)

0,0,1,1,2,2,6,-->0,0,1,1,2,2,6,3,--0,0,1,1,2,2,6,4,--0,0,1,1,2,2,6,5,--0,0,1,1,2,2,  
6,6,--0,--

R21) 0,0,1,1,4,2,2,-->0,0,2,1,--

R22)

0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,  
1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R23)

0,0,1,1,2,2,4,4,-->0,0,2,1,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,  
1,2,2,6,--

R24)

0,0,1,1,2,2,5,5,-->0,0,1,1,4,2,--0,0,1,1,4,3,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--

R25) 0,0,1,1,2,2,6,3,-->0,0,1,1,2,2,6,3,3,--0,0,1,1,4,2,--0,0,1,1,4,3,--

R26) 0,0,1,1,2,2,6,4,-->0,0,2,1,--0,0,1,1,2,2,6,4,4,--0,0,2,1,--

R27) 0,0,1,1,2,2,6,5,-->0,0,1,1,4,2,--0,0,1,1,4,3,--0,0,1,1,2,2,6,3,3,--

R28)

0,0,1,1,2,2,6,6,-->0,0,1,1,2,2,6,3,--0,0,1,1,2,2,6,4,--0,0,1,1,2,2,6,5,--0,0,1,--0,  
0,2,--

R29)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--  
0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R30)

0,0,1,1,2,2,3,3,5,-->0,0,2,1,--0,0,1,1,2,2,3,3,5,5,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,  
--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--

R31)

0,0,1,1,2,2,3,3,6,-->0,0,1,1,4,2,--0,0,1,1,4,3,--0,0,1,1,2,2,3,3,6,6,--0,0,1,1,2,--  
0,0,1,1,3,--0,0,1,1,4,--

R32)

0,0,1,1,2,2,3,3,7,-->0,0,1,1,2,2,6,3,--0,0,1,1,2,2,6,4,--0,0,1,1,2,2,6,5,--0,0,1,1,  
2,2,3,3,7,7,--0,0,1,--0,0,2,--

R33)

0,0,1,1,2,2,3,3,8,-->0,0,1,1,2,2,3,3,8,4,--0,0,1,1,2,2,3,3,8,5,--0,0,1,1,2,2,3,3,8,  
6,--0,0,1,1,2,2,3,3,8,7,--0,0,1,1,2,2,3,3,8,8,--0,--

R34) 0,0,1,1,2,2,6,3,3,-->0,0,1,1,4,2,--0,0,1,1,4,3,--

R35) 0,0,1,1,2,2,6,4,4,-->0,0,2,1,--0,0,2,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

LEN=3) 0,0,1,: 0,0,2,:

LEN=4) 0,0,1,1,: 0,0,2,1,: 0,0,2,2,:

LEN=5) 0,0,1,1,2,: 0,0,1,1,3,: 0,0,1,1,4,: 0,0,2,1,1,:

LEN=6) 0,0,1,1,2,2,: 0,0,1,1,3,3,: 0,0,1,1,4,2,: 0,0,1,1,4,3,: 0,0,1,1,4,4,:

LEN=7) 0,0,1,1,2,2,3,: 0,0,1,1,2,2,4,: 0,0,1,1,2,2,5,: 0,0,1,1,2,2,6,:

0,0,1,1,4,2,2,:



LEN=8) 0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,4,4, : 0,0,1,1,2,2,5,5, : 0,0,1,1,2,2,6,3, :  
 0,0,1,1,2,2,6,4, : 0,0,1,1,2,2,6,5, : 0,0,1,1,2,2,6,6, :  
 LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,3,5, : 0,0,1,1,2,2,3,3,6, :  
 0,0,1,1,2,2,3,3,7, : 0,0,1,1,2,2,3,3,8, : 0,0,1,1,2,2,6,3,3, : 0,0,1,1,2,2,6,4,4, :  
 LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,5,5, : 0,0,1,1,2,2,3,3,6,6, :  
 0,0,1,1,2,2,3,3,7,7, : 0,0,1,1,2,2,3,3,8,4, : 0,0,1,1,2,2,3,3,8,5, :  
 0,0,1,1,2,2,3,3,8,6, : 0,0,1,1,2,2,3,3,8,7, : 0,0,1,1,2,2,3,3,8,8, :  
 Number new nodes in level n is given by : 1,1,2,3,4,5,5,7,7,9,

-----Class

268-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][101][102][201]]$

-----

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,--
- R2) 0,0,-->0,0,1,--0,0,2,--
- R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--
- R4) 0,0,2,-->0,0,2,1,--0,0,2,2,--0,0,2,--
- R5) 0,0,1,1,-->0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--
- R6) 0,0,2,1,-->0,0,2,1,1,--
- R7) 0,0,2,2,-->0,0,2,1,--0,0,1,1,3,--0,0,1,1,4,--
- R8) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--
- R9) 0,0,1,1,3,-->0,0,2,1,--0,0,1,1,3,3,--0,0,1,1,3,--0,0,1,1,4,--
- R10) 0,0,1,1,4,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,4,4,--0,0,1,1,4,--
- R11) 0,0,2,1,1,-->
- R12)
- 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--
- R13) 0,0,1,1,3,3,-->0,0,2,1,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--
- R14) 0,0,1,1,4,3,-->0,0,2,1,--0,0,1,1,4,3,3,--
- R15) 0,0,1,1,4,4,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--
- R16)
- 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--
- 0,0,1,1,2,2,6,--
- R17)
- 0,0,1,1,2,2,4,-->0,0,2,1,--0,0,1,1,2,2,4,4,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,
- 1,2,2,6,--
- R18)
- 0,0,1,1,2,2,5,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,5,5,--0,0,1,1,2,2,5,--0,0,1,1,
- 2,2,6,--
- R19)
- 0,0,1,1,2,2,6,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,6,5,--0,0,1,1,2,2,6,6,--0,0,1,
- 1,2,2,6,--
- R20) 0,0,1,1,4,3,3,-->0,0,2,1,--
- R21)
- 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,
- 1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--
- R22)
- 0,0,1,1,2,2,4,4,-->0,0,2,1,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,
- 3,7,--0,0,1,1,2,2,3,3,8,--

R23)  
 $0,0,1,1,2,2,5,5, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,4,3, \rightarrow 0,0,1,1,2,2,3,3,6, \rightarrow 0,0,1,1,2,2,3,3,7, \rightarrow 0,0,1,1,2,2,3,3,8, \rightarrow$

R24)  $0,0,1,1,2,2,6,5, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,4,3, \rightarrow 0,0,1,1,2,2,6,5,5, \rightarrow$

R25)  
 $0,0,1,1,2,2,6,6, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,4,3, \rightarrow 0,0,1,1,2,2,6,5, \rightarrow 0,0,1,1,2,2,3,3,7, \rightarrow 0,0,1,1,2,2,3,3,8, \rightarrow$

R26)  
 $0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3,3,4,4, \rightarrow 0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3,3,5, \rightarrow 0,0,1,1,2,2,3,3,6, \rightarrow 0,0,1,1,2,2,3,3,7, \rightarrow 0,0,1,1,2,2,3,3,8, \rightarrow$

R27)  
 $0,0,1,1,2,2,3,3,5, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,2,2,3,3,5,5, \rightarrow 0,0,1,1,2,2,3,3,5, \rightarrow 0,0,1,1,2,2,3,3,6, \rightarrow 0,0,1,1,2,2,3,3,7, \rightarrow 0,0,1,1,2,2,3,3,8, \rightarrow$

R28)  
 $0,0,1,1,2,2,3,3,6, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,4,3, \rightarrow 0,0,1,1,2,2,3,3,6,6, \rightarrow 0,0,1,1,2,2,3,3,6, \rightarrow 0,0,1,1,2,2,3,3,7, \rightarrow 0,0,1,1,2,2,3,3,8, \rightarrow$

R29)  
 $0,0,1,1,2,2,3,3,7, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,4,3, \rightarrow 0,0,1,1,2,2,6,5, \rightarrow 0,0,1,1,2,2,3,3,7,7, \rightarrow 0,0,1,1,2,2,3,3,7, \rightarrow 0,0,1,1,2,2,3,3,8, \rightarrow$

R30)  
 $0,0,1,1,2,2,3,3,8, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,4,3, \rightarrow 0,0,1,1,2,2,6,5, \rightarrow 0,0,1,1,2,2,3,3,8,7, \rightarrow 0,0,1,1,2,2,3,3,8,8, \rightarrow 0,0,1,1,2,2,3,3,8, \rightarrow$

R31)  $0,0,1,1,2,2,6,5,5, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,4,3, \rightarrow$

List of different nodes in  $T[L]$

LEN=1)  $0, :$   
 LEN=2)  $0,0, :$   
 LEN=3)  $0,0,1, : 0,0,2, :$   
 LEN=4)  $0,0,1,1, : 0,0,2,1, : 0,0,2,2, :$   
 LEN=5)  $0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, : 0,0,2,1,1, :$   
 LEN=6)  $0,0,1,1,2,2, : 0,0,1,1,3,3, : 0,0,1,1,4,3, : 0,0,1,1,4,4, :$   
 LEN=7)  $0,0,1,1,2,2,3, : 0,0,1,1,2,2,4, : 0,0,1,1,2,2,5, : 0,0,1,1,2,2,6, : 0,0,1,1,4,3,3, :$   
 LEN=8)  $0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,4,4, : 0,0,1,1,2,2,5,5, : 0,0,1,1,2,2,6,5, : 0,0,1,1,2,2,6,6, :$   
 LEN=9)  $0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,3,5, : 0,0,1,1,2,2,3,3,6, : 0,0,1,1,2,2,3,3,7, : 0,0,1,1,2,2,3,3,8, : 0,0,1,1,2,2,6,5,5, :$   
 LEN=10)  $0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,5,5, : 0,0,1,1,2,2,3,3,6,6, : 0,0,1,1,2,2,3,3,7,7, : 0,0,1,1,2,2,3,3,8,7, : 0,0,1,1,2,2,3,3,8,8, :$   
 Number new nodes in level n is given by :  $1,1,2,3,4,4,5,5,6,6,$

-----Class

269-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][101][102][210]]$

Rules of  $T[L]$ :

R1)  $0, \rightarrow 0,0, \rightarrow 0, \rightarrow$   
 R2)  $0,0, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$   
 R3)  $0,0,1, \rightarrow 0,0,1,1, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$   
 R4)  $0,0,2, \rightarrow 0,0,2,1, \rightarrow 0,0,2,2, \rightarrow 0,0,2, \rightarrow$

R5) 0,0,1,1,-->0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--  
R6) 0,0,2,1,-->0,0,2,1,1,--  
R7) 0,0,2,2,-->0,0,2,1,--0,0,1,1,3,--0,0,2,2,4,--  
R8) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--  
R9) 0,0,1,1,3,-->0,0,2,1,--0,0,1,1,3,3,--0,0,1,1,3,--0,0,2,2,4,--  
R10) 0,0,1,1,4,-->0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,4,4,--0,0,1,1,4,--  
R11) 0,0,2,1,1,-->  
R12) 0,0,2,2,4,-->0,0,2,1,--0,0,2,1,--0,0,2,2,4,4,--0,0,2,2,4,--  
R13)  
0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--  
R14) 0,0,1,1,3,3,-->0,0,2,1,--0,0,1,1,2,2,4,--0,0,1,1,3,3,5,--0,0,1,1,3,3,6,--  
R15) 0,0,1,1,4,2,-->0,0,1,1,4,2,2,--0,0,2,1,--  
R16) 0,0,1,1,4,4,-->0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,5,--0,0,1,1,4,4,6,--  
R17) 0,0,2,2,4,4,-->0,0,2,1,--0,0,2,1,--0,0,1,1,3,3,5,--0,0,2,2,4,4,6,--  
R18)  
0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--  
0,0,1,1,2,2,6,--  
R19)  
0,0,1,1,2,2,4,-->0,0,2,1,--0,0,1,1,2,2,4,4,--0,0,1,1,2,2,4,--0,0,1,1,3,3,5,--0,0,1,  
1,3,3,6,--  
R20)  
0,0,1,1,2,2,5,-->0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,5,5,--0,0,1,1,2,2,5,--0,0,1,1,  
4,4,6,--  
R21)  
0,0,1,1,2,2,6,-->0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,6,6,--0,0,1,  
1,2,2,6,--  
R22)  
0,0,1,1,3,3,5,-->0,0,2,1,--0,0,2,1,--0,0,1,1,3,3,5,5,--0,0,1,1,3,3,5,--0,0,2,2,4,4,  
6,--  
R23)  
0,0,1,1,3,3,6,-->0,0,2,1,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,3,3,6,6,--0,0,1,1,3,3,6,  
--  
R24) 0,0,1,1,4,2,2,-->0,0,2,1,--  
R25)  
0,0,1,1,4,4,6,-->0,0,1,1,4,2,--0,0,2,1,--0,0,2,1,--0,0,1,1,4,4,6,6,--0,0,1,1,4,4,6,  
--  
R26)  
0,0,2,2,4,4,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,2,4,4,6,6,--0,0,2,2,4,4,6,--  
R27)  
0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,  
1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--  
R28)  
0,0,1,1,2,2,4,4,-->0,0,2,1,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,4,4,6,--0,0,1,1,2,2,4,  
4,7,--0,0,1,1,2,2,4,4,8,--  
R29)  
0,0,1,1,2,2,5,5,-->0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,5,5,7,--  
0,0,1,1,2,2,5,5,8,--  
R30) 0,0,1,1,2,2,6,3,-->0,0,1,1,2,2,6,3,3,--0,0,1,1,4,2,--0,0,2,1,--  
R31)  
0,0,1,1,2,2,6,6,-->0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,3,3,7,--0,

0,1,1,2,2,6,6,8,--

R32)

0,0,1,1,3,3,5,5,-->0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,4,4,6,--0,0,1,1,3,3,5,5,7,--0,0,1,1,3,3,5,5,8,--

R33)

0,0,1,1,3,3,6,6,-->0,0,2,1,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,4,4,7,--0,0,1,1,3,3,6,6,8,--

R34)

0,0,1,1,4,4,6,6,-->0,0,1,1,4,2,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,5,5,7,--0,0,1,1,4,4,6,6,8,--

R35)

0,0,2,2,4,4,6,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,1,3,3,5,5,7,--0,0,2,2,4,4,6,6,8,--

R36)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R37)

0,0,1,1,2,2,3,3,5,-->0,0,2,1,--0,0,1,1,2,2,3,3,5,5,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,4,4,6,--0,0,1,1,2,2,4,4,7,--0,0,1,1,2,2,4,4,8,--

R38)

0,0,1,1,2,2,3,3,6,-->0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,3,3,6,6,--0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,5,5,7,--0,0,1,1,2,2,5,5,8,--

R39)

0,0,1,1,2,2,3,3,7,-->0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,3,3,7,7,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,6,6,8,--

R40)

0,0,1,1,2,2,3,3,8,-->0,0,1,1,2,2,3,3,8,4,--0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,3,3,8,8,--0,0,1,1,2,2,3,3,8,--

R41)

0,0,1,1,2,2,4,4,6,-->0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,4,4,6,6,--0,0,1,1,2,2,4,4,6,--0,0,1,1,3,3,5,5,7,--0,0,1,1,3,3,5,5,8,--

R42)

0,0,1,1,2,2,4,4,7,-->0,0,2,1,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,4,4,7,7,--0,0,1,1,2,2,4,4,7,--0,0,1,1,3,3,6,6,8,--

R43)

0,0,1,1,2,2,4,4,8,-->0,0,2,1,--0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,4,4,8,8,--0,0,1,1,2,2,4,4,8,--

R44)

0,0,1,1,2,2,5,5,7,-->0,0,1,1,4,2,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,5,5,7,7,--0,0,1,1,2,2,5,5,7,--0,0,1,1,4,4,6,6,8,--

R45)

0,0,1,1,2,2,5,5,8,-->0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,5,5,8,8,--0,0,1,1,2,2,5,5,8,--

R46) 0,0,1,1,2,2,6,3,3,-->0,0,1,1,4,2,--0,0,2,1,--

R47)

0,0,1,1,2,2,6,6,8,-->0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,6,6,8,8,--0,0,1,1,2,2,6,6,8,--

R48)

0,0,1,1,3,3,5,5,7,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,1,3,3,5,5,7,7,--0,0,1,1,3,3,5,5,7,--0,0,2,2,4,4,6,6,8,--

R49)

0,0,1,1,3,3,5,5,8,-->0,0,2,1,--0,0,2,1,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,3,3,5,5,8,  
8,--0,0,1,1,3,3,5,5,8,--

R50)

0,0,1,1,3,3,6,6,8,-->0,0,2,1,--0,0,1,1,4,2,--0,0,2,1,--0,0,2,1,--0,0,1,1,3,3,6,6,8,  
8,--0,0,1,1,3,3,6,6,8,--

R51)

0,0,1,1,4,4,6,6,8,-->0,0,1,1,4,2,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,1,4,4,6,6,8,  
8,--0,0,1,1,4,4,6,6,8,--

R52)

0,0,2,2,4,4,6,6,8,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,2,4,4,6,6,8,8,--  
0,0,2,2,4,4,6,6,8,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

LEN=3) 0,0,1,: 0,0,2,:

LEN=4) 0,0,1,1,: 0,0,2,1,: 0,0,2,2,:

LEN=5) 0,0,1,1,2,: 0,0,1,1,3,: 0,0,1,1,4,: 0,0,2,1,1,: 0,0,2,2,4,:

LEN=6) 0,0,1,1,2,2,: 0,0,1,1,3,3,: 0,0,1,1,4,2,: 0,0,1,1,4,4,: 0,0,2,2,4,4,:

LEN=7) 0,0,1,1,2,2,3,: 0,0,1,1,2,2,4,: 0,0,1,1,2,2,5,: 0,0,1,1,2,2,6,:

0,0,1,1,3,3,5,: 0,0,1,1,3,3,6,: 0,0,1,1,4,2,2,: 0,0,1,1,4,4,6,: 0,0,2,2,4,4,6,:

LEN=8) 0,0,1,1,2,2,3,3,: 0,0,1,1,2,2,4,4,: 0,0,1,1,2,2,5,5,: 0,0,1,1,2,2,6,3,:

0,0,1,1,2,2,6,6,: 0,0,1,1,3,3,5,5,: 0,0,1,1,3,3,6,6,: 0,0,1,1,4,4,6,6,:

0,0,2,2,4,4,6,6,:

LEN=9) 0,0,1,1,2,2,3,3,4,: 0,0,1,1,2,2,3,3,5,: 0,0,1,1,2,2,3,3,6,:

0,0,1,1,2,2,3,3,7,: 0,0,1,1,2,2,3,3,8,: 0,0,1,1,2,2,4,4,6,: 0,0,1,1,2,2,4,4,7,:

0,0,1,1,2,2,4,4,8,: 0,0,1,1,2,2,5,5,7,: 0,0,1,1,2,2,5,5,8,: 0,0,1,1,2,2,6,3,3,:

0,0,1,1,2,2,6,6,8,: 0,0,1,1,3,3,5,5,7,: 0,0,1,1,3,3,5,5,8,: 0,0,1,1,3,3,6,6,8,:

0,0,1,1,4,4,6,6,8,: 0,0,2,2,4,4,6,6,8,:

LEN=10) 0,0,1,1,2,2,3,3,4,4,: 0,0,1,1,2,2,3,3,5,5,: 0,0,1,1,2,2,3,3,6,6,:

0,0,1,1,2,2,3,3,7,7,: 0,0,1,1,2,2,3,3,8,4,: 0,0,1,1,2,2,3,3,8,8,:

0,0,1,1,2,2,4,4,6,6,6,: 0,0,1,1,2,2,4,4,7,7,: 0,0,1,1,2,2,4,4,8,8,:

0,0,1,1,2,2,5,5,7,7,7,: 0,0,1,1,2,2,5,5,8,8,8,: 0,0,1,1,2,2,6,6,8,8,8,:

0,0,1,1,3,3,5,5,7,7,7,: 0,0,1,1,3,3,5,5,8,8,8,: 0,0,1,1,3,3,6,6,8,8,8,:

0,0,1,1,4,4,6,6,8,8,8,: 0,0,2,2,4,4,6,6,8,8,8,:

Number new nodes in level n is given by : 1,1,2,3,5,5,9,9,17,17,

-----Class

270-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][101][110][120]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,1,--0,0,2,--

R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--

R4) 0,0,2,-->0,0,1,--0,0,--0,--

R5) 0,0,1,1,-->0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--

R6) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--

R7) 0,0,1,1,3,-->0,0,1,1,2,--0,0,1,1,--0,0,1,--0,0,2,--

R8) 0,0,1,1,4,-->0,0,1,1,4,2,--0,0,1,1,3,--0,0,--0,--  
R9) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--  
R10) 0,0,1,1,4,2,-->0,0,1,1,4,2,2,--0,0,1,1,2,--0,0,1,--0,0,2,--  
R11)  
0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--  
0,0,1,1,2,2,6,--  
R12)  
0,0,1,1,2,2,4,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--  
R13) 0,0,1,1,2,2,5,-->0,0,1,1,2,2,5,3,--0,0,1,1,2,2,4,--0,0,1,1,--0,0,1,--0,0,2,--  
R14)  
0,0,1,1,2,2,6,-->0,0,1,1,2,2,6,3,--0,0,1,1,2,2,6,4,--0,0,1,1,2,2,5,--0,0,--0,--  
R15) 0,0,1,1,4,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--  
R16)  
0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,  
1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--  
R17)  
0,0,1,1,2,2,5,3,-->0,0,1,1,2,2,5,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,1,3,--0,0,  
1,1,4,--  
R18)  
0,0,1,1,2,2,6,3,-->0,0,1,1,2,2,6,3,3,--0,0,1,1,2,2,5,3,--0,0,1,1,2,2,4,--0,0,1,--0,  
0,2,--  
R19)  
0,0,1,1,2,2,6,4,-->0,0,1,1,2,2,5,3,--0,0,1,1,4,2,2,--0,0,1,1,2,--0,0,1,--0,0,2,--  
R20)  
0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--  
0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--  
R21)  
0,0,1,1,2,2,3,3,5,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,  
2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--  
R22)  
0,0,1,1,2,2,3,3,6,-->0,0,1,1,2,2,3,3,6,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,--0,0,1,  
1,2,--0,0,1,1,3,--0,0,1,1,4,--  
R23)  
0,0,1,1,2,2,3,3,7,-->0,0,1,1,2,2,3,3,7,4,--0,0,1,1,2,2,3,3,7,5,--0,0,1,1,2,2,3,3,6,  
--0,0,1,1,--0,0,1,--0,0,2,--  
R24)  
0,0,1,1,2,2,3,3,8,-->0,0,1,1,2,2,3,3,8,4,--0,0,1,1,2,2,3,3,8,5,--0,0,1,1,2,2,3,3,8,  
6,--0,0,1,1,2,2,3,3,7,--0,0,--0,--  
R25)  
0,0,1,1,2,2,5,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,  
2,5,--0,0,1,1,2,2,6,--  
R26)  
0,0,1,1,2,2,6,3,3,-->0,0,1,1,2,2,3,3,6,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,--0,0,1,1,  
3,--0,0,1,1,4,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
LEN=3) 0,0,1, : 0,0,2, :  
LEN=4) 0,0,1,1, :  
LEN=5) 0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, :

LEN=6) 0,0,1,1,2,2,: 0,0,1,1,4,2,:  
 LEN=7) 0,0,1,1,2,2,3,: 0,0,1,1,2,2,4,: 0,0,1,1,2,2,5,: 0,0,1,1,2,2,6,:  
 0,0,1,1,4,2,2,:  
 LEN=8) 0,0,1,1,2,2,3,3,: 0,0,1,1,2,2,5,3,: 0,0,1,1,2,2,6,3,: 0,0,1,1,2,2,6,4,:  
 LEN=9) 0,0,1,1,2,2,3,3,4,: 0,0,1,1,2,2,3,3,5,: 0,0,1,1,2,2,3,3,6,:  
 0,0,1,1,2,2,3,3,7,: 0,0,1,1,2,2,3,3,8,: 0,0,1,1,2,2,5,3,3,: 0,0,1,1,2,2,6,3,3,:  
 LEN=10) 0,0,1,1,2,2,3,3,4,4,: 0,0,1,1,2,2,3,3,6,4,: 0,0,1,1,2,2,3,3,7,4,:  
 0,0,1,1,2,2,3,3,7,5,: 0,0,1,1,2,2,3,3,8,4,: 0,0,1,1,2,2,3,3,8,5,:  
 0,0,1,1,2,2,3,3,8,6,:  
 Number new nodes in level n is given by : 1,1,2,1,3,2,5,4,7,7,

-----Class

271-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][101][110][201]]$

-----

--

Rules of  $T[L]$ :

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,1,--0,0,2,--

R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--

R4) 0,0,2,-->0,0,1,--0,0,--0,0,2,--

R5) 0,0,1,1,-->0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--

R6) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--

R7) 0,0,1,1,3,-->0,0,1,1,2,--0,0,1,1,--0,0,1,1,3,--0,0,1,1,4,--

R8) 0,0,1,1,4,-->0,0,1,--0,0,1,1,3,--0,0,--0,0,1,1,4,--

R9) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--

R10)

0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--

0,0,1,1,2,2,6,--

R11)

0,0,1,1,2,2,4,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,

1,1,2,2,6,--

R12)

0,0,1,1,2,2,5,-->0,0,1,1,2,--0,0,1,1,2,2,4,--0,0,1,1,--0,0,1,1,2,2,5,--0,0,1,1,2,2,

6,--

R13) 0,0,1,1,2,2,6,-->0,0,1,--0,0,1,1,3,--0,0,1,1,2,2,5,--0,0,--0,0,1,1,2,2,6,--

R14)

0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,

1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R15)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--

0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R16)

0,0,1,1,2,2,3,3,5,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,5,--0,0,

1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R17)

0,0,1,1,2,2,3,3,6,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,--0,0,1,1,2,2,

3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R18)

0,0,1,1,2,2,3,3,7,-->0,0,1,1,2,--0,0,1,1,2,2,4,--0,0,1,1,2,2,3,3,6,--0,0,1,1,--0,0,

1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--  
 R19)  
 0,0,1,1,2,2,3,3,8,-->0,0,1,--0,0,1,1,3,--0,0,1,1,2,2,5,--0,0,1,1,2,2,3,3,7,--0,0,--  
 0,0,1,1,2,2,3,3,8,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, :  
 LEN=3) 0,0,1, : 0,0,2, :  
 LEN=4) 0,0,1,1, :  
 LEN=5) 0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, :  
 LEN=6) 0,0,1,1,2,2, :  
 LEN=7) 0,0,1,1,2,2,3, : 0,0,1,1,2,2,4, : 0,0,1,1,2,2,5, : 0,0,1,1,2,2,6, :  
 LEN=8) 0,0,1,1,2,2,3,3, :  
 LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,3,5, : 0,0,1,1,2,2,3,3,6, :  
 0,0,1,1,2,2,3,3,7, : 0,0,1,1,2,2,3,3,8, :  
 LEN=10) 0,0,1,1,2,2,3,3,4,4, :  
 Number new nodes in level n is given by : 1,1,2,1,3,1,4,1,5,1,

-----Class

272-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][101][110][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,--  
 R2) 0,0,-->0,0,1,--0,0,2,--  
 R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--  
 R4) 0,0,2,-->0,0,1,--0,0,--0,0,2,--  
 R5) 0,0,1,1,-->0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--  
 R6) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--  
 R7) 0,0,1,1,3,-->0,0,1,1,2,--0,0,1,1,--0,0,1,1,3,--0,0,1,1,4,--  
 R8) 0,0,1,1,4,-->0,0,1,1,2,--0,0,1,--0,0,--0,0,1,1,4,--  
 R9) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--  
 R10)  
 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--  
 0,0,1,1,2,2,6,--  
 R11)  
 0,0,1,1,2,2,4,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,  
 1,1,2,2,6,--  
 R12)  
 0,0,1,1,2,2,5,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,2,2,5,--0,0,1,1,2,2,  
 6,--  
 R13) 0,0,1,1,2,2,6,-->0,0,1,1,2,2,6,3,--0,0,1,1,2,--0,0,1,--0,0,--0,0,1,1,2,2,6,--  
 R14)  
 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,  
 1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--  
 R15)  
 0,0,1,1,2,2,6,3,-->0,0,1,1,2,2,6,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,1,2,2,5,--  
 0,0,1,1,2,2,6,--  
 R16)



0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--  
0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R17)

0,0,1,1,2,2,3,3,5,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,5,--0,0,  
1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R18)

0,0,1,1,2,2,3,3,6,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,2,--0,0,1,1,2,2,  
3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R19)

0,0,1,1,2,2,3,3,7,-->0,0,1,1,2,2,3,3,7,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,1,--0,  
0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R20)

0,0,1,1,2,2,3,3,8,-->0,0,1,1,2,2,3,3,8,4,--0,0,1,1,2,2,6,3,--0,0,1,1,2,--0,0,1,--0,  
0,--0,0,1,1,2,2,3,3,8,--

R21)

0,0,1,1,2,2,6,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,2,3,3,6,--0,0,1,  
1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

LEN=3) 0,0,1,: 0,0,2,:

LEN=4) 0,0,1,1,:

LEN=5) 0,0,1,1,2,: 0,0,1,1,3,: 0,0,1,1,4,:

LEN=6) 0,0,1,1,2,2,:

LEN=7) 0,0,1,1,2,2,3,: 0,0,1,1,2,2,4,: 0,0,1,1,2,2,5,: 0,0,1,1,2,2,6,:

LEN=8) 0,0,1,1,2,2,3,3,: 0,0,1,1,2,2,6,3,:

LEN=9) 0,0,1,1,2,2,3,3,4,: 0,0,1,1,2,2,3,3,5,: 0,0,1,1,2,2,3,3,6,:

0,0,1,1,2,2,3,3,7,: 0,0,1,1,2,2,3,3,8,: 0,0,1,1,2,2,6,3,3,:

LEN=10) 0,0,1,1,2,2,3,3,4,4,: 0,0,1,1,2,2,3,3,7,4,: 0,0,1,1,2,2,3,3,8,4,:

Number new nodes in level n is given by : 1,1,2,1,3,1,4,2,6,3,

-----Class

273-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][101][120][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,1,--0,0,2,--

R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--

R4) 0,0,2,-->0,0,1,--0,0,2,2,--0,--

R5) 0,0,1,1,-->0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--

R6) 0,0,2,2,-->0,0,1,1,2,--0,0,1,--0,0,2,--

R7) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--

R8) 0,0,1,1,3,-->0,0,1,1,2,--0,0,1,1,3,3,--0,0,1,--0,0,2,--

R9) 0,0,1,1,4,-->0,0,1,--0,0,1,1,3,--0,0,1,1,4,4,--0,--

R10)

0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--

R11) 0,0,1,1,3,3,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--

R12) 0,0,1,1,4,4,-->0,0,1,1,2,--0,0,1,1,2,2,4,--0,0,1,--0,0,2,--

R13)

0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--  
0,0,1,1,2,2,6,--

R14)

0,0,1,1,2,2,4,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,4,4,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,  
4,--

R15)

0,0,1,1,2,2,5,-->0,0,1,1,2,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,5,--0,0,1,--0,0,2,--

R16) 0,0,1,1,2,2,6,-->0,0,1,--0,0,1,1,3,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,6,--0,--

R17)

0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,  
1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R18)

0,0,1,1,2,2,4,4,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,  
5,--0,0,1,1,2,2,6,--

R19)

0,0,1,1,2,2,5,5,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,--0,0,1,1,3,--0,0,  
1,1,4,--

R20)

0,0,1,1,2,2,6,6,-->0,0,1,1,2,--0,0,1,1,2,2,4,--0,0,1,1,2,2,3,3,6,--0,0,1,--0,0,2,--

R21)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--  
0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R22)

0,0,1,1,2,2,3,3,5,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,5,--0,0,1,1,2,2,3,--0,0,  
1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--

R23)

0,0,1,1,2,2,3,3,6,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,6,--0,0,  
1,1,2,--0,0,1,1,3,--0,0,1,1,4,--

R24)

0,0,1,1,2,2,3,3,7,-->0,0,1,1,2,--0,0,1,1,2,2,4,--0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,  
3,7,7,--0,0,1,--0,0,2,--

R25)

0,0,1,1,2,2,3,3,8,-->0,0,1,--0,0,1,1,3,--0,0,1,1,2,2,5,--0,0,1,1,2,2,3,3,7,--0,0,1,  
1,2,2,3,3,8,8,--0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

LEN=3) 0,0,1,: 0,0,2,:

LEN=4) 0,0,1,1,: 0,0,2,2,:

LEN=5) 0,0,1,1,2,: 0,0,1,1,3,: 0,0,1,1,4,:

LEN=6) 0,0,1,1,2,2,: 0,0,1,1,3,3,: 0,0,1,1,4,4,:

LEN=7) 0,0,1,1,2,2,3,: 0,0,1,1,2,2,4,: 0,0,1,1,2,2,5,: 0,0,1,1,2,2,6,:

LEN=8) 0,0,1,1,2,2,3,3,: 0,0,1,1,2,2,4,4,: 0,0,1,1,2,2,5,5,: 0,0,1,1,2,2,6,6,:

LEN=9) 0,0,1,1,2,2,3,3,4,: 0,0,1,1,2,2,3,3,5,: 0,0,1,1,2,2,3,3,6,:

0,0,1,1,2,2,3,3,7,: 0,0,1,1,2,2,3,3,8,:

LEN=10) 0,0,1,1,2,2,3,3,4,4,: 0,0,1,1,2,2,3,3,5,5,: 0,0,1,1,2,2,3,3,6,6,:

0,0,1,1,2,2,3,3,7,7,: 0,0,1,1,2,2,3,3,8,8,:

Number new nodes in level n is given by : 1,1,2,2,3,3,4,4,5,5,

-----Class

274-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][101][120][210]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0, -->0,0, --0, --$

R2)  $0,0, -->0,0,1, --0,0,2, --$

R3)  $0,0,1, -->0,0,1,1, --0,0,1, --0,0,2, --$

R4)  $0,0,2, -->0,0,1, --0,0,2,2, --0, --$

R5)  $0,0,1,1, -->0,0,1,1,2, --0,0,1,1,3, --0,0,1,1,4, --$

R6)  $0,0,2,2, -->0,0,1,1,2, --0,0,1, --0,0,2, --$

R7)  $0,0,1,1,2, -->0,0,1,1,2,2, --0,0,1,1,2, --0,0,1,1,3, --0,0,1,1,4, --$

R8)  $0,0,1,1,3, -->0,0,1,1,2, --0,0,1,1,3,3, --0,0,1, --0,0,2, --$

R9)  $0,0,1,1,4, -->0,0,1,1,4,2, --0,0,1, --0,0,1,1,4,4, --0, --$

R10)

$0,0,1,1,2,2, -->0,0,1,1,2,2,3, --0,0,1,1,2,2,4, --0,0,1,1,2,2,5, --0,0,1,1,2,2,6, --$

R11)  $0,0,1,1,3,3, -->0,0,1,1,2,2,3, --0,0,1,1,2, --0,0,1,1,3, --0,0,1,1,4, --$

R12)  $0,0,1,1,4,2, -->0,0,1,1,3,3, --0,0,1,1,2, --0,0,1, --0,0,2, --$

R13)  $0,0,1,1,4,4, -->0,0,1,1,4,4,2, --0,0,1,1,2, --0,0,1, --0,0,2, --$

R14)

$0,0,1,1,2,2,3, -->0,0,1,1,2,2,3,3, --0,0,1,1,2,2,3, --0,0,1,1,2,2,4, --0,0,1,1,2,2,5, --$

$0,0,1,1,2,2,6, --$

R15)

$0,0,1,1,2,2,4, -->0,0,1,1,2,2,3, --0,0,1,1,2,2,4,4, --0,0,1,1,2, --0,0,1,1,3, --0,0,1,1,4, --$

R16)

$0,0,1,1,2,2,5, -->0,0,1,1,4,4,2, --0,0,1,1,2, --0,0,1,1,2,2,5,5, --0,0,1, --0,0,2, --$

R17)

$0,0,1,1,2,2,6, -->0,0,1,1,2,2,6,3, --0,0,1,1,4,2, --0,0,1, --0,0,1,1,2,2,6,6, --0, --$

R18)

$0,0,1,1,4,4,2, -->0,0,1,1,2,2,4,4, --0,0,1,1,2,2,3, --0,0,1,1,2, --0,0,1,1,3, --0,0,1,1,4, --$

R19)

$0,0,1,1,2,2,3,3, -->0,0,1,1,2,2,3,3,4, --0,0,1,1,2,2,3,3,5, --0,0,1,1,2,2,3,3,6, --0,0,1,1,2,2,3,3,7, --0,0,1,1,2,2,3,3,8, --$

R20)

$0,0,1,1,2,2,4,4, -->0,0,1,1,2,2,3,3,4, --0,0,1,1,2,2,3, --0,0,1,1,2,2,4, --0,0,1,1,2,2,5, --0,0,1,1,2,2,6, --$

R21)

$0,0,1,1,2,2,5,5, -->0,0,1,1,2,2,5,5,3, --0,0,1,1,2,2,3, --0,0,1,1,2, --0,0,1,1,3, --0,0,1,1,4, --$

R22)

$0,0,1,1,2,2,6,3, -->0,0,1,1,2,2,5,5, --0,0,1,1,4,4,2, --0,0,1,1,2, --0,0,1, --0,0,2, --$

R23)

$0,0,1,1,2,2,6,6, -->0,0,1,1,2,2,6,6,3, --0,0,1,1,4,4,2, --0,0,1,1,2, --0,0,1, --0,0,2, --$

R24)

$0,0,1,1,2,2,3,3,4, -->0,0,1,1,2,2,3,3,4,4, --0,0,1,1,2,2,3,3,4, --0,0,1,1,2,2,3,3,5, --0,0,1,1,2,2,3,3,6, --0,0,1,1,2,2,3,3,7, --0,0,1,1,2,2,3,3,8, --$

R25)

0,0,1,1,2,2,3,3,5,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,5,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--

R26)

0,0,1,1,2,2,3,3,6,-->0,0,1,1,2,2,5,5,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,3,3,6,6,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--

R27)

0,0,1,1,2,2,3,3,7,-->0,0,1,1,2,2,6,6,3,--0,0,1,1,4,4,2,--0,0,1,1,2,--0,0,1,1,2,2,3,3,7,7,--0,0,1,--0,0,2,--

R28)

0,0,1,1,2,2,3,3,8,-->0,0,1,1,2,2,3,3,8,4,--0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,1,--0,0,1,1,2,2,3,3,8,8,--0,--

R29)

0,0,1,1,2,2,5,5,3,-->0,0,1,1,2,2,3,3,5,5,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--

R30)

0,0,1,1,2,2,6,6,3,-->0,0,1,1,2,2,3,3,6,6,--0,0,1,1,2,2,5,5,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, :

LEN=3) 0,0,1, : 0,0,2, :

LEN=4) 0,0,1,1, : 0,0,2,2, :

LEN=5) 0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, :

LEN=6) 0,0,1,1,2,2, : 0,0,1,1,3,3, : 0,0,1,1,4,2, : 0,0,1,1,4,4, :

LEN=7) 0,0,1,1,2,2,3, : 0,0,1,1,2,2,4, : 0,0,1,1,2,2,5, : 0,0,1,1,2,2,6, :

0,0,1,1,4,4,2, :

LEN=8) 0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,4,4, : 0,0,1,1,2,2,5,5, : 0,0,1,1,2,2,6,3, :

0,0,1,1,2,2,6,6, :

LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,3,5, : 0,0,1,1,2,2,3,3,6, :

0,0,1,1,2,2,3,3,7, : 0,0,1,1,2,2,3,3,8, : 0,0,1,1,2,2,5,5,3, : 0,0,1,1,2,2,6,6,3, :

LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,5,5, : 0,0,1,1,2,2,3,3,6,6, :

0,0,1,1,2,2,3,3,7,7, : 0,0,1,1,2,2,3,3,8,4, : 0,0,1,1,2,2,3,3,8,8, :

Number new nodes in level n is given by : 1,1,2,2,3,4,5,5,7,6,

-----Class

275-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][101][201][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,1,--0,0,2,--

R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--

R4) 0,0,2,-->0,0,1,--0,0,1,1,--0,0,2,--

R5) 0,0,1,1,-->0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--

R6) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--

R7) 0,0,1,1,3,-->0,0,1,1,2,--0,0,1,1,2,2,--0,0,1,1,3,--0,0,1,1,4,--

R8) 0,0,1,1,4,-->0,0,1,--0,0,1,--0,0,1,1,4,4,--0,0,1,1,4,--

R9) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--

R10) 0,0,1,1,4,4,-->0,0,1,1,2,--0,0,1,1,2,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--

R11)  
0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--  
0,0,1,1,2,2,6,--

R12)  
0,0,1,1,2,2,4,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--  
0,0,1,1,2,2,6,--

R13)  
0,0,1,1,2,2,5,-->0,0,1,1,2,--0,0,1,1,2,--0,0,1,1,2,2,5,5,--0,0,1,1,2,2,5,--0,0,1,1,  
2,2,6,--

R14) 0,0,1,1,2,2,6,-->0,0,1,--0,0,1,--0,0,1,--0,0,1,1,2,2,6,6,--0,0,1,1,2,2,6,--

R15)  
0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,  
1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R16)  
0,0,1,1,2,2,5,5,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,  
3,3,7,--0,0,1,1,2,2,3,3,8,--

R17)  
0,0,1,1,2,2,6,6,-->0,0,1,1,2,--0,0,1,1,2,--0,0,1,1,2,--0,0,1,1,2,2,3,3,7,--0,0,1,1,  
2,2,3,3,8,--

R18)  
0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--  
0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R19)  
0,0,1,1,2,2,3,3,5,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,5,--  
0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R20)  
0,0,1,1,2,2,3,3,6,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,3,3,6,6,--0,0,1,1,  
2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R21)  
0,0,1,1,2,2,3,3,7,-->0,0,1,1,2,--0,0,1,1,2,--0,0,1,1,2,--0,0,1,1,2,2,3,3,7,7,--0,0,  
1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R22)  
0,0,1,1,2,2,3,3,8,-->0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,1,2,2,3,3,8,8,--0,0,1,1,  
2,2,3,3,8,--

List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
LEN=3) 0,0,1, : 0,0,2, :  
LEN=4) 0,0,1,1, :  
LEN=5) 0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, :  
LEN=6) 0,0,1,1,2,2, : 0,0,1,1,4,4, :  
LEN=7) 0,0,1,1,2,2,3, : 0,0,1,1,2,2,4, : 0,0,1,1,2,2,5, : 0,0,1,1,2,2,6, :  
LEN=8) 0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,5,5, : 0,0,1,1,2,2,6,6, :  
LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,3,5, : 0,0,1,1,2,2,3,3,6, :  
0,0,1,1,2,2,3,3,7, : 0,0,1,1,2,2,3,3,8, :  
LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,6,6, : 0,0,1,1,2,2,3,3,7,7, :  
0,0,1,1,2,2,3,3,8,8, :

Number new nodes in level n is given by : 1,1,2,1,3,2,4,3,5,4,

-----Class

--

Rules of  $T[L]$ :R1)  $0, -- \rightarrow 0, 0, -- 0, --$ R2)  $0, 0, -- \rightarrow 0, 0, 1, -- 0, 0, 2, --$ R3)  $0, 0, 1, -- \rightarrow 0, 0, 1, 1, -- 0, 0, 1, -- 0, 0, 2, --$ R4)  $0, 0, 2, -- \rightarrow 0, 0, 2, 1, -- 0, 0, -- 0, --$ R5)  $0, 0, 1, 1, -- \rightarrow 0, 0, 1, 1, 2, -- 0, 0, 1, 1, 3, -- 0, 0, 1, 1, 4, --$ R6)  $0, 0, 2, 1, -- \rightarrow 0, 0, 2, 1, 1, -- 0, 0, 2, 1, 2, --$ R7)  $0, 0, 1, 1, 2, -- \rightarrow 0, 0, 1, 1, 2, 2, -- 0, 0, 1, 1, 2, -- 0, 0, 1, 1, 3, -- 0, 0, 1, 1, 4, --$ R8)  $0, 0, 1, 1, 3, -- \rightarrow 0, 0, 2, 1, -- 0, 0, 1, 1, -- 0, 0, 1, -- 0, 0, 2, --$ R9)  $0, 0, 1, 1, 4, -- \rightarrow 0, 0, 1, 1, 4, 2, -- 0, 0, 1, 1, 4, 3, -- 0, 0, -- 0, --$ R10)  $0, 0, 2, 1, 1, -- \rightarrow 0, 0, 2, 1, 2, --$ R11)  $0, 0, 2, 1, 2, -- \rightarrow$ 

R12)

 $0, 0, 1, 1, 2, 2, -- \rightarrow 0, 0, 1, 1, 2, 2, 3, -- 0, 0, 1, 1, 2, 2, 4, -- 0, 0, 1, 1, 2, 2, 5, -- 0, 0, 1, 1, 2, 2, 6, --$ R13)  $0, 0, 1, 1, 4, 2, -- \rightarrow 0, 0, 1, 1, 4, 2, 2, -- 0, 0, 2, 1, -- 0, 0, 2, 1, 2, --$ R14)  $0, 0, 1, 1, 4, 3, -- \rightarrow 0, 0, 2, 1, -- 0, 0, 2, 1, 1, -- 0, 0, 2, 1, 2, --$ 

R15)

 $0, 0, 1, 1, 2, 2, 3, -- \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, -- 0, 0, 1, 1, 2, 2, 3, -- 0, 0, 1, 1, 2, 2, 4, -- 0, 0, 1, 1, 2, 2, 5, --$   
 $0, 0, 1, 1, 2, 2, 6, --$ R16)  $0, 0, 1, 1, 2, 2, 4, -- \rightarrow 0, 0, 2, 1, -- 0, 0, 1, 1, 2, 2, -- 0, 0, 1, 1, 2, -- 0, 0, 1, 1, 3, -- 0, 0, 1, 1, 4, --$ R17)  $0, 0, 1, 1, 2, 2, 5, -- \rightarrow 0, 0, 1, 1, 4, 2, -- 0, 0, 1, 1, 4, 3, -- 0, 0, 1, 1, -- 0, 0, 1, -- 0, 0, 2, --$ 

R18)

 $0, 0, 1, 1, 2, 2, 6, -- \rightarrow 0, 0, 1, 1, 2, 2, 6, 3, -- 0, 0, 1, 1, 2, 2, 6, 4, -- 0, 0, 1, 1, 2, 2, 6, 5, -- 0, 0, -- 0, --$ R19)  $0, 0, 1, 1, 4, 2, 2, -- \rightarrow 0, 0, 2, 1, -- 0, 0, 2, 1, 2, --$ 

R20)

 $0, 0, 1, 1, 2, 2, 3, 3, -- \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, -- 0, 0, 1, 1, 2, 2, 3, 3, 5, -- 0, 0, 1, 1, 2, 2, 3, 3, 6, -- 0, 0,$   
 $1, 1, 2, 2, 3, 3, 7, -- 0, 0, 1, 1, 2, 2, 3, 3, 8, --$ 

R21)

 $0, 0, 1, 1, 2, 2, 6, 3, -- \rightarrow 0, 0, 1, 1, 2, 2, 6, 3, 3, -- 0, 0, 1, 1, 4, 2, -- 0, 0, 1, 1, 4, 3, -- 0, 0, 2, 1, 2, --$ R22)  $0, 0, 1, 1, 2, 2, 6, 4, -- \rightarrow 0, 0, 2, 1, -- 0, 0, 1, 1, 4, 2, 2, -- 0, 0, 2, 1, -- 0, 0, 2, 1, 2, --$ R23)  $0, 0, 1, 1, 2, 2, 6, 5, -- \rightarrow 0, 0, 1, 1, 4, 2, -- 0, 0, 1, 1, 4, 3, -- 0, 0, 2, 1, 1, -- 0, 0, 2, 1, 2, --$ 

R24)

 $0, 0, 1, 1, 2, 2, 3, 3, 4, -- \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, 4, -- 0, 0, 1, 1, 2, 2, 3, 3, 4, -- 0, 0, 1, 1, 2, 2, 3, 3, 5, --$   
 $0, 0, 1, 1, 2, 2, 3, 3, 6, -- 0, 0, 1, 1, 2, 2, 3, 3, 7, -- 0, 0, 1, 1, 2, 2, 3, 3, 8, --$ 

R25)

 $0, 0, 1, 1, 2, 2, 3, 3, 5, -- \rightarrow 0, 0, 2, 1, -- 0, 0, 1, 1, 2, 2, 3, 3, -- 0, 0, 1, 1, 2, 2, 3, -- 0, 0, 1, 1, 2, 2, 4, -- 0,$   
 $0, 1, 1, 2, 2, 5, -- 0, 0, 1, 1, 2, 2, 6, --$ 

R26)

 $0, 0, 1, 1, 2, 2, 3, 3, 6, -- \rightarrow 0, 0, 1, 1, 4, 2, -- 0, 0, 1, 1, 4, 3, -- 0, 0, 1, 1, 2, 2, -- 0, 0, 1, 1, 2, -- 0, 0, 1, 1,$   
 $3, -- 0, 0, 1, 1, 4, --$ 

R27)

 $0, 0, 1, 1, 2, 2, 3, 3, 7, -- \rightarrow 0, 0, 1, 1, 2, 2, 6, 3, -- 0, 0, 1, 1, 2, 2, 6, 4, -- 0, 0, 1, 1, 2, 2, 6, 5, -- 0, 0, 1, 1,$   
 $-- 0, 0, 1, -- 0, 0, 2, --$ 

R28)

 $0, 0, 1, 1, 2, 2, 3, 3, 8, -- \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 8, 4, -- 0, 0, 1, 1, 2, 2, 3, 3, 8, 5, -- 0, 0, 1, 1, 2, 2, 3, 3, 8,$   
 $6, -- 0, 0, 1, 1, 2, 2, 3, 3, 8, 7, -- 0, 0, -- 0, --$

R29) 0,0,1,1,2,2,6,3,3,-->0,0,1,1,4,2,--0,0,1,1,4,3,--0,0,2,1,2,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, :

LEN=3) 0,0,1, : 0,0,2, :

LEN=4) 0,0,1,1, : 0,0,2,1, :

LEN=5) 0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, : 0,0,2,1,1, : 0,0,2,1,2, :

LEN=6) 0,0,1,1,2,2, : 0,0,1,1,4,2, : 0,0,1,1,4,3, :

LEN=7) 0,0,1,1,2,2,3, : 0,0,1,1,2,2,4, : 0,0,1,1,2,2,5, : 0,0,1,1,2,2,6, :

0,0,1,1,4,2,2, :

LEN=8) 0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,6,3, : 0,0,1,1,2,2,6,4, : 0,0,1,1,2,2,6,5, :

LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,3,5, : 0,0,1,1,2,2,3,3,6, :

0,0,1,1,2,2,3,3,7, : 0,0,1,1,2,2,3,3,8, : 0,0,1,1,2,2,6,3,3, :

LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,8,4, : 0,0,1,1,2,2,3,3,8,5, :

0,0,1,1,2,2,3,3,8,6, : 0,0,1,1,2,2,3,3,8,7, :

Number new nodes in level n is given by : 1,1,2,2,5,3,5,4,6,5,

-----Class

277-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][102][110][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,1,--0,0,2,--

R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--

R4) 0,0,2,-->0,0,2,1,--0,0,--0,0,2,3,--

R5) 0,0,1,1,-->0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--

R6) 0,0,2,1,-->0,0,2,1,1,--0,0,2,1,2,--

R7) 0,0,2,3,-->0,0,2,1,1,--0,0,--0,0,2,3,--

R8) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--

R9) 0,0,1,1,3,-->0,0,2,1,--0,0,1,1,--0,0,1,1,3,4,--0,0,1,1,3,5,--

R10) 0,0,1,1,4,-->0,0,2,1,--0,0,1,1,4,3,--0,0,--0,0,1,1,4,5,--

R11) 0,0,2,1,1,-->0,0,2,1,2,--

R12) 0,0,2,1,2,-->

R13)

0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--

R14) 0,0,1,1,3,4,-->0,0,2,1,1,--0,0,1,1,--0,0,1,1,3,4,--0,0,1,1,3,5,--

R15) 0,0,1,1,3,5,-->0,0,2,1,1,--0,0,1,1,4,3,--0,0,--0,0,1,1,4,5,--

R16) 0,0,1,1,4,3,-->0,0,2,1,1,--0,0,2,1,1,--0,0,2,1,2,--

R17) 0,0,1,1,4,5,-->0,0,2,1,1,--0,0,2,1,--0,0,--0,0,1,1,4,5,--

R18)

0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--

0,0,1,1,2,2,6,--

R19)

0,0,1,1,2,2,4,-->0,0,2,1,--0,0,1,1,2,2,--0,0,1,1,2,2,4,5,--0,0,1,1,2,2,4,6,--0,0,1,

1,2,2,4,7,--

R20)

0,0,1,1,2,2,5,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,--0,0,1,1,2,2,5,6,--0,0,1,1,2,2,5,

7,--

R21)  
0,0,1,1,2,2,6,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,6,5,--0,0,--0,0,1,1,2,2,6,7,--

R22)  
0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,  
1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R23)  
0,0,1,1,2,2,4,5,-->0,0,2,1,1,--0,0,1,1,2,2,--0,0,1,1,2,2,4,5,--0,0,1,1,2,2,4,6,--0,  
0,1,1,2,2,4,7,--

R24)  
0,0,1,1,2,2,4,6,-->0,0,2,1,1,--0,0,1,1,4,3,--0,0,1,1,--0,0,1,1,2,2,5,6,--0,0,1,1,2,  
2,5,7,--

R25)  
0,0,1,1,2,2,4,7,-->0,0,2,1,1,--0,0,1,1,4,3,--0,0,1,1,2,2,6,5,--0,0,--0,0,1,1,2,2,6,  
7,--

R26)  
0,0,1,1,2,2,5,6,-->0,0,2,1,1,--0,0,2,1,--0,0,1,1,--0,0,1,1,2,2,5,6,--0,0,1,1,2,2,5,  
7,--

R27)  
0,0,1,1,2,2,5,7,-->0,0,2,1,1,--0,0,2,1,--0,0,1,1,2,2,6,5,--0,0,--0,0,1,1,2,2,6,7,--

R28) 0,0,1,1,2,2,6,5,-->0,0,2,1,1,--0,0,2,1,--0,0,2,1,1,--0,0,2,1,2,--  
R29)  
0,0,1,1,2,2,6,7,-->0,0,2,1,1,--0,0,2,1,--0,0,1,1,2,2,6,7,5,--0,0,--0,0,1,1,2,2,6,7,  
--

R30)  
0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--  
0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R31)  
0,0,1,1,2,2,3,3,5,-->0,0,2,1,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,5,6,--0,0,1,1,2,2,  
3,3,5,7,--0,0,1,1,2,2,3,3,5,8,--0,0,1,1,2,2,3,3,5,9,--

R32)  
0,0,1,1,2,2,3,3,6,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,--0,0,1,1,2,2,3,3,6,7,--0,  
0,1,1,2,2,3,3,6,8,--0,0,1,1,2,2,3,3,6,9,--

R33)  
0,0,1,1,2,2,3,3,7,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,6,5,--0,0,1,1,--0,0,1,1,2,  
2,3,3,7,8,--0,0,1,1,2,2,3,3,7,9,--

R34)  
0,0,1,1,2,2,3,3,8,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,6,5,--0,0,1,1,2,2,3,3,8,7,  
--0,0,--0,0,1,1,2,2,3,3,8,9,--

R35) 0,0,1,1,2,2,6,7,5,-->0,0,2,1,1,--0,0,2,1,--0,0,2,1,2,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

LEN=3) 0,0,1,: 0,0,2,:

LEN=4) 0,0,1,1,: 0,0,2,1,: 0,0,2,3,:

LEN=5) 0,0,1,1,2,: 0,0,1,1,3,: 0,0,1,1,4,: 0,0,2,1,1,: 0,0,2,1,2,:

LEN=6) 0,0,1,1,2,2,: 0,0,1,1,3,4,: 0,0,1,1,3,5,: 0,0,1,1,4,3,: 0,0,1,1,4,5,:

LEN=7) 0,0,1,1,2,2,3,: 0,0,1,1,2,2,4,: 0,0,1,1,2,2,5,: 0,0,1,1,2,2,6,:

LEN=8) 0,0,1,1,2,2,3,3,: 0,0,1,1,2,2,4,5,: 0,0,1,1,2,2,4,6,: 0,0,1,1,2,2,4,7,:

0,0,1,1,2,2,5,6,: 0,0,1,1,2,2,5,7,: 0,0,1,1,2,2,6,5,: 0,0,1,1,2,2,6,7,:

LEN=9) 0,0,1,1,2,2,3,3,4,: 0,0,1,1,2,2,3,3,5,: 0,0,1,1,2,2,3,3,6,:



$0,0,1,1,2,2,3,3,7, : 0,0,1,1,2,2,3,3,8, : 0,0,1,1,2,2,6,7,5, :$   
 LEN=10)  $0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,5,6, : 0,0,1,1,2,2,3,3,5,7, :$   
 $0,0,1,1,2,2,3,3,5,8, : 0,0,1,1,2,2,3,3,5,9, : 0,0,1,1,2,2,3,3,6,7, :$   
 $0,0,1,1,2,2,3,3,6,8, : 0,0,1,1,2,2,3,3,6,9, : 0,0,1,1,2,2,3,3,7,8, :$   
 $0,0,1,1,2,2,3,3,7,9, : 0,0,1,1,2,2,3,3,8,7, : 0,0,1,1,2,2,3,3,8,9, :$   
 Number new nodes in level n is given by : 1,1,2,3,5,5,4,8,6,12,

-----Class

278-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][102][110][210]]$

-----

--

Rules of T[L]:

- R1)  $0, -->0,0, --0, --$
- R2)  $0,0, -->0,0,1, --0,0,2, --$
- R3)  $0,0,1, -->0,0,1,1, --0,0,1, --0,0,2, --$
- R4)  $0,0,2, -->0,0,2,1, --0,0, --0,0,2,3, --$
- R5)  $0,0,1,1, -->0,0,1,1,2, --0,0,1,1,3, --0,0,1,1,4, --$
- R6)  $0,0,2,1, -->0,0,2,1,1, --0,0,2,1,2, --$
- R7)  $0,0,2,3, -->0,0,2,1,1, --0,0, --0,0,2,3, --$
- R8)  $0,0,1,1,2, -->0,0,1,1,2,2, --0,0,1,1,2, --0,0,1,1,3, --0,0,1,1,4, --$
- R9)  $0,0,1,1,3, -->0,0,2,1, --0,0,1,1, --0,0,1,1,3,4, --0,0,1,1,3,5, --$
- R10)  $0,0,1,1,4, -->0,0,1,1,4,2, --0,0,2,1, --0,0, --0,0,1,1,4,5, --$
- R11)  $0,0,2,1,1, -->0,0,2,1,2, --$
- R12)  $0,0,2,1,2, -->$
- R13)  $0,0,1,1,2,2, -->0,0,1,1,2,2,3, --0,0,1,1,2,2,4, --0,0,1,1,2,2,5, --0,0,1,1,2,2,6, --$
- R14)  $0,0,1,1,3,4, -->0,0,2,1,1, --0,0,1,1, --0,0,1,1,3,4, --0,0,1,1,3,5, --$
- R15)  $0,0,1,1,3,5, -->0,0,2,1,1, --0,0,2,1, --0,0, --0,0,1,1,3,5,6, --$
- R16)  $0,0,1,1,4,2, -->0,0,1,1,4,2,2, --0,0,2,1, --0,0,2,1,2, --$
- R17)  $0,0,1,1,4,5, -->0,0,1,1,4,5,2, --0,0,2,1,1, --0,0, --0,0,1,1,4,5, --$
- R18)  $0,0,1,1,2,2,3, -->0,0,1,1,2,2,3,3, --0,0,1,1,2,2,3, --0,0,1,1,2,2,4, --0,0,1,1,2,2,5, --$   
 $0,0,1,1,2,2,6, --$
- R19)  $0,0,1,1,2,2,4, -->0,0,2,1, --0,0,1,1,2,2, --0,0,1,1,2,2,4,5, --0,0,1,1,2,2,4,6, --0,0,1,$   
 $1,2,2,4,7, --$
- R20)  $0,0,1,1,2,2,5, -->0,0,1,1,4,2, --0,0,2,1, --0,0,1,1, --0,0,1,1,2,2,5,6, --0,0,1,1,2,2,5,$   
 $7, --$
- R21)  $0,0,1,1,2,2,6, -->0,0,1,1,2,2,6,3, --0,0,1,1,4,2, --0,0,2,1, --0,0, --0,0,1,1,2,2,6,7, --$
- R22)  $0,0,1,1,3,5,6, -->0,0,2,1,1, --0,0,2,1,1, --0,0, --0,0,1,1,3,5,6, --$
- R23)  $0,0,1,1,4,2,2, -->0,0,2,1, --0,0,2,1,2, --$
- R24)  $0,0,1,1,4,5,2, -->0,0,1,1,4,5,2,2, --0,0,2,1,1, --$
- R25)  $0,0,1,1,2,2,3,3, -->0,0,1,1,2,2,3,3,4, --0,0,1,1,2,2,3,3,5, --0,0,1,1,2,2,3,3,6, --0,0,$   
 $1,1,2,2,3,3,7, --0,0,1,1,2,2,3,3,8, --$
- R26)  $0,0,1,1,2,2,4,5, -->0,0,2,1,1, --0,0,1,1,2,2, --0,0,1,1,2,2,4,5, --0,0,1,1,2,2,4,6, --0,$

0,1,1,2,2,4,7,--  
 R27) 0,0,1,1,2,2,4,6,-->0,0,2,1,1,--0,0,2,1,--0,0,1,1,--0,0,1,1,2,2,4,6,7,--0,0,1,1,2,2,4,6,8,--  
 R28) 0,0,1,1,2,2,4,7,-->0,0,2,1,1,--0,0,1,1,4,2,--0,0,2,1,--0,0,--0,0,1,1,2,2,4,7,8,--  
 R29) 0,0,1,1,2,2,5,6,-->0,0,1,1,4,5,2,--0,0,2,1,1,--0,0,1,1,--0,0,1,1,2,2,5,6,--0,0,1,1,2,2,5,7,--  
 R30) 0,0,1,1,2,2,5,7,-->0,0,1,1,4,5,2,--0,0,2,1,1,--0,0,2,1,--0,0,--0,0,1,1,2,2,5,7,8,--  
 R31) 0,0,1,1,2,2,6,3,-->0,0,1,1,2,2,6,3,3,--0,0,1,1,4,2,--0,0,2,1,--0,0,2,1,2,--  
 R32) 0,0,1,1,2,2,6,7,-->0,0,1,1,2,2,6,7,3,--0,0,1,1,4,5,2,--0,0,2,1,1,--0,0,--0,0,1,1,2,2,6,7,--  
 R33) 0,0,1,1,4,5,2,2,-->0,0,2,1,1,--  
 R34) 0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--  
 0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--  
 R35) 0,0,1,1,2,2,3,3,5,-->0,0,2,1,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,5,6,--0,0,1,1,2,2,3,3,5,7,--0,0,1,1,2,2,3,3,5,8,--0,0,1,1,2,2,3,3,5,9,--  
 R36) 0,0,1,1,2,2,3,3,6,-->0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,--0,0,1,1,2,2,3,3,6,7,--0,0,1,1,2,2,3,3,6,8,--0,0,1,1,2,2,3,3,6,9,--  
 R37) 0,0,1,1,2,2,3,3,7,-->0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,--0,0,1,1,2,2,3,3,7,8,--0,0,1,1,2,2,3,3,7,9,--  
 R38) 0,0,1,1,2,2,3,3,8,-->0,0,1,1,2,2,3,3,8,4,--0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,2,1,--0,0,--0,0,1,1,2,2,3,3,8,9,--  
 R39) 0,0,1,1,2,2,4,6,7,-->0,0,2,1,1,--0,0,2,1,1,--0,0,1,1,--0,0,1,1,2,2,4,6,7,--0,0,1,1,2,2,4,6,8,--  
 R40) 0,0,1,1,2,2,4,6,8,-->0,0,2,1,1,--0,0,2,1,1,--0,0,2,1,--0,0,--0,0,1,1,2,2,4,6,8,9,--  
 R41) 0,0,1,1,2,2,4,7,8,-->0,0,2,1,1,--0,0,1,1,4,5,2,--0,0,2,1,1,--0,0,--0,0,1,1,2,2,4,7,8,--  
 R42) 0,0,1,1,2,2,5,7,8,-->0,0,1,1,4,5,2,--0,0,2,1,1,--0,0,2,1,1,--0,0,--0,0,1,1,2,2,5,7,8,--  
 R43) 0,0,1,1,2,2,6,3,3,-->0,0,1,1,4,2,--0,0,2,1,--0,0,2,1,2,--  
 R44) 0,0,1,1,2,2,6,7,3,-->0,0,1,1,2,2,6,7,3,3,--0,0,1,1,4,5,2,--0,0,2,1,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, :  
 LEN=3) 0,0,1, : 0,0,2, :  
 LEN=4) 0,0,1,1, : 0,0,2,1, : 0,0,2,3, :  
 LEN=5) 0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, : 0,0,2,1,1, : 0,0,2,1,2, :

LEN=6) 0,0,1,1,2,2,: 0,0,1,1,3,4,: 0,0,1,1,3,5,: 0,0,1,1,4,2,: 0,0,1,1,4,5,:  
 LEN=7) 0,0,1,1,2,2,3,: 0,0,1,1,2,2,4,: 0,0,1,1,2,2,5,: 0,0,1,1,2,2,6,:  
 0,0,1,1,3,5,6,: 0,0,1,1,4,2,2,: 0,0,1,1,4,5,2,:  
 LEN=8) 0,0,1,1,2,2,3,3,: 0,0,1,1,2,2,4,5,: 0,0,1,1,2,2,4,6,: 0,0,1,1,2,2,4,7,:  
 0,0,1,1,2,2,5,6,: 0,0,1,1,2,2,5,7,: 0,0,1,1,2,2,6,3,: 0,0,1,1,2,2,6,7,:  
 0,0,1,1,4,5,2,2,:  
 LEN=9) 0,0,1,1,2,2,3,3,4,: 0,0,1,1,2,2,3,3,5,: 0,0,1,1,2,2,3,3,6,:  
 0,0,1,1,2,2,3,3,7,: 0,0,1,1,2,2,3,3,8,: 0,0,1,1,2,2,4,6,7,: 0,0,1,1,2,2,4,6,8,:  
 0,0,1,1,2,2,4,7,8,: 0,0,1,1,2,2,5,7,8,: 0,0,1,1,2,2,6,3,3,: 0,0,1,1,2,2,6,7,3,:  
 LEN=10) 0,0,1,1,2,2,3,3,4,4,: 0,0,1,1,2,2,3,3,5,6,: 0,0,1,1,2,2,3,3,5,7,:  
 0,0,1,1,2,2,3,3,5,8,: 0,0,1,1,2,2,3,3,5,9,: 0,0,1,1,2,2,3,3,6,7,:  
 0,0,1,1,2,2,3,3,6,8,: 0,0,1,1,2,2,3,3,6,9,: 0,0,1,1,2,2,3,3,7,8,:  
 0,0,1,1,2,2,3,3,7,9,: 0,0,1,1,2,2,3,3,8,4,: 0,0,1,1,2,2,3,3,8,9,:  
 0,0,1,1,2,2,4,6,8,9,: 0,0,1,1,2,2,6,7,3,3,:  
 Number new nodes in level n is given by : 1,1,2,3,5,5,7,9,11,14,

-----Class

279-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][102][120][201]]$

-----

--  
Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,--
- R2) 0,0,-->0,0,1,--0,0,2,--
- R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--
- R4) 0,0,2,-->0,0,2,1,--0,0,2,2,--0,--
- R5) 0,0,1,1,-->0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--
- R6) 0,0,2,1,-->0,0,2,1,1,--0,0,2,1,2,--
- R7) 0,0,2,2,-->0,0,2,1,1,--0,0,1,--0,0,2,--
- R8) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--
- R9) 0,0,1,1,3,-->0,0,2,1,--0,0,1,1,3,3,--0,0,1,--0,0,2,--
- R10) 0,0,1,1,4,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,4,4,--0,--
- R11) 0,0,2,1,1,-->0,0,2,1,2,--
- R12) 0,0,2,1,2,-->
- R13)
- 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--
- R14) 0,0,1,1,3,3,-->0,0,2,1,1,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--
- R15) 0,0,1,1,4,3,-->0,0,2,1,1,--0,0,2,1,--0,0,2,1,2,--
- R16) 0,0,1,1,4,4,-->0,0,2,1,1,--0,0,1,1,4,4,3,--0,0,1,--0,0,2,--
- R17)
- 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--
- 0,0,1,1,2,2,6,--
- R18)
- 0,0,1,1,2,2,4,-->0,0,2,1,--0,0,1,1,2,2,4,4,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--
- R19) 0,0,1,1,2,2,5,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,5,5,--0,0,1,--0,0,2,--
- R20)
- 0,0,1,1,2,2,6,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,6,5,--0,0,1,1,2,2,6,6,--0,--
- R21) 0,0,1,1,4,4,3,-->0,0,2,1,1,--0,0,1,1,4,4,3,3,--
- R22)
- 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,

1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--  
 R23) 0,0,1,1,2,2,4,4,-->0,0,2,1,1,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,  
 1,1,2,2,6,--  
 R24) 0,0,1,1,2,2,5,5,-->0,0,2,1,1,--0,0,1,1,4,4,3,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--  
 R25) 0,0,1,1,2,2,6,5,-->0,0,2,1,1,--0,0,1,1,4,4,3,--0,0,1,1,2,2,6,5,5,--0,0,2,1,2,--  
 R26) 0,0,1,1,2,2,6,6,-->0,0,2,1,1,--0,0,1,1,4,4,3,--0,0,1,1,2,2,6,6,5,--0,0,1,--0,0,2,--  
 R27) 0,0,1,1,4,4,3,3,-->0,0,2,1,1,--  
 R28) 0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--  
 0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--  
 R29) 0,0,1,1,2,2,3,3,5,-->0,0,2,1,--0,0,1,1,2,2,3,3,5,5,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,  
 --0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--  
 R30) 0,0,1,1,2,2,3,3,6,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,3,3,6,6,--0,0,1,1,2,--0,0,  
 1,1,3,--0,0,1,1,4,--  
 R31) 0,0,1,1,2,2,3,3,7,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,6,5,--0,0,1,1,2,2,3,3,7,7,  
 --0,0,1,--0,0,2,--  
 R32) 0,0,1,1,2,2,3,3,8,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,6,5,--0,0,1,1,2,2,3,3,8,7,  
 --0,0,1,1,2,2,3,3,8,8,--0,--  
 R33) 0,0,1,1,2,2,6,5,5,-->0,0,2,1,1,--0,0,1,1,4,4,3,--0,0,2,1,2,--  
 R34) 0,0,1,1,2,2,6,6,5,-->0,0,2,1,1,--0,0,1,1,4,4,3,--0,0,1,1,2,2,6,6,5,5,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, :  
 LEN=3) 0,0,1, : 0,0,2, :  
 LEN=4) 0,0,1,1, : 0,0,2,1, : 0,0,2,2, :  
 LEN=5) 0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, : 0,0,2,1,1, : 0,0,2,1,2, :  
 LEN=6) 0,0,1,1,2,2, : 0,0,1,1,3,3, : 0,0,1,1,4,3, : 0,0,1,1,4,4, :  
 LEN=7) 0,0,1,1,2,2,3, : 0,0,1,1,2,2,4, : 0,0,1,1,2,2,5, : 0,0,1,1,2,2,6, :  
 0,0,1,1,4,4,3, :  
 LEN=8) 0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,4,4, : 0,0,1,1,2,2,5,5, : 0,0,1,1,2,2,6,5, :  
 0,0,1,1,2,2,6,6, : 0,0,1,1,4,4,3,3, :  
 LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,3,5, : 0,0,1,1,2,2,3,3,6, :  
 0,0,1,1,2,2,3,3,7, : 0,0,1,1,2,2,3,3,8, : 0,0,1,1,2,2,6,5,5, : 0,0,1,1,2,2,6,6,5, :  
 LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,5,5, : 0,0,1,1,2,2,3,3,6,6, :  
 0,0,1,1,2,2,3,3,7,7, : 0,0,1,1,2,2,3,3,8,7, : 0,0,1,1,2,2,3,3,8,8, :  
 0,0,1,1,2,2,6,6,5,5, :  
 Number new nodes in level n is given by : 1,1,2,3,5,4,5,6,7,7,

-----Class

280-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][102][120][210]]$

-----

--

Rules of  $T[L]$ :

R1)  $0, -- \rightarrow 0, 0, -- 0, --$

R2)  $0, 0, -- \rightarrow 0, 0, 1, -- 0, 0, 2, --$

R3)  $0, 0, 1, -- \rightarrow 0, 0, 1, 1, -- 0, 0, 1, -- 0, 0, 2, --$

R4)  $0, 0, 2, -- \rightarrow 0, 0, 2, 1, -- 0, 0, 2, 2, -- 0, --$

R5)  $0, 0, 1, 1, -- \rightarrow 0, 0, 1, 1, 2, -- 0, 0, 1, 1, 3, -- 0, 0, 1, 1, 4, --$

R6)  $0, 0, 2, 1, -- \rightarrow 0, 0, 2, 1, 1, -- 0, 0, 2, 1, 2, --$

R7)  $0, 0, 2, 2, -- \rightarrow 0, 0, 2, 1, 1, -- 0, 0, 1, -- 0, 0, 2, --$

R8)  $0, 0, 1, 1, 2, -- \rightarrow 0, 0, 1, 1, 2, 2, -- 0, 0, 1, 1, 2, -- 0, 0, 1, 1, 3, -- 0, 0, 1, 1, 4, --$

R9)  $0, 0, 1, 1, 3, -- \rightarrow 0, 0, 2, 1, -- 0, 0, 1, 1, 3, 3, -- 0, 0, 1, -- 0, 0, 2, --$

R10)  $0, 0, 1, 1, 4, -- \rightarrow 0, 0, 1, 1, 4, 2, -- 0, 0, 2, 1, -- 0, 0, 1, 1, 4, 4, -- 0, --$

R11)  $0, 0, 2, 1, 1, -- \rightarrow 0, 0, 2, 1, 2, --$

R12)  $0, 0, 2, 1, 2, -- \rightarrow$

R13)

$0, 0, 1, 1, 2, 2, -- \rightarrow 0, 0, 1, 1, 2, 2, 3, -- 0, 0, 1, 1, 2, 2, 4, -- 0, 0, 1, 1, 2, 2, 5, -- 0, 0, 1, 1, 2, 2, 6, --$

R14)  $0, 0, 1, 1, 3, 3, -- \rightarrow 0, 0, 2, 1, 1, -- 0, 0, 1, 1, 2, -- 0, 0, 1, 1, 3, -- 0, 0, 1, 1, 4, --$

R15)  $0, 0, 1, 1, 4, 2, -- \rightarrow 0, 0, 1, 1, 4, 2, 2, -- 0, 0, 2, 1, -- 0, 0, 1, 1, 4, 2, 4, --$

R16)  $0, 0, 1, 1, 4, 4, -- \rightarrow 0, 0, 1, 1, 4, 4, 2, -- 0, 0, 2, 1, 1, -- 0, 0, 1, -- 0, 0, 2, --$

R17)

$0, 0, 1, 1, 2, 2, 3, -- \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, -- 0, 0, 1, 1, 2, 2, 3, -- 0, 0, 1, 1, 2, 2, 4, -- 0, 0, 1, 1, 2, 2, 5, --$   
 $0, 0, 1, 1, 2, 2, 6, --$

R18)

$0, 0, 1, 1, 2, 2, 4, -- \rightarrow 0, 0, 2, 1, -- 0, 0, 1, 1, 2, 2, 4, 4, -- 0, 0, 1, 1, 2, -- 0, 0, 1, 1, 3, -- 0, 0, 1, 1, 4, --$

R19)  $0, 0, 1, 1, 2, 2, 5, -- \rightarrow 0, 0, 1, 1, 4, 2, -- 0, 0, 2, 1, -- 0, 0, 1, 1, 2, 2, 5, 5, -- 0, 0, 1, -- 0, 0, 2, --$

R20)

$0, 0, 1, 1, 2, 2, 6, -- \rightarrow 0, 0, 1, 1, 2, 2, 6, 3, -- 0, 0, 1, 1, 4, 2, -- 0, 0, 2, 1, -- 0, 0, 1, 1, 2, 2, 6, 6, -- 0, --$

R21)  $0, 0, 1, 1, 4, 2, 2, -- \rightarrow 0, 0, 2, 1, -- 0, 0, 1, 1, 4, 2, 4, --$

R22)  $0, 0, 1, 1, 4, 2, 4, -- \rightarrow 0, 0, 2, 1, 1, --$

R23)  $0, 0, 1, 1, 4, 4, 2, -- \rightarrow 0, 0, 1, 1, 4, 2, 4, -- 0, 0, 2, 1, 1, --$

R24)

$0, 0, 1, 1, 2, 2, 3, 3, -- \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, -- 0, 0, 1, 1, 2, 2, 3, 3, 5, -- 0, 0, 1, 1, 2, 2, 3, 3, 6, -- 0, 0,$   
 $1, 1, 2, 2, 3, 3, 7, -- 0, 0, 1, 1, 2, 2, 3, 3, 8, --$

R25)

$0, 0, 1, 1, 2, 2, 4, 4, -- \rightarrow 0, 0, 2, 1, 1, -- 0, 0, 1, 1, 2, 2, 3, -- 0, 0, 1, 1, 2, 2, 4, -- 0, 0, 1, 1, 2, 2, 5, -- 0, 0,$   
 $1, 1, 2, 2, 6, --$

R26)

$0, 0, 1, 1, 2, 2, 5, 5, -- \rightarrow 0, 0, 1, 1, 4, 4, 2, -- 0, 0, 2, 1, 1, -- 0, 0, 1, 1, 2, -- 0, 0, 1, 1, 3, -- 0, 0, 1, 1, 4, --$

R27)

$0, 0, 1, 1, 2, 2, 6, 3, -- \rightarrow 0, 0, 1, 1, 2, 2, 6, 3, 3, -- 0, 0, 1, 1, 4, 2, -- 0, 0, 2, 1, -- 0, 0, 1, 1, 2, 2, 6, 3, 6, --$

R28)

$0, 0, 1, 1, 2, 2, 6, 6, -- \rightarrow 0, 0, 1, 1, 2, 2, 6, 6, 3, -- 0, 0, 1, 1, 4, 4, 2, -- 0, 0, 2, 1, 1, -- 0, 0, 1, -- 0, 0, 2, --$

R29)

$0, 0, 1, 1, 2, 2, 3, 3, 4, -- \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, 4, -- 0, 0, 1, 1, 2, 2, 3, 3, 4, -- 0, 0, 1, 1, 2, 2, 3, 3, 5, --$   
 $0, 0, 1, 1, 2, 2, 3, 3, 6, -- 0, 0, 1, 1, 2, 2, 3, 3, 7, -- 0, 0, 1, 1, 2, 2, 3, 3, 8, --$

R30)

$0, 0, 1, 1, 2, 2, 3, 3, 5, -- \rightarrow 0, 0, 2, 1, -- 0, 0, 1, 1, 2, 2, 3, 3, 5, 5, -- 0, 0, 1, 1, 2, 2, 3, -- 0, 0, 1, 1, 2, 2, 4,$   
 $-- 0, 0, 1, 1, 2, 2, 5, -- 0, 0, 1, 1, 2, 2, 6, --$

R31)

$0, 0, 1, 1, 2, 2, 3, 3, 6, -- \rightarrow 0, 0, 1, 1, 4, 2, -- 0, 0, 2, 1, -- 0, 0, 1, 1, 2, 2, 3, 3, 6, 6, -- 0, 0, 1, 1, 2, -- 0, 0,$

1,1,3,--0,0,1,1,4,--  
R32) 0,0,1,1,2,2,3,3,7,-->0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,3,3,7,7,  
--0,0,1,--0,0,2,--  
R33) 0,0,1,1,2,2,3,3,8,-->0,0,1,1,2,2,3,3,8,4,--0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,2,1,  
--0,0,1,1,2,2,3,3,8,8,--0,--  
R34) 0,0,1,1,2,2,6,3,3,-->0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,6,3,6,--  
R35) 0,0,1,1,2,2,6,3,6,-->0,0,1,1,4,4,2,--0,0,2,1,1,--  
R36) 0,0,1,1,2,2,6,6,3,-->0,0,1,1,2,2,6,3,6,--0,0,1,1,4,4,2,--0,0,2,1,1,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, :  
LEN=3) 0,0,1, : 0,0,2, :  
LEN=4) 0,0,1,1, : 0,0,2,1, : 0,0,2,2, :  
LEN=5) 0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, : 0,0,2,1,1, : 0,0,2,1,2, :  
LEN=6) 0,0,1,1,2,2, : 0,0,1,1,3,3, : 0,0,1,1,4,2, : 0,0,1,1,4,4, :  
LEN=7) 0,0,1,1,2,2,3, : 0,0,1,1,2,2,4, : 0,0,1,1,2,2,5, : 0,0,1,1,2,2,6, :  
0,0,1,1,4,2,2, : 0,0,1,1,4,2,4, : 0,0,1,1,4,4,2, :  
LEN=8) 0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,4,4, : 0,0,1,1,2,2,5,5, : 0,0,1,1,2,2,6,3, :  
0,0,1,1,2,2,6,6, :  
LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,3,5, : 0,0,1,1,2,2,3,3,6, :  
0,0,1,1,2,2,3,3,7, : 0,0,1,1,2,2,3,3,8, : 0,0,1,1,2,2,6,3,3, : 0,0,1,1,2,2,6,3,6, :  
0,0,1,1,2,2,6,6,3, :  
LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,5,5, : 0,0,1,1,2,2,3,3,6,6, :  
0,0,1,1,2,2,3,3,7,7, : 0,0,1,1,2,2,3,3,8,4, : 0,0,1,1,2,2,3,3,8,8, :  
Number new nodes in level n is given by : 1,1,2,3,5,4,7,5,8,6,

-----Class

281-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][102][201][210]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,1,--0,0,2,--  
R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--  
R4) 0,0,2,-->0,0,2,1,--0,0,2,2,--0,0,2,3,--  
R5) 0,0,1,1,-->0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--  
R6) 0,0,2,1,-->0,0,2,1,1,--0,0,2,1,2,--  
R7) 0,0,2,2,-->0,0,2,1,1,--0,0,2,2,3,--0,0,2,2,4,--  
R8) 0,0,2,3,-->0,0,2,1,1,--0,0,2,2,--0,0,2,3,--  
R9) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--  
R10) 0,0,1,1,3,-->0,0,2,1,--0,0,1,1,3,3,--0,0,2,2,3,--0,0,2,2,4,--  
R11) 0,0,1,1,4,-->0,0,2,1,--0,0,2,1,--0,0,1,1,4,4,--0,0,1,1,4,5,--  
R12) 0,0,2,1,1,-->0,0,2,1,2,--  
R13) 0,0,2,1,2,-->  
R14) 0,0,2,2,3,-->0,0,2,1,1,--0,0,1,1,3,3,--0,0,2,2,3,--0,0,2,2,4,--  
R15) 0,0,2,2,4,-->0,0,2,1,1,--0,0,2,1,--0,0,1,1,4,4,--0,0,1,1,4,5,--  
R16)

0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--  
R17) 0,0,1,1,3,3,-->0,0,2,1,1,--0,0,1,1,3,3,4,--0,0,1,1,3,3,5,--0,0,1,1,3,3,6,--  
R18) 0,0,1,1,4,4,-->0,0,2,1,1,--0,0,2,1,1,--0,0,1,1,4,4,5,--0,0,1,1,4,4,6,--  
R19) 0,0,1,1,4,5,-->0,0,2,1,1,--0,0,2,1,1,--0,0,1,1,4,4,--0,0,1,1,4,5,--  
R20)  
0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--  
0,0,1,1,2,2,6,--  
R21)  
0,0,1,1,2,2,4,-->0,0,2,1,--0,0,1,1,2,2,4,4,--0,0,1,1,3,3,4,--0,0,1,1,3,3,5,--0,0,1,  
1,3,3,6,--  
R22)  
0,0,1,1,2,2,5,-->0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,5,5,--0,0,1,1,4,4,5,--0,0,1,1,4,4,  
6,--  
R23)  
0,0,1,1,2,2,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,6,6,--0,0,1,1,2,2,6,7,--  
R24)  
0,0,1,1,3,3,4,-->0,0,2,1,1,--0,0,1,1,2,2,4,4,--0,0,1,1,3,3,4,--0,0,1,1,3,3,5,--0,0,  
1,1,3,3,6,--  
R25)  
0,0,1,1,3,3,5,-->0,0,2,1,1,--0,0,2,1,--0,0,1,1,2,2,5,5,--0,0,1,1,4,4,5,--0,0,1,1,4,  
4,6,--  
R26)  
0,0,1,1,3,3,6,-->0,0,2,1,1,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,6,6,--0,0,1,1,2,2,6,7,  
--  
R27)  
0,0,1,1,4,4,5,-->0,0,2,1,1,--0,0,2,1,1,--0,0,1,1,2,2,5,5,--0,0,1,1,4,4,5,--0,0,1,1,  
4,4,6,--  
R28)  
0,0,1,1,4,4,6,-->0,0,2,1,1,--0,0,2,1,1,--0,0,2,1,--0,0,1,1,2,2,6,6,--0,0,1,1,2,2,6,  
7,--  
R29)  
0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,  
1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--  
R30)  
0,0,1,1,2,2,4,4,-->0,0,2,1,1,--0,0,1,1,2,2,4,4,5,--0,0,1,1,2,2,4,4,6,--0,0,1,1,2,2,  
4,4,7,--0,0,1,1,2,2,4,4,8,--  
R31)  
0,0,1,1,2,2,5,5,-->0,0,2,1,1,--0,0,2,1,1,--0,0,1,1,2,2,5,5,6,--0,0,1,1,2,2,5,5,7,--  
0,0,1,1,2,2,5,5,8,--  
R32)  
0,0,1,1,2,2,6,6,-->0,0,2,1,1,--0,0,2,1,1,--0,0,2,1,1,--0,0,1,1,2,2,6,6,7,--0,0,1,1,  
2,2,6,6,8,--  
R33)  
0,0,1,1,2,2,6,7,-->0,0,2,1,1,--0,0,2,1,1,--0,0,2,1,1,--0,0,1,1,2,2,6,6,--0,0,1,1,2,  
2,6,7,--  
R34)  
0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--  
0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--  
R35)  
0,0,1,1,2,2,3,3,5,-->0,0,2,1,--0,0,1,1,2,2,3,3,5,5,--0,0,1,1,2,2,4,4,5,--0,0,1,1,2,

2,4,4,6,--0,0,1,1,2,2,4,4,7,--0,0,1,1,2,2,4,4,8,--  
 R36)  
 0,0,1,1,2,2,3,3,6,-->0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,3,3,6,6,--0,0,1,1,2,2,5,5,6,--  
 0,0,1,1,2,2,5,5,7,--0,0,1,1,2,2,5,5,8,--  
 R37)  
 0,0,1,1,2,2,3,3,7,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,3,3,7,7,--0,0,1,1,2,  
 2,6,6,7,--0,0,1,1,2,2,6,6,8,--  
 R38)  
 0,0,1,1,2,2,3,3,8,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,3,3,8,8,--  
 0,0,1,1,2,2,3,3,8,9,--  
 R39)  
 0,0,1,1,2,2,4,4,5,-->0,0,2,1,1,--0,0,1,1,2,2,3,3,5,5,--0,0,1,1,2,2,4,4,5,--0,0,1,1,  
 2,2,4,4,6,--0,0,1,1,2,2,4,4,7,--0,0,1,1,2,2,4,4,8,--  
 R40)  
 0,0,1,1,2,2,4,4,6,-->0,0,2,1,1,--0,0,2,1,--0,0,1,1,2,2,3,3,6,6,--0,0,1,1,2,2,5,5,6,  
 --0,0,1,1,2,2,5,5,7,--0,0,1,1,2,2,5,5,8,--  
 R41)  
 0,0,1,1,2,2,4,4,7,-->0,0,2,1,1,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,3,3,7,7,--0,0,1,1,  
 2,2,6,6,7,--0,0,1,1,2,2,6,6,8,--  
 R42)  
 0,0,1,1,2,2,4,4,8,-->0,0,2,1,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,3,3,8,8,  
 --0,0,1,1,2,2,3,3,8,9,--  
 R43)  
 0,0,1,1,2,2,5,5,6,-->0,0,2,1,1,--0,0,2,1,1,--0,0,1,1,2,2,3,3,6,6,--0,0,1,1,2,2,5,5,  
 6,--0,0,1,1,2,2,5,5,7,--0,0,1,1,2,2,5,5,8,--  
 R44)  
 0,0,1,1,2,2,5,5,7,-->0,0,2,1,1,--0,0,2,1,1,--0,0,2,1,--0,0,1,1,2,2,3,3,7,7,--0,0,1,  
 1,2,2,6,6,7,--0,0,1,1,2,2,6,6,8,--  
 R45)  
 0,0,1,1,2,2,5,5,8,-->0,0,2,1,1,--0,0,2,1,1,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,3,3,8,  
 8,--0,0,1,1,2,2,3,3,8,9,--  
 R46)  
 0,0,1,1,2,2,6,6,7,-->0,0,2,1,1,--0,0,2,1,1,--0,0,2,1,1,--0,0,1,1,2,2,3,3,7,7,--0,0,  
 1,1,2,2,6,6,7,--0,0,1,1,2,2,6,6,8,--  
 R47)  
 0,0,1,1,2,2,6,6,8,-->0,0,2,1,1,--0,0,2,1,1,--0,0,2,1,1,--0,0,2,1,--0,0,1,1,2,2,3,3,  
 8,8,--0,0,1,1,2,2,3,3,8,9,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, :  
 LEN=3) 0,0,1, : 0,0,2, :  
 LEN=4) 0,0,1,1, : 0,0,2,1, : 0,0,2,2, : 0,0,2,3, :  
 LEN=5) 0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, : 0,0,2,1,1, : 0,0,2,1,2, : 0,0,2,2,3, :  
 0,0,2,2,4, :  
 LEN=6) 0,0,1,1,2,2, : 0,0,1,1,3,3, : 0,0,1,1,4,4, : 0,0,1,1,4,5, :  
 LEN=7) 0,0,1,1,2,2,3, : 0,0,1,1,2,2,4, : 0,0,1,1,2,2,5, : 0,0,1,1,2,2,6, :  
 0,0,1,1,3,3,4, : 0,0,1,1,3,3,5, : 0,0,1,1,3,3,6, : 0,0,1,1,4,4,5, : 0,0,1,1,4,4,6, :  
 LEN=8) 0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,4,4, : 0,0,1,1,2,2,5,5, : 0,0,1,1,2,2,6,6, :  
 0,0,1,1,2,2,6,7, :  
 LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,3,5, : 0,0,1,1,2,2,3,3,6, :



$0,0,1,1,2,2,3,3,7, : 0,0,1,1,2,2,3,3,8, : 0,0,1,1,2,2,4,4,5, : 0,0,1,1,2,2,4,4,6, :$   
 $0,0,1,1,2,2,4,4,7, : 0,0,1,1,2,2,4,4,8, : 0,0,1,1,2,2,5,5,6, : 0,0,1,1,2,2,5,5,7, :$   
 $0,0,1,1,2,2,5,5,8, : 0,0,1,1,2,2,6,6,7, : 0,0,1,1,2,2,6,6,8, :$   
 LEN=10)  $0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,5,5, : 0,0,1,1,2,2,3,3,6,6, :$   
 $0,0,1,1,2,2,3,3,7,7, : 0,0,1,1,2,2,3,3,8,8, : 0,0,1,1,2,2,3,3,8,9, :$   
 Number new nodes in level n is given by : 1,1,2,4,7,4,9,5,14,6,

-----Class

282-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][110][120][201]]$

-----

--

Rules of T[L]:

- R1)  $0, -->0,0, --0, --$
- R2)  $0,0, -->0,0,1, --0,0,2, --$
- R3)  $0,0,1, -->0,0,1,1, --0,0,1, --0,0,2, --$
- R4)  $0,0,2, -->0,0,2,1, --0,0, --0, --$
- R5)  $0,0,1,1, -->0,0,1,1,2, --0,0,1,1,3, --0,0,1,1,4, --$
- R6)  $0,0,2,1, -->0,0,1,1,2, --0,0,1,1, --0,0,1, --0,0,2, --$
- R7)  $0,0,1,1,2, -->0,0,1,1,2,2, --0,0,1,1,2, --0,0,1,1,3, --0,0,1,1,4, --$
- R8)  $0,0,1,1,3, -->0,0,1,1,3,2, --0,0,1,1, --0,0,1, --0,0,2, --$
- R9)  $0,0,1,1,4, -->0,0,2,1, --0,0,1,1,4,3, --0,0, --0, --$
- R10)
- $0,0,1,1,2,2, -->0,0,1,1,2,2,3, --0,0,1,1,2,2,4, --0,0,1,1,2,2,5, --0,0,1,1,2,2,6, --$
- R11)
- $0,0,1,1,3,2, -->0,0,1,1,2,2,3, --0,0,1,1,2,2, --0,0,1,1,2, --0,0,1,1,3, --0,0,1,1,4, --$
- R12)  $0,0,1,1,4,3, -->0,0,1,1,3,2, --0,0,1,1,2, --0,0,1,1, --0,0,1, --0,0,2, --$
- R13)
- $0,0,1,1,2,2,3, -->0,0,1,1,2,2,3,3, --0,0,1,1,2,2,3, --0,0,1,1,2,2,4, --0,0,1,1,2,2,5, --$
- $0,0,1,1,2,2,6, --$
- R14)
- $0,0,1,1,2,2,4, -->0,0,1,1,2,2,4,3, --0,0,1,1,2,2, --0,0,1,1,2, --0,0,1,1,3, --0,0,1,1,4, --$
- 
- R15)  $0,0,1,1,2,2,5, -->0,0,1,1,3,2, --0,0,1,1,2,2,5,4, --0,0,1,1, --0,0,1, --0,0,2, --$
- R16)  $0,0,1,1,2,2,6, -->0,0,2,1, --0,0,1,1,4,3, --0,0,1,1,2,2,6,5, --0,0, --0, --$
- R17)
- $0,0,1,1,2,2,3,3, -->0,0,1,1,2,2,3,3,4, --0,0,1,1,2,2,3,3,5, --0,0,1,1,2,2,3,3,6, --0,0, --$
- $1,1,2,2,3,3,7, --0,0,1,1,2,2,3,3,8, --$
- R18)
- $0,0,1,1,2,2,4,3, -->0,0,1,1,2,2,3,3,4, --0,0,1,1,2,2,3,3, --0,0,1,1,2,2,3, --0,0,1,1,2, --$
- $2,4, --0,0,1,1,2,2,5, --0,0,1,1,2,2,6, --$
- R19)
- $0,0,1,1,2,2,5,4, -->0,0,1,1,2,2,4,3, --0,0,1,1,2,2,3, --0,0,1,1,2,2, --0,0,1,1,2, --0,0, --$
- $1,1,3, --0,0,1,1,4, --$
- R20)
- $0,0,1,1,2,2,6,5, -->0,0,1,1,3,2, --0,0,1,1,2,2,5,4, --0,0,1,1,2, --0,0,1,1, --0,0,1, --0, --$
- $0,2, --$
- R21)
- $0,0,1,1,2,2,3,3,4, -->0,0,1,1,2,2,3,3,4,4, --0,0,1,1,2,2,3,3,4, --0,0,1,1,2,2,3,3,5, --$
- $0,0,1,1,2,2,3,3,6, --0,0,1,1,2,2,3,3,7, --0,0,1,1,2,2,3,3,8, --$

R22)  
 $0,0,1,1,2,2,3,3,5, \rightarrow 0,0,1,1,2,2,3,3,5,4, \rightarrow 0,0,1,1,2,2,3,3, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2,2,4, \rightarrow 0,0,1,1,2,2,5, \rightarrow 0,0,1,1,2,2,6, \rightarrow$

R23)  
 $0,0,1,1,2,2,3,3,6, \rightarrow 0,0,1,1,2,2,4,3, \rightarrow 0,0,1,1,2,2,3,3,6,5, \rightarrow 0,0,1,1,2,2, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1,1,3, \rightarrow 0,0,1,1,4, \rightarrow$

R24)  
 $0,0,1,1,2,2,3,3,7, \rightarrow 0,0,1,1,3,2, \rightarrow 0,0,1,1,2,2,5,4, \rightarrow 0,0,1,1,2,2,3,3,7,6, \rightarrow 0,0,1,1, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$

R25)  
 $0,0,1,1,2,2,3,3,8, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,4,3, \rightarrow 0,0,1,1,2,2,6,5, \rightarrow 0,0,1,1,2,2,3,3,8,7, \rightarrow 0,0, \rightarrow 0, \rightarrow$

List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, :  
 LEN=3) 0,0,1, : 0,0,2, :  
 LEN=4) 0,0,1,1, : 0,0,2,1, :  
 LEN=5) 0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, :  
 LEN=6) 0,0,1,1,2,2, : 0,0,1,1,3,2, : 0,0,1,1,4,3, :  
 LEN=7) 0,0,1,1,2,2,3, : 0,0,1,1,2,2,4, : 0,0,1,1,2,2,5, : 0,0,1,1,2,2,6, :  
 LEN=8) 0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,4,3, : 0,0,1,1,2,2,5,4, : 0,0,1,1,2,2,6,5, :  
 LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,3,5, : 0,0,1,1,2,2,3,3,6, :  
 $0,0,1,1,2,2,3,3,7, : 0,0,1,1,2,2,3,3,8, :$   
 LEN=10)  $0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,5,4, : 0,0,1,1,2,2,3,3,6,5, : 0,0,1,1,2,2,3,3,7,6, : 0,0,1,1,2,2,3,3,8,7, :$   
 Number new nodes in level n is given by : 1,1,2,2,3,3,4,4,5,5,

-----Class

283-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][110][120][210]]$

-----

--

Rules of T[L]:

R1)  $0, \rightarrow 0,0, \rightarrow 0, \rightarrow$   
 R2)  $0,0, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$   
 R3)  $0,0,1, \rightarrow 0,0,1,1, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$   
 R4)  $0,0,2, \rightarrow 0,0,2,1, \rightarrow 0,0, \rightarrow 0, \rightarrow$   
 R5)  $0,0,1,1, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1,1,3, \rightarrow 0,0,1,1,4, \rightarrow$   
 R6)  $0,0,2,1, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1,1, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$   
 R7)  $0,0,1,1,2, \rightarrow 0,0,1,1,2,2, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1,1,3, \rightarrow 0,0,1,1,4, \rightarrow$   
 R8)  $0,0,1,1,3, \rightarrow 0,0,1,1,3,2, \rightarrow 0,0,1,1, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$   
 R9)  $0,0,1,1,4, \rightarrow 0,0,1,1,4,2, \rightarrow 0,0,2,1, \rightarrow 0,0, \rightarrow 0, \rightarrow$   
 R10)  
 $0,0,1,1,2,2, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2,2,4, \rightarrow 0,0,1,1,2,2,5, \rightarrow 0,0,1,1,2,2,6, \rightarrow$   
 R11)  
 $0,0,1,1,3,2, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2,2, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1,1,3, \rightarrow 0,0,1,1,4, \rightarrow$   
 R12)  $0,0,1,1,4,2, \rightarrow 0,0,1,1,2,2,4, \rightarrow 0,0,1,1,3,2, \rightarrow 0,0,1,1, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$   
 R13)  
 $0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2,2,3,3, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2,2,4, \rightarrow 0,0,1,1,2,2,5, \rightarrow$   
 $0,0,1,1,2,2,6, \rightarrow$

R14)  
 $0,0,1,1,2,2,4, \rightarrow 0,0,1,1,2,2,4,3, \rightarrow 0,0,1,1,2,2, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1,1,3, \rightarrow 0,0,1,1,4, \rightarrow$   
 $\rightarrow$

R15)  $0,0,1,1,2,2,5, \rightarrow 0,0,1,1,2,2,5,3, \rightarrow 0,0,1,1,3,2, \rightarrow 0,0,1,1, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$

R16)  $0,0,1,1,2,2,6, \rightarrow 0,0,1,1,2,2,6,3, \rightarrow 0,0,1,1,4,2, \rightarrow 0,0,2,1, \rightarrow 0,0, \rightarrow 0, \rightarrow$

R17)  
 $0,0,1,1,2,2,3,3, \rightarrow 0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3,3,5, \rightarrow 0,0,1,1,2,2,3,3,6, \rightarrow 0,0, \rightarrow$   
 $1,1,2,2,3,3,7, \rightarrow 0,0,1,1,2,2,3,3,8, \rightarrow$

R18)  
 $0,0,1,1,2,2,4,3, \rightarrow 0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3,3, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2, \rightarrow$   
 $2,4, \rightarrow 0,0,1,1,2,2,5, \rightarrow 0,0,1,1,2,2,6, \rightarrow$

R19)  
 $0,0,1,1,2,2,5,3, \rightarrow 0,0,1,1,2,2,3,3,5, \rightarrow 0,0,1,1,2,2,4,3, \rightarrow 0,0,1,1,2,2, \rightarrow 0,0,1,1,2, \rightarrow$   
 $0,0,1,1,3, \rightarrow 0,0,1,1,4, \rightarrow$

R20)  
 $0,0,1,1,2,2,6,3, \rightarrow 0,0,1,1,2,2,3,3,6, \rightarrow 0,0,1,1,2,2,5,3, \rightarrow 0,0,1,1,3,2, \rightarrow 0,0,1,1, \rightarrow 0, \rightarrow$   
 $0,1, \rightarrow 0,0,2, \rightarrow$

R21)  
 $0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3,3,4,4, \rightarrow 0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3,3,5, \rightarrow$   
 $0,0,1,1,2,2,3,3,6, \rightarrow 0,0,1,1,2,2,3,3,7, \rightarrow 0,0,1,1,2,2,3,3,8, \rightarrow$

R22)  
 $0,0,1,1,2,2,3,3,5, \rightarrow 0,0,1,1,2,2,3,3,5,4, \rightarrow 0,0,1,1,2,2,3,3, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1, \rightarrow$   
 $1,2,2,4, \rightarrow 0,0,1,1,2,2,5, \rightarrow 0,0,1,1,2,2,6, \rightarrow$

R23)  
 $0,0,1,1,2,2,3,3,6, \rightarrow 0,0,1,1,2,2,3,3,6,4, \rightarrow 0,0,1,1,2,2,4,3, \rightarrow 0,0,1,1,2,2, \rightarrow 0,0,1,1, \rightarrow$   
 $2, \rightarrow 0,0,1,1,3, \rightarrow 0,0,1,1,4, \rightarrow$

R24)  
 $0,0,1,1,2,2,3,3,7, \rightarrow 0,0,1,1,2,2,3,3,7,4, \rightarrow 0,0,1,1,2,2,5,3, \rightarrow 0,0,1,1,3,2, \rightarrow 0,0,1,1, \rightarrow$   
 $\rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$

R25)  
 $0,0,1,1,2,2,3,3,8, \rightarrow 0,0,1,1,2,2,3,3,8,4, \rightarrow 0,0,1,1,2,2,6,3, \rightarrow 0,0,1,1,4,2, \rightarrow 0,0,2,1, \rightarrow$   
 $\rightarrow 0,0, \rightarrow 0, \rightarrow$

List of different nodes in  $T[L]$

LEN=1)  $0, :$   
 LEN=2)  $0,0, :$   
 LEN=3)  $0,0,1, : 0,0,2, :$   
 LEN=4)  $0,0,1,1, : 0,0,2,1, :$   
 LEN=5)  $0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, :$   
 LEN=6)  $0,0,1,1,2,2, : 0,0,1,1,3,2, : 0,0,1,1,4,2, :$   
 LEN=7)  $0,0,1,1,2,2,3, : 0,0,1,1,2,2,4, : 0,0,1,1,2,2,5, : 0,0,1,1,2,2,6, :$   
 LEN=8)  $0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,4,3, : 0,0,1,1,2,2,5,3, : 0,0,1,1,2,2,6,3, :$   
 LEN=9)  $0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,3,5, : 0,0,1,1,2,2,3,3,6, :$   
 $0,0,1,1,2,2,3,3,7, : 0,0,1,1,2,2,3,3,8, :$   
 LEN=10)  $0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,5,4, : 0,0,1,1,2,2,3,3,6,4, :$   
 $0,0,1,1,2,2,3,3,7,4, : 0,0,1,1,2,2,3,3,8,4, :$   
 Number new nodes in level  $n$  is given by :  $1,1,2,2,3,3,4,4,5,5,$

-----Class

284-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][110][201][210]]$

-----  
--  
Rules of T[L]:

R1)  $0, \rightarrow 0, 0, \rightarrow 0, \rightarrow$

R2)  $0, 0, \rightarrow 0, 0, 1, \rightarrow 0, 0, 2, \rightarrow$

R3)  $0, 0, 1, \rightarrow 0, 0, 1, 1, \rightarrow 0, 0, 1, \rightarrow 0, 0, 2, \rightarrow$

R4)  $0, 0, 2, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, \rightarrow 0, 0, 2, \rightarrow$

R5)  $0, 0, 1, 1, \rightarrow 0, 0, 1, 1, 2, \rightarrow 0, 0, 1, 1, 3, \rightarrow 0, 0, 1, 1, 4, \rightarrow$

R6)  $0, 0, 2, 1, \rightarrow 0, 0, 1, 1, 2, \rightarrow 0, 0, 1, 1, \rightarrow 0, 0, 1, \rightarrow 0, 0, 2, \rightarrow$

R7)  $0, 0, 1, 1, 2, \rightarrow 0, 0, 1, 1, 2, 2, \rightarrow 0, 0, 1, 1, 2, \rightarrow 0, 0, 1, 1, 3, \rightarrow 0, 0, 1, 1, 4, \rightarrow$

R8)  $0, 0, 1, 1, 3, \rightarrow 0, 0, 1, 1, 3, 2, \rightarrow 0, 0, 1, 1, \rightarrow 0, 0, 1, 1, 3, \rightarrow 0, 0, 1, 1, 4, \rightarrow$

R9)  $0, 0, 1, 1, 4, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, \rightarrow 0, 0, 1, 1, 4, \rightarrow$

R10)

$0, 0, 1, 1, 2, 2, \rightarrow 0, 0, 1, 1, 2, 2, 3, \rightarrow 0, 0, 1, 1, 2, 2, 4, \rightarrow 0, 0, 1, 1, 2, 2, 5, \rightarrow 0, 0, 1, 1, 2, 2, 6, \rightarrow$

R11)

$0, 0, 1, 1, 3, 2, \rightarrow 0, 0, 1, 1, 2, 2, 3, \rightarrow 0, 0, 1, 1, 2, 2, \rightarrow 0, 0, 1, 1, 2, \rightarrow 0, 0, 1, 1, 3, \rightarrow 0, 0, 1, 1, 4, \rightarrow$

R12)

$0, 0, 1, 1, 2, 2, 3, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, \rightarrow 0, 0, 1, 1, 2, 2, 3, \rightarrow 0, 0, 1, 1, 2, 2, 4, \rightarrow 0, 0, 1, 1, 2, 2, 5, \rightarrow$   
 $0, 0, 1, 1, 2, 2, 6, \rightarrow$

R13)

$0, 0, 1, 1, 2, 2, 4, \rightarrow 0, 0, 1, 1, 2, 2, 4, 3, \rightarrow 0, 0, 1, 1, 2, 2, \rightarrow 0, 0, 1, 1, 2, 2, 4, \rightarrow 0, 0, 1, 1, 2, 2, 5, \rightarrow 0,$   
 $0, 1, 1, 2, 2, 6, \rightarrow$

R14)

$0, 0, 1, 1, 2, 2, 5, \rightarrow 0, 0, 1, 1, 3, 2, \rightarrow 0, 0, 1, 1, 3, 2, \rightarrow 0, 0, 1, 1, \rightarrow 0, 0, 1, 1, 2, 2, 5, \rightarrow 0, 0, 1, 1, 2, 2,$   
 $6, \rightarrow$

R15)  $0, 0, 1, 1, 2, 2, 6, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, \rightarrow 0, 0, 1, 1, 2, 2, 6, \rightarrow$

R16)

$0, 0, 1, 1, 2, 2, 3, 3, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 5, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 6, \rightarrow 0, 0,$   
 $1, 1, 2, 2, 3, 3, 7, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 8, \rightarrow$

R17)

$0, 0, 1, 1, 2, 2, 4, 3, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, \rightarrow 0, 0, 1, 1, 2, 2, 3, \rightarrow 0, 0, 1, 1, 2,$   
 $2, 4, \rightarrow 0, 0, 1, 1, 2, 2, 5, \rightarrow 0, 0, 1, 1, 2, 2, 6, \rightarrow$

R18)

$0, 0, 1, 1, 2, 2, 3, 3, 4, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, 4, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 5, \rightarrow$   
 $0, 0, 1, 1, 2, 2, 3, 3, 6, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 7, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 8, \rightarrow$

R19)

$0, 0, 1, 1, 2, 2, 3, 3, 5, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 5, 4, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 5, \rightarrow 0,$   
 $0, 1, 1, 2, 2, 3, 3, 6, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 7, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 8, \rightarrow$

R20)

$0, 0, 1, 1, 2, 2, 3, 3, 6, \rightarrow 0, 0, 1, 1, 2, 2, 4, 3, \rightarrow 0, 0, 1, 1, 2, 2, 4, 3, \rightarrow 0, 0, 1, 1, 2, 2, \rightarrow 0, 0, 1, 1, 2, 2,$   
 $3, 3, 6, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 7, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 8, \rightarrow$

R21)

$0, 0, 1, 1, 2, 2, 3, 3, 7, \rightarrow 0, 0, 1, 1, 3, 2, \rightarrow 0, 0, 1, 1, 3, 2, \rightarrow 0, 0, 1, 1, 3, 2, \rightarrow 0, 0, 1, 1, \rightarrow 0, 0, 1, 1, 2,$   
 $2, 3, 3, 7, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 8, \rightarrow$

R22)

$0, 0, 1, 1, 2, 2, 3, 3, 8, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3,$   
 $8, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 0, :$

LEN=3) 0,0,1,: 0,0,2,:  
 LEN=4) 0,0,1,1,: 0,0,2,1,:  
 LEN=5) 0,0,1,1,2,: 0,0,1,1,3,: 0,0,1,1,4,:  
 LEN=6) 0,0,1,1,2,2,: 0,0,1,1,3,2,:  
 LEN=7) 0,0,1,1,2,2,3,: 0,0,1,1,2,2,4,: 0,0,1,1,2,2,5,: 0,0,1,1,2,2,6,:  
 LEN=8) 0,0,1,1,2,2,3,3,: 0,0,1,1,2,2,4,3,:  
 LEN=9) 0,0,1,1,2,2,3,3,4,: 0,0,1,1,2,2,3,3,5,: 0,0,1,1,2,2,3,3,6,:  
 0,0,1,1,2,2,3,3,7,: 0,0,1,1,2,2,3,3,8,:  
 LEN=10) 0,0,1,1,2,2,3,3,4,4,: 0,0,1,1,2,2,3,3,5,4,:  
 Number new nodes in level n is given by : 1,1,2,2,3,2,4,2,5,2,

-----Class

285-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][120][201][210]]$

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,--
- R2) 0,0,-->0,0,1,--0,0,2,--
- R3) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--
- R4) 0,0,2,-->0,0,2,1,--0,0,2,2,--0,--
- R5) 0,0,1,1,-->0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--
- R6) 0,0,2,1,-->0,0,1,1,2,--0,0,1,1,--0,0,1,--0,0,2,--
- R7) 0,0,2,2,-->0,0,1,1,2,--0,0,1,--0,0,2,--
- R8) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--
- R9) 0,0,1,1,3,-->0,0,1,1,3,2,--0,0,1,1,3,3,--0,0,1,--0,0,2,--
- R10) 0,0,1,1,4,-->0,0,2,1,--0,0,2,1,--0,0,1,1,4,4,--0,--
- R11) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--
- R12) 0,0,1,1,3,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--
- R13) 0,0,1,1,3,3,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--
- R14) 0,0,1,1,4,4,-->0,0,1,1,2,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R15) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--
- R16) 0,0,1,1,2,2,4,-->0,0,1,1,2,2,4,3,--0,0,1,1,2,2,4,4,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--
- R17) 0,0,1,1,2,2,5,-->0,0,1,1,3,2,--0,0,1,1,3,2,--0,0,1,1,2,2,5,5,--0,0,1,--0,0,2,--
- R18) 0,0,1,1,2,2,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,6,6,--0,--
- R19) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--
- R20) 0,0,1,1,2,2,4,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--
- R21) 0,0,1,1,2,2,4,4,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,

5,--0,0,1,1,2,2,6,--  
R22)  
0,0,1,1,2,2,5,5,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--  
R23) 0,0,1,1,2,2,6,6,-->0,0,1,1,2,--0,0,1,1,2,--0,0,1,1,2,--0,0,1,--0,0,2,--  
R24)  
0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--  
0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--  
R25)  
0,0,1,1,2,2,3,3,5,-->0,0,1,1,2,2,3,3,5,4,--0,0,1,1,2,2,3,3,5,5,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--  
R26)  
0,0,1,1,2,2,3,3,6,-->0,0,1,1,2,2,4,3,--0,0,1,1,2,2,4,3,--0,0,1,1,2,2,3,3,6,6,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--  
R27)  
0,0,1,1,2,2,3,3,7,-->0,0,1,1,3,2,--0,0,1,1,3,2,--0,0,1,1,3,2,--0,0,1,1,2,2,3,3,7,7,--0,0,1,--0,0,2,--  
R28)  
0,0,1,1,2,2,3,3,8,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,3,3,8,8,--0,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, :  
LEN=3) 0,0,1, : 0,0,2, :  
LEN=4) 0,0,1,1, : 0,0,2,1, : 0,0,2,2, :  
LEN=5) 0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, :  
LEN=6) 0,0,1,1,2,2, : 0,0,1,1,3,2, : 0,0,1,1,3,3, : 0,0,1,1,4,4, :  
LEN=7) 0,0,1,1,2,2,3, : 0,0,1,1,2,2,4, : 0,0,1,1,2,2,5, : 0,0,1,1,2,2,6, :  
LEN=8) 0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,4,3, : 0,0,1,1,2,2,4,4, : 0,0,1,1,2,2,5,5, :  
0,0,1,1,2,2,6,6, :  
LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,3,5, : 0,0,1,1,2,2,3,3,6, :  
0,0,1,1,2,2,3,3,7, : 0,0,1,1,2,2,3,3,8, :  
LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,5,4, : 0,0,1,1,2,2,3,3,5,5, :  
0,0,1,1,2,2,3,3,6,6, : 0,0,1,1,2,2,3,3,7,7, : 0,0,1,1,2,2,3,3,8,8, :  
Number new nodes in level n is given by : 1,1,2,3,3,4,4,5,5,6,

-----Class

286-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][021][100]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,1,--0,0,1,--  
R3) 0,1,-->0,0,1,--  
R4) 0,0,1,-->

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,1, :

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

287-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][021][101]]$

-----

--

Rules of T[L]:

R1)  $0, \rightarrow 0,0, \rightarrow 0,1, \rightarrow$

R2)  $0,0, \rightarrow 0,0,1, \rightarrow 0,0,1, \rightarrow$

R3)  $0,1, \rightarrow 0,0,1, \rightarrow$

R4)  $0,0,1, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0,0, : 0,1, :$

LEN=3)  $0,0,1, :$

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

288-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][021][102]]$

-----

--

Rules of T[L]:

R1)  $0, \rightarrow 0,0, \rightarrow 0,1, \rightarrow$

R2)  $0,0, \rightarrow 0,0,1, \rightarrow 0,0,1, \rightarrow$

R3)  $0,1, \rightarrow 0,0,1, \rightarrow$

R4)  $0,0,1, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0,0, : 0,1, :$

LEN=3)  $0,0,1, :$

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

289-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][021][110]]$

-----

--

Rules of T[L]:

R1)  $0, \rightarrow 0,0, \rightarrow 0,1, \rightarrow$

R2)  $0,0, \rightarrow 0,0,1, \rightarrow 0,0,1, \rightarrow$

R3)  $0,1, \rightarrow 0,0,1, \rightarrow$

R4)  $0,0,1, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0,0, : 0,1, :$

LEN=3)  $0,0,1, :$

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

290-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][021][120]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,1,--$

R2)  $0,0,-->0,0,1,--0,0,1,--$

R3)  $0,1,-->0,0,1,--$

R4)  $0,0,1,-->$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,: 0,1,:$

LEN=3)  $0,0,1,:$

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

291-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][021][201]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,1,--$

R2)  $0,0,-->0,0,1,--0,0,1,--$

R3)  $0,1,-->0,0,1,--$

R4)  $0,0,1,-->$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,: 0,1,:$

LEN=3)  $0,0,1,:$

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

292-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][021][210]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,1,--$

R2)  $0,0,-->0,0,1,--0,0,1,--$

R3)  $0,1,-->0,0,1,--$

R4)  $0,0,1,-->$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,: 0,1,:$

LEN=3)  $0,0,1,:$

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

293-----



Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][100][101]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,1,--0,1,--  
R3) 0,1,-->0,0,1,--  
R4) 0,0,1,-->  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
LEN=3) 0,0,1,:  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

294-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][100][102]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,1,--0,1,--  
R3) 0,1,-->0,0,1,--  
R4) 0,0,1,-->  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
LEN=3) 0,0,1,:  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

295-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][100][110]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,1,--0,1,--  
R3) 0,1,-->0,0,1,--  
R4) 0,0,1,-->  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
LEN=3) 0,0,1,:  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

296-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][100][120]]$

```
--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,1,--0,1,--
R3) 0,1,-->0,0,1,--
R4) 0,0,1,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,0,1,:
Number new nodes in level n is given by : 1,2,1,  DONE
```

-----Class

```
297-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][012][100][201]]
-----
```

```
--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,1,--0,1,--
R3) 0,1,-->0,0,1,--
R4) 0,0,1,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,0,1,:
Number new nodes in level n is given by : 1,2,1,  DONE
```

-----Class

```
298-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][012][100][210]]
-----
```

```
--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,1,--0,1,--
R3) 0,1,-->0,0,1,--
R4) 0,0,1,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,0,1,:
Number new nodes in level n is given by : 1,2,1,  DONE
```

-----Class

```
299-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][012][101][102]]
-----
```

```
--
Rules of T[L]:
```

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,1,--0,1,--  
R3) 0,1,-->0,0,1,--  
R4) 0,0,1,-->  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
LEN=3) 0,0,1,:  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

300-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][101][110]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,1,--0,1,--  
R3) 0,1,-->0,0,1,--  
R4) 0,0,1,-->  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
LEN=3) 0,0,1,:  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

301-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][101][120]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,1,--0,1,--  
R3) 0,1,-->0,0,1,--  
R4) 0,0,1,-->  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
LEN=3) 0,0,1,:  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

302-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][101][201]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,1,--0,1,--

R3) 0,1,-->0,0,1,--  
R4) 0,0,1,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,1, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

303-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][101][210]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,1,--0,1,--  
R3) 0,1,-->0,0,1,--  
R4) 0,0,1,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,1, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

304-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][102][110]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,1,--0,1,--  
R3) 0,1,-->0,0,1,--  
R4) 0,0,1,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,1, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

305-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][102][120]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,1,--0,1,--  
R3) 0,1,-->0,0,1,--  
R4) 0,0,1,-->

List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,1, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

306-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][102][201]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,1,--0,1,--  
R3) 0,1,-->0,0,1,--  
R4) 0,0,1,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,1, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

307-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][102][210]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,1,--0,1,--  
R3) 0,1,-->0,0,1,--  
R4) 0,0,1,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,1, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

308-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][110][120]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,1,--0,1,--  
R3) 0,1,-->0,0,1,--  
R4) 0,0,1,-->  
List of different nodes in T[L]  
LEN=1) 0, :

LEN=2) 0,0,: 0,1,:  
LEN=3) 0,0,1,:  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

309-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][110][201]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,1,--0,1,--  
R3) 0,1,-->0,0,1,--  
R4) 0,0,1,-->  
List of different nodes in T[L]

LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
LEN=3) 0,0,1,:  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

310-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][110][210]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,1,--0,1,--  
R3) 0,1,-->0,0,1,--  
R4) 0,0,1,-->  
List of different nodes in T[L]

LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
LEN=3) 0,0,1,:  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

311-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][120][201]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,1,--0,1,--  
R3) 0,1,-->0,0,1,--  
R4) 0,0,1,-->  
List of different nodes in T[L]

LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
LEN=3) 0,0,1,:

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

312-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][120][210]]$

-----

--

Rules of T[L]:

R1)  $0, \rightarrow 0,0, \rightarrow 0,1, \rightarrow$

R2)  $0,0, \rightarrow 0,0,1, \rightarrow 0,1, \rightarrow$

R3)  $0,1, \rightarrow 0,0,1, \rightarrow$

R4)  $0,0,1, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0,0, : 0,1, :$

LEN=3)  $0,0,1, :$

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

313-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][201][210]]$

-----

--

Rules of T[L]:

R1)  $0, \rightarrow 0,0, \rightarrow 0,1, \rightarrow$

R2)  $0,0, \rightarrow 0,0,1, \rightarrow 0,1, \rightarrow$

R3)  $0,1, \rightarrow 0,0,1, \rightarrow$

R4)  $0,0,1, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0,0, : 0,1, :$

LEN=3)  $0,0,1, :$

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

314-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][021][100][101]]$

-----

--

Rules of T[L]:

R1)  $0, \rightarrow 0,0, \rightarrow 0, \rightarrow$

R2)  $0,0, \rightarrow 0,0, \rightarrow 0,0,2, \rightarrow$

R3)  $0,0,2, \rightarrow 0,0,2, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0,0, :$

LEN=3)  $0,0,2, :$

Number new nodes in level n is given by : 1,1,1, DONE

-----Class

315-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][021][100][102]]$

-----  
--  
Rules of T[L]:  
R1)  $0,-->0,0,--0,1,--$   
R2)  $0,0,-->0,0,--0,0,2,--$   
R3)  $0,1,-->0,1,0,--0,1,--$   
R4)  $0,0,2,-->0,0,2,--$   
R5)  $0,1,0,-->$   
List of different nodes in T[L]

LEN=1)  $0,:$   
LEN=2)  $0,0,: 0,1,:$   
LEN=3)  $0,0,2,: 0,1,0,:$   
Number new nodes in level n is given by : 1,2,2, DONE

-----Class

316-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][021][100][110]]$

-----  
--  
Rules of T[L]:  
R1)  $0,-->0,0,--0,--$   
R2)  $0,0,-->0,0,--0,0,2,--$   
R3)  $0,0,2,-->0,0,2,--$   
List of different nodes in T[L]

LEN=1)  $0,:$   
LEN=2)  $0,0,:$   
LEN=3)  $0,0,2,:$   
Number new nodes in level n is given by : 1,1,1, DONE

-----Class

317-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][021][100][120]]$

-----  
--  
Rules of T[L]:  
R1)  $0,-->0,0,--0,0,--$   
R2)  $0,0,-->0,0,--0,0,2,--$   
R3)  $0,0,2,-->0,0,2,--$   
List of different nodes in T[L]

LEN=1)  $0,:$   
LEN=2)  $0,0,:$   
LEN=3)  $0,0,2,:$   
Number new nodes in level n is given by : 1,1,1, DONE

-----Class

318-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][021][100][201]]$



```

--
Rules of T[L]:
R1) 0,-->0,0,--0,--
R2) 0,0,-->0,0,--0,0,2,--
R3) 0,0,2,-->0,0,2,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
LEN=3) 0,0,2,:
Number new nodes in level n is given by : 1,1,1,  DONE

```

-----Class

```

319-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][021][100][210]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,--
R2) 0,0,-->0,0,--0,0,2,--
R3) 0,0,2,-->0,0,2,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
LEN=3) 0,0,2,:
Number new nodes in level n is given by : 1,1,1,  DONE

```

-----Class

```

320-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][021][101][102]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,--0,0,2,--
R3) 0,1,-->0,1,0,--0,1,--
R4) 0,0,2,-->0,0,2,--
R5) 0,1,0,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,0,2,: 0,1,0,:
Number new nodes in level n is given by : 1,2,2,  DONE

```

-----Class

```

321-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][021][101][110]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,--

```

R2) 0,0,-->0,0,--0,0,2,--  
R3) 0,0,2,-->0,0,2,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
LEN=3) 0,0,2,:  
Number new nodes in level n is given by : 1,1,1, DONE

-----Class

322-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][021][101][120]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,0,--  
R2) 0,0,-->0,0,--0,0,2,--  
R3) 0,0,2,-->0,0,2,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
LEN=3) 0,0,2,:  
Number new nodes in level n is given by : 1,1,1, DONE

-----Class

323-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][021][101][201]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,0,--  
R2) 0,0,-->0,0,--0,0,2,--  
R3) 0,0,2,-->0,0,2,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
LEN=3) 0,0,2,:  
Number new nodes in level n is given by : 1,1,1, DONE

-----Class

324-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][021][101][210]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,0,--  
R2) 0,0,-->0,0,--0,0,2,--  
R3) 0,0,2,-->0,0,2,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:

LEN=3) 0,0,2,:  
Number new nodes in level n is given by : 1,1,1, DONE

-----Class

325-----

Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][011][021][102][110]]

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,--0,0,2,--
- R3) 0,1,-->0,1,0,--0,1,--
- R4) 0,0,2,-->0,0,2,--
- R5) 0,1,0,-->

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,2,: 0,1,0,:

Number new nodes in level n is given by : 1,2,2, DONE

-----Class

326-----

Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][011][021][102][120]]

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,--0,0,2,--
- R3) 0,1,-->0,1,0,--0,0,2,--
- R4) 0,0,2,-->0,0,2,--
- R5) 0,1,0,-->

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,2,: 0,1,0,:

Number new nodes in level n is given by : 1,2,2, DONE

-----Class

327-----

Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][011][021][102][201]]

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,--0,0,2,--
- R3) 0,1,-->0,1,0,--0,1,--
- R4) 0,0,2,-->0,0,2,--
- R5) 0,1,0,-->

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:  
LEN=3) 0,0,2,: 0,1,0,:  
Number new nodes in level n is given by : 1,2,2, DONE

-----Class

328-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][021][102][210]]$

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,--0,0,2,--
- R3) 0,1,-->0,1,0,--0,1,--
- R4) 0,0,2,-->0,0,2,--
- R5) 0,1,0,-->

List of different nodes in T[L]

LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
LEN=3) 0,0,2,: 0,1,0,:  
Number new nodes in level n is given by : 1,2,2, DONE

-----Class

329-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][021][110][120]]$

--

Rules of T[L]:

- R1) 0,-->0,0,--0,0,--
- R2) 0,0,-->0,0,--0,0,2,--
- R3) 0,0,2,-->0,0,2,--

List of different nodes in T[L]

LEN=1) 0,:  
LEN=2) 0,0,:  
LEN=3) 0,0,2,:  
Number new nodes in level n is given by : 1,1,1, DONE

-----Class

330-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][021][110][201]]$

--

Rules of T[L]:

- R1) 0,-->0,0,--0,--
- R2) 0,0,-->0,0,--0,0,2,--
- R3) 0,0,2,-->0,0,2,--

List of different nodes in T[L]

LEN=1) 0,:  
LEN=2) 0,0,:  
LEN=3) 0,0,2,:  
Number new nodes in level n is given by : 1,1,1, DONE

```

-----Class
331-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][021][110][210]]
-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,--
R2) 0,0,-->0,0,--0,0,2,--
R3) 0,0,2,-->0,0,2,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
LEN=3) 0,0,2,:
Number new nodes in level n is given by : 1,1,1,  DONE

```

```

-----Class
332-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][021][120][201]]
-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,0,--
R2) 0,0,-->0,0,--0,0,2,--
R3) 0,0,2,-->0,0,2,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
LEN=3) 0,0,2,:
Number new nodes in level n is given by : 1,1,1,  DONE

```

```

-----Class
333-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][021][120][210]]
-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,0,--
R2) 0,0,-->0,0,--0,0,2,--
R3) 0,0,2,-->0,0,2,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
LEN=3) 0,0,2,:
Number new nodes in level n is given by : 1,1,1,  DONE

```

```

-----Class
334-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][021][201][210]]
-----

```

```
--
Rules of T[L]:
R1) 0,-->0,0,--0,--
R2) 0,0,-->0,0,--0,0,2,--
R3) 0,0,2,-->0,0,2,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
LEN=3) 0,0,2,:
Number new nodes in level n is given by : 1,1,1,  DONE
```

-----Class

```
335-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][100][101][102]]
-----
```

```
--
Rules of T[L]:
R1) 0,-->0,--0,1,--
R2) 0,1,-->0,1,0,--0,1,--
R3) 0,1,0,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,1,:
LEN=3) 0,1,0,:
Number new nodes in level n is given by : 1,1,1,  DONE
```

-----Class

```
336-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][100][101][110]]
-----
```

```
--
Rules of T[L]:
R1) 0,-->0,--0,--
List of different nodes in T[L]
LEN=1) 0,:
Number new nodes in level n is given by : 1,  DONE
```

-----Class

```
337-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][100][101][120]]
-----
```

```
--
Rules of T[L]:
R1) 0,-->0,--0,1,--
R2) 0,1,-->0,--0,1,2,--
R3) 0,1,2,-->0,1,2,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,1,:
LEN=3) 0,1,2,:
```

Number new nodes in level n is given by : 1,1,1, DONE

-----Class

338-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][100][101][201]]$

-----

--

Rules of T[L]:

R1)  $0,-->0,--0,--$

List of different nodes in T[L]

LEN=1)  $0,:$

Number new nodes in level n is given by : 1, DONE

-----Class

339-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][100][101][210]]$

-----

--

Rules of T[L]:

R1)  $0,-->0,--0,--$

List of different nodes in T[L]

LEN=1)  $0,:$

Number new nodes in level n is given by : 1, DONE

-----Class

340-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][100][102][110]]$

-----

--

Rules of T[L]:

R1)  $0,-->0,--0,1,--$

R2)  $0,1,-->0,1,0,--0,1,--$

R3)  $0,1,0,-->$

List of different nodes in T[L]

LEN=1)  $0,:$

LEN=2)  $0,1,:$

LEN=3)  $0,1,0,:$

Number new nodes in level n is given by : 1,1,1, DONE

-----Class

341-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][100][102][120]]$

-----

--

Rules of T[L]:

R1)  $0,-->0,--0,1,--$

R2)  $0,1,-->0,1,0,--0,1,2,--$

R3)  $0,1,0,-->$

R4)  $0,1,2,-->0,1,2,--$

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,1, :  
LEN=3) 0,1,0, : 0,1,2, :  
Number new nodes in level n is given by : 1,1,2, DONE

-----Class

342-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][100][102][201]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,--0,1,--  
R2) 0,1,-->0,1,0,--0,1,--  
R3) 0,1,0,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,1, :  
LEN=3) 0,1,0, :  
Number new nodes in level n is given by : 1,1,1, DONE

-----Class

343-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][100][102][210]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,--0,1,--  
R2) 0,1,-->0,1,0,--0,1,--  
R3) 0,1,0,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,1, :  
LEN=3) 0,1,0, :  
Number new nodes in level n is given by : 1,1,1, DONE

-----Class

344-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][100][110][120]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,--0,1,--  
R2) 0,1,-->0,--0,1,2,--  
R3) 0,1,2,-->0,1,2,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,1, :  
LEN=3) 0,1,2, :  
Number new nodes in level n is given by : 1,1,1, DONE



```

-----Class
345-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][100][110][201]]
-----
--
Rules of T[L]:
R1) 0,-->0,--0,--
List of different nodes in T[L]
LEN=1) 0,:
Number new nodes in level n is given by : 1,   DONE

-----Class
346-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][100][110][210]]
-----
--
Rules of T[L]:
R1) 0,-->0,--0,--
List of different nodes in T[L]
LEN=1) 0,:
Number new nodes in level n is given by : 1,   DONE

-----Class
347-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][100][120][201]]
-----
--
Rules of T[L]:
R1) 0,-->0,--0,1,--
R2) 0,1,-->0,--0,1,2,--
R3) 0,1,2,-->0,1,2,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,1,:
LEN=3) 0,1,2,:
Number new nodes in level n is given by : 1,1,1,   DONE

-----Class
348-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][100][120][210]]
-----
--
Rules of T[L]:
R1) 0,-->0,--0,1,--
R2) 0,1,-->0,--0,1,2,--
R3) 0,1,2,-->0,1,2,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,1,:
LEN=3) 0,1,2,:

```

Number new nodes in level n is given by : 1,1,1, DONE

-----Class

349-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][100][201][210]]$

-----

--

Rules of T[L]:

R1)  $0, \rightarrow 0, \rightarrow 0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

Number new nodes in level n is given by : 1, DONE

-----Class

350-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][101][102][110]]$

-----

--

Rules of T[L]:

R1)  $0, \rightarrow 0, \rightarrow 0, 1, \rightarrow$

R2)  $0, 1, \rightarrow 0, 1, 0, \rightarrow 0, 1, \rightarrow$

R3)  $0, 1, 0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 1, :$

LEN=3)  $0, 1, 0, :$

Number new nodes in level n is given by : 1,1,1, DONE

-----Class

351-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][101][102][120]]$

-----

--

Rules of T[L]:

R1)  $0, \rightarrow 0, \rightarrow 0, 1, \rightarrow$

R2)  $0, 1, \rightarrow 0, 1, 0, \rightarrow 0, 1, 2, \rightarrow$

R3)  $0, 1, 0, \rightarrow$

R4)  $0, 1, 2, \rightarrow 0, 1, 2, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 1, :$

LEN=3)  $0, 1, 0, : 0, 1, 2, :$

Number new nodes in level n is given by : 1,1,2, DONE

-----Class

352-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][101][102][201]]$

-----

--

Rules of T[L]:

```

R1) 0,-->0,--0,1,--
R2) 0,1,-->0,1,0,--0,1,--
R3) 0,1,0,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,1,:
LEN=3) 0,1,0,:
  Number new nodes in level n is given by : 1,1,1,  DONE

```

-----Class

```

353-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][101][102][210]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,--0,1,--
R2) 0,1,-->0,1,0,--0,1,--
R3) 0,1,0,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,1,:
LEN=3) 0,1,0,:
  Number new nodes in level n is given by : 1,1,1,  DONE

```

-----Class

```

354-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][101][110][120]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,--0,1,--
R2) 0,1,-->0,--0,1,2,--
R3) 0,1,2,-->0,1,2,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,1,:
LEN=3) 0,1,2,:
  Number new nodes in level n is given by : 1,1,1,  DONE

```

-----Class

```

355-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][101][110][201]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,--0,--
List of different nodes in T[L]
LEN=1) 0,:
  Number new nodes in level n is given by : 1,  DONE

```

-----Class  
356-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][101][110][210]]$   
-----

--  
Rules of  $T[L]$ :  
R1)  $0, -- \rightarrow 0, --0, --$   
List of different nodes in  $T[L]$   
LEN=1)  $0, :$   
Number new nodes in level  $n$  is given by : 1, DONE

-----Class  
357-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][101][120][201]]$   
-----

--  
Rules of  $T[L]$ :  
R1)  $0, -- \rightarrow 0, --0, 1, --$   
R2)  $0, 1, -- \rightarrow 0, --0, 1, 2, --$   
R3)  $0, 1, 2, -- \rightarrow 0, 1, 2, --$   
List of different nodes in  $T[L]$   
LEN=1)  $0, :$   
LEN=2)  $0, 1, :$   
LEN=3)  $0, 1, 2, :$   
Number new nodes in level  $n$  is given by : 1,1,1, DONE

-----Class  
358-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][101][120][210]]$   
-----

--  
Rules of  $T[L]$ :  
R1)  $0, -- \rightarrow 0, --0, 1, --$   
R2)  $0, 1, -- \rightarrow 0, --0, 1, 2, --$   
R3)  $0, 1, 2, -- \rightarrow 0, 1, 2, --$   
List of different nodes in  $T[L]$   
LEN=1)  $0, :$   
LEN=2)  $0, 1, :$   
LEN=3)  $0, 1, 2, :$   
Number new nodes in level  $n$  is given by : 1,1,1, DONE

-----Class  
359-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][101][201][210]]$   
-----

--  
Rules of  $T[L]$ :  
R1)  $0, -- \rightarrow 0, --0, --$   
List of different nodes in  $T[L]$   
LEN=1)  $0, :$

Number new nodes in level n is given by : 1, DONE

-----Class

360-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][102][110][120]]$

-----

--

Rules of T[L]:

R1)  $0, \rightarrow 0, \rightarrow 0, 1, \rightarrow$

R2)  $0, 1, \rightarrow 0, 1, 0, \rightarrow 0, 1, 2, \rightarrow$

R3)  $0, 1, 0, \rightarrow$

R4)  $0, 1, 2, \rightarrow 0, 1, 2, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 1, :$

LEN=3)  $0, 1, 0, : 0, 1, 2, :$

Number new nodes in level n is given by : 1,1,2, DONE

-----Class

361-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][102][110][201]]$

-----

--

Rules of T[L]:

R1)  $0, \rightarrow 0, \rightarrow 0, 1, \rightarrow$

R2)  $0, 1, \rightarrow 0, 1, 0, \rightarrow 0, 1, \rightarrow$

R3)  $0, 1, 0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 1, :$

LEN=3)  $0, 1, 0, :$

Number new nodes in level n is given by : 1,1,1, DONE

-----Class

362-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][102][110][210]]$

-----

--

Rules of T[L]:

R1)  $0, \rightarrow 0, \rightarrow 0, 1, \rightarrow$

R2)  $0, 1, \rightarrow 0, 1, 0, \rightarrow 0, 1, \rightarrow$

R3)  $0, 1, 0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 1, :$

LEN=3)  $0, 1, 0, :$

Number new nodes in level n is given by : 1,1,1, DONE

-----Class

363-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][102][120][201]]$

--

Rules of  $T[L]$ :

R1)  $0,-->0,--0,1,--$

R2)  $0,1,-->0,1,0,--0,1,2,--$

R3)  $0,1,0,-->$

R4)  $0,1,2,-->0,1,2,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,1,:$

LEN=3)  $0,1,0,: 0,1,2,:$

Number new nodes in level n is given by : 1,1,2, DONE

-----Class

364-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][102][120][210]]$

--

Rules of  $T[L]$ :

R1)  $0,-->0,--0,1,--$

R2)  $0,1,-->0,1,0,--0,1,2,--$

R3)  $0,1,0,-->$

R4)  $0,1,2,-->0,1,2,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,1,:$

LEN=3)  $0,1,0,: 0,1,2,:$

Number new nodes in level n is given by : 1,1,2, DONE

-----Class

365-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][102][201][210]]$

--

Rules of  $T[L]$ :

R1)  $0,-->0,--0,1,--$

R2)  $0,1,-->0,1,0,--0,1,--$

R3)  $0,1,0,-->$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,1,:$

LEN=3)  $0,1,0,:$

Number new nodes in level n is given by : 1,1,1, DONE

-----Class

366-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][110][120][201]]$

--

Rules of T[L]:  
R1) 0,-->0,--0,1,--  
R2) 0,1,-->0,--0,1,2,--  
R3) 0,1,2,-->0,1,2,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,1,:  
LEN=3) 0,1,2,:  
Number new nodes in level n is given by : 1,1,1, DONE

-----Class

367-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][110][120][210]]$

--  
Rules of T[L]:  
R1) 0,-->0,--0,1,--  
R2) 0,1,-->0,--0,1,2,--  
R3) 0,1,2,-->0,1,2,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,1,:  
LEN=3) 0,1,2,:  
Number new nodes in level n is given by : 1,1,1, DONE

-----Class

368-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][110][201][210]]$

--  
Rules of T[L]:  
R1) 0,-->0,--0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
Number new nodes in level n is given by : 1, DONE

-----Class

369-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][120][201][210]]$

--  
Rules of T[L]:  
R1) 0,-->0,--0,1,--  
R2) 0,1,-->0,--0,1,2,--  
R3) 0,1,2,-->0,1,2,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,1,:  
LEN=3) 0,1,2,:  
Number new nodes in level n is given by : 1,1,1, DONE

-----Class

370-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][100][101]]$

-----  
--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,0,1,--
- R3) 0,1,-->0,1,0,--0,0,1,--
- R4) 0,0,1,-->0,1,0,--
- R5) 0,1,0,-->

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,1,: 0,1,0,:

Number new nodes in level n is given by : 1,2,2, DONE

-----Class

371-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][100][102]]$

-----  
--

Rules of T[L]:

- R1) 0,-->0,0,--0,0,--
- R2) 0,0,-->0,0,1,--0,0,1,--
- R3) 0,0,1,-->0,0,1,1,--
- R4) 0,0,1,1,-->

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

LEN=3) 0,0,1,:

LEN=4) 0,0,1,1,:

Number new nodes in level n is given by : 1,1,1,1, DONE

-----Class

372-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][100][110]]$

-----  
--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,0,1,--
- R3) 0,1,-->0,0,1,--0,1,1,--
- R4) 0,0,1,-->0,1,1,--
- R5) 0,1,1,-->

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,1,: 0,1,1,:



Number new nodes in level n is given by : 1,2,2, DONE

-----Class

373-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][100][120]]$

-----

--

Rules of T[L]:

R1)  $0, \rightarrow 0,0, \rightarrow 0,0, \rightarrow$

R2)  $0,0, \rightarrow 0,0,1, \rightarrow 0,0,1, \rightarrow$

R3)  $0,0,1, \rightarrow 0,0,1,1, \rightarrow$

R4)  $0,0,1,1, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0,0, :$

LEN=3)  $0,0,1, :$

LEN=4)  $0,0,1,1, :$

Number new nodes in level n is given by : 1,1,1,1, DONE

-----Class

374-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][100][201]]$

-----

--

Rules of T[L]:

R1)  $0, \rightarrow 0,0, \rightarrow 0,0, \rightarrow$

R2)  $0,0, \rightarrow 0,0,1, \rightarrow 0,0,1, \rightarrow$

R3)  $0,0,1, \rightarrow 0,0,1,1, \rightarrow$

R4)  $0,0,1,1, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0,0, :$

LEN=3)  $0,0,1, :$

LEN=4)  $0,0,1,1, :$

Number new nodes in level n is given by : 1,1,1,1, DONE

-----Class

375-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][100][210]]$

-----

--

Rules of T[L]:

R1)  $0, \rightarrow 0,0, \rightarrow 0,0, \rightarrow$

R2)  $0,0, \rightarrow 0,0,1, \rightarrow 0,0,1, \rightarrow$

R3)  $0,0,1, \rightarrow 0,0,1,1, \rightarrow$

R4)  $0,0,1,1, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0,0, :$

LEN=3)  $0,0,1, :$

LEN=4) 0,0,1,1,:  
Number new nodes in level n is given by : 1,1,1,1, DONE

-----Class

376-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][101][102]]$

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,0,1,--
- R3) 0,1,-->0,1,0,--0,0,1,--
- R4) 0,0,1,-->0,1,0,--
- R5) 0,1,0,-->

List of different nodes in  $T[L]$

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,1,: 0,1,0,:

Number new nodes in level n is given by : 1,2,2, DONE

-----Class

377-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][101][110]]$

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,0,1,--
- R3) 0,1,-->0,1,0,--0,1,0,--
- R4) 0,0,1,-->0,1,0,--
- R5) 0,1,0,-->

List of different nodes in  $T[L]$

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,1,: 0,1,0,:

Number new nodes in level n is given by : 1,2,2, DONE

-----Class

378-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][101][120]]$

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,0,1,--
- R3) 0,1,-->0,1,0,--0,0,1,--
- R4) 0,0,1,-->0,1,0,--
- R5) 0,1,0,-->

List of different nodes in  $T[L]$

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:  
LEN=3) 0,0,1,: 0,1,0,:  
Number new nodes in level n is given by : 1,2,2, DONE

-----Class

379-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][101][201]]$

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,0,1,--
- R3) 0,1,-->0,1,0,--0,0,1,--
- R4) 0,0,1,-->0,1,0,--
- R5) 0,1,0,-->

List of different nodes in T[L]

LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
LEN=3) 0,0,1,: 0,1,0,:  
Number new nodes in level n is given by : 1,2,2, DONE

-----Class

380-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][101][210]]$

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,0,1,--
- R3) 0,1,-->0,1,0,--0,0,1,--
- R4) 0,0,1,-->0,1,0,--
- R5) 0,1,0,-->

List of different nodes in T[L]

LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
LEN=3) 0,0,1,: 0,1,0,:  
Number new nodes in level n is given by : 1,2,2, DONE

-----Class

381-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][102][110]]$

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,0,1,--
- R3) 0,1,-->0,0,1,--0,1,1,--
- R4) 0,0,1,-->0,1,1,--
- R5) 0,1,1,-->

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,1, : 0,1,1, :  
Number new nodes in level n is given by : 1,2,2, DONE

-----Class

382-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][102][120]]$

--

Rules of T[L]:

- R1) 0, -->0,0, --0,0, --
- R2) 0,0, -->0,0,1, --0,0,1, --
- R3) 0,0,1, -->0,0,1,1, --
- R4) 0,0,1,1, -->

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, :
- LEN=3) 0,0,1, :
- LEN=4) 0,0,1,1, :

Number new nodes in level n is given by : 1,1,1,1, DONE

-----Class

383-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][102][201]]$

--

Rules of T[L]:

- R1) 0, -->0,0, --0,0, --
- R2) 0,0, -->0,0,1, --0,0,1, --
- R3) 0,0,1, -->0,0,1,1, --
- R4) 0,0,1,1, -->

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, :
- LEN=3) 0,0,1, :
- LEN=4) 0,0,1,1, :

Number new nodes in level n is given by : 1,1,1,1, DONE

-----Class

384-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][102][210]]$

--

Rules of T[L]:

- R1) 0, -->0,0, --0,0, --
- R2) 0,0, -->0,0,1, --0,0,1, --
- R3) 0,0,1, -->0,0,1,1, --
- R4) 0,0,1,1, -->

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, :  
LEN=3) 0,0,1, :  
LEN=4) 0,0,1,1, :  
Number new nodes in level n is given by : 1,1,1,1, DONE

-----Class

385-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][110][120]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,1,--0,0,1,--  
R3) 0,1,-->0,0,1,--0,1,1,--  
R4) 0,0,1,-->0,1,1,--  
R5) 0,1,1,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,1, : 0,1,1, :  
Number new nodes in level n is given by : 1,2,2, DONE

-----Class

386-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][110][201]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,1,--0,0,1,--  
R3) 0,1,-->0,0,1,--0,1,1,--  
R4) 0,0,1,-->0,1,1,--  
R5) 0,1,1,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,1, : 0,1,1, :  
Number new nodes in level n is given by : 1,2,2, DONE

-----Class

387-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][110][210]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,1,--0,0,1,--  
R3) 0,1,-->0,0,1,--0,1,1,--  
R4) 0,0,1,-->0,1,1,--

R5) 0,1,1,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,1, : 0,1,1, :  
Number new nodes in level n is given by : 1,2,2, DONE

-----Class

388-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][120][201]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,0,--  
R2) 0,0,-->0,0,1,--0,0,1,--  
R3) 0,0,1,-->0,0,1,1,--  
R4) 0,0,1,1,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
LEN=3) 0,0,1, :  
LEN=4) 0,0,1,1, :  
Number new nodes in level n is given by : 1,1,1,1, DONE

-----Class

389-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][120][210]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,0,--  
R2) 0,0,-->0,0,1,--0,0,1,--  
R3) 0,0,1,-->0,0,1,1,--  
R4) 0,0,1,1,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
LEN=3) 0,0,1, :  
LEN=4) 0,0,1,1, :  
Number new nodes in level n is given by : 1,1,1,1, DONE

-----Class

390-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][201][210]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,0,--  
R2) 0,0,-->0,0,1,--0,0,1,--  
R3) 0,0,1,-->0,0,1,1,--

R4) 0,0,1,1,-->  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, :  
 LEN=3) 0,0,1, :  
 LEN=4) 0,0,1,1, :  
 Number new nodes in level n is given by : 1,1,1,1, DONE

-----Class

391-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][100][101][102]]$

-----  
 --  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,1,--0,1,--  
 R3) 0,1,-->0,1,0,--0,0,1,--  
 R4) 0,0,1,-->0,1,0,--  
 R5) 0,1,0,-->  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,1, : 0,1,0, :  
 Number new nodes in level n is given by : 1,2,2, DONE

-----Class

392-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][100][101][110]]$

-----  
 --  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,1,--0,1,--  
 R3) 0,1,-->0,1,0,--0,1,0,--  
 R4) 0,0,1,-->0,1,0,--  
 R5) 0,1,0,-->  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,1, : 0,1,0, :  
 Number new nodes in level n is given by : 1,2,2, DONE

-----Class

393-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][100][101][120]]$

-----  
 --  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,1,--0,1,--

R3) 0,1,-->0,1,0,--0,0,1,--  
R4) 0,0,1,-->0,1,0,--  
R5) 0,1,0,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,1, : 0,1,0, :  
Number new nodes in level n is given by : 1,2,2, DONE

-----Class

394-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][100][101][201]]$

--  
Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,1,--0,1,--  
R3) 0,1,-->0,1,0,--0,0,1,--  
R4) 0,0,1,-->0,1,0,--  
R5) 0,1,0,-->

List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,1, : 0,1,0, :  
Number new nodes in level n is given by : 1,2,2, DONE

-----Class

395-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][100][101][210]]$

--  
Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,1,--0,1,--  
R3) 0,1,-->0,1,0,--0,0,1,--  
R4) 0,0,1,-->0,1,0,--  
R5) 0,1,0,-->

List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,1, : 0,1,0, :  
Number new nodes in level n is given by : 1,2,2, DONE

-----Class

396-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][100][102][110]]$

--  
Rules of T[L]:

R1) 0,-->0,0,--0,1,--



```

R2) 0,0,-->0,0,1,--0,0,2,--
R3) 0,1,-->0,0,1,--0,1,1,--
R4) 0,0,1,-->0,1,1,--
R5) 0,0,2,-->0,1,1,--0,1,1,--
R6) 0,1,1,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,0,1,: 0,0,2,: 0,1,1,:
Number new nodes in level n is given by : 1,2,3,  DONE

```

-----Class

```

397-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][012][100][102][120]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,1,--0,0,2,--
R3) 0,1,-->0,0,1,--0,0,1,--
R4) 0,0,1,-->0,0,1,1,--
R5) 0,0,2,-->0,0,1,1,--0,0,1,--
R6) 0,0,1,1,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,0,1,: 0,0,2,:
LEN=4) 0,0,1,1,:
Number new nodes in level n is given by : 1,2,2,1,  DONE

```

-----Class

```

398-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][012][100][102][201]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,1,--0,0,2,--
R3) 0,1,-->0,0,1,--0,0,1,--
R4) 0,0,1,-->0,0,1,1,--
R5) 0,0,2,-->0,0,1,1,--0,0,1,--
R6) 0,0,1,1,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,0,1,: 0,0,2,:
LEN=4) 0,0,1,1,:
Number new nodes in level n is given by : 1,2,2,1,  DONE

```

-----Class

399-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][100][102][210]]$

--  
Rules of  $T[L]$ :  
R1)  $0,-->0,0,--0,1,--$   
R2)  $0,0,-->0,0,1,--0,0,2,--$   
R3)  $0,1,-->0,0,1,--0,0,1,--$   
R4)  $0,0,1,-->0,0,1,1,--$   
R5)  $0,0,2,-->0,0,1,1,--0,0,1,--$   
R6)  $0,0,1,1,-->$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,: 0,1,:$

LEN=3)  $0,0,1,: 0,0,2,:$

LEN=4)  $0,0,1,1,:$

Number new nodes in level n is given by : 1,2,2,1, DONE

-----Class

400-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][100][110][120]]$

--  
Rules of  $T[L]$ :  
R1)  $0,-->0,0,--0,1,--$   
R2)  $0,0,-->0,0,1,--0,0,2,--$   
R3)  $0,1,-->0,0,1,--0,1,1,--$   
R4)  $0,0,1,-->0,1,1,--$   
R5)  $0,0,2,-->0,1,1,--0,1,1,--$   
R6)  $0,1,1,-->$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,: 0,1,:$

LEN=3)  $0,0,1,: 0,0,2,: 0,1,1,:$

Number new nodes in level n is given by : 1,2,3, DONE

-----Class

401-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][100][110][201]]$

--  
Rules of  $T[L]$ :  
R1)  $0,-->0,0,--0,1,--$   
R2)  $0,0,-->0,0,1,--0,0,2,--$   
R3)  $0,1,-->0,0,1,--0,1,1,--$   
R4)  $0,0,1,-->0,1,1,--$   
R5)  $0,0,2,-->0,1,1,--0,1,1,--$   
R6)  $0,1,1,-->$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2) 0,0,: 0,1,:  
LEN=3) 0,0,1,: 0,0,2,: 0,1,1,:  
Number new nodes in level n is given by : 1,2,3, DONE

-----Class

402-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][100][110][210]]$

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,0,2,--
- R3) 0,1,-->0,0,1,--0,1,1,--
- R4) 0,0,1,-->0,1,1,--
- R5) 0,0,2,-->0,1,1,--0,1,1,--
- R6) 0,1,1,-->

List of different nodes in  $T[L]$

LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
LEN=3) 0,0,1,: 0,0,2,: 0,1,1,:  
Number new nodes in level n is given by : 1,2,3, DONE

-----Class

403-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][100][120][201]]$

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,0,2,--
- R3) 0,1,-->0,0,1,--0,0,1,--
- R4) 0,0,1,-->0,0,1,1,--
- R5) 0,0,2,-->0,0,1,1,--0,0,1,--
- R6) 0,0,1,1,-->

List of different nodes in  $T[L]$

LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
LEN=3) 0,0,1,: 0,0,2,:  
LEN=4) 0,0,1,1,:  
Number new nodes in level n is given by : 1,2,2,1, DONE

-----Class

404-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][100][120][210]]$

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,0,2,--
- R3) 0,1,-->0,0,1,--0,0,1,--

```

R4) 0,0,1,-->0,0,1,1,--
R5) 0,0,2,-->0,0,1,1,--0,0,1,--
R6) 0,0,1,1,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,0,1,: 0,0,2,:
LEN=4) 0,0,1,1,:
  Number new nodes in level n is given by : 1,2,2,1,  DONE

```

-----Class

```

405-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][012][100][201][210]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,1,--0,0,2,--
R3) 0,1,-->0,0,1,--0,0,1,--
R4) 0,0,1,-->0,0,1,1,--
R5) 0,0,2,-->0,0,1,1,--0,0,1,--
R6) 0,0,1,1,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,0,1,: 0,0,2,:
LEN=4) 0,0,1,1,:
  Number new nodes in level n is given by : 1,2,2,1,  DONE

```

-----Class

```

406-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][012][101][102][110]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,1,--0,0,2,--
R3) 0,1,-->0,1,0,--0,1,0,--
R4) 0,0,1,-->0,1,0,--
R5) 0,0,2,-->0,0,1,--0,1,0,--
R6) 0,1,0,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,0,1,: 0,0,2,: 0,1,0,:
  Number new nodes in level n is given by : 1,2,3,  DONE

```

-----Class

```

407-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][012][101][102][120]]
-----

```

```

-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,1,--0,0,2,--
R3) 0,1,-->0,1,0,--0,0,1,--
R4) 0,0,1,-->0,1,0,--
R5) 0,0,2,-->0,0,1,--0,0,2,2,--
R6) 0,1,0,-->
R7) 0,0,2,2,-->0,0,1,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,0,1,: 0,0,2,: 0,1,0,:
LEN=4) 0,0,2,2,:
Number new nodes in level n is given by : 1,2,3,1,   DONE

```

```

-----Class
408-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][012][101][102][201]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,1,--0,0,2,--
R3) 0,1,-->0,1,0,--0,0,1,--
R4) 0,0,1,-->0,1,0,--
R5) 0,0,2,-->0,0,1,--0,0,2,2,--
R6) 0,1,0,-->
R7) 0,0,2,2,-->0,0,1,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,0,1,: 0,0,2,: 0,1,0,:
LEN=4) 0,0,2,2,:
Number new nodes in level n is given by : 1,2,3,1,   DONE

```

```

-----Class
409-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][012][101][102][210]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,1,--0,0,2,--
R3) 0,1,-->0,1,0,--0,0,1,--
R4) 0,0,1,-->0,1,0,--
R5) 0,0,2,-->0,0,1,--0,0,2,2,--
R6) 0,1,0,-->
R7) 0,0,2,2,-->0,0,1,--

```

List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,1, : 0,0,2, : 0,1,0, :  
 LEN=4) 0,0,2,2, :  
 Number new nodes in level n is given by : 1,2,3,1,   DONE

-----Class

410-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][101][110][120]]$

-----  
 --  
 Rules of T[L]:  
 R1) 0, -->0,0, --0,1, --  
 R2) 0,0, -->0,0,1, --0,0,2, --  
 R3) 0,1, -->0,1,0, --0,1,0, --  
 R4) 0,0,1, -->0,1,0, --  
 R5) 0,0,2, -->0,0,1, --0,1,0, --  
 R6) 0,1,0, -->  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,1, : 0,0,2, : 0,1,0, :  
 Number new nodes in level n is given by : 1,2,3,   DONE

-----Class

411-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][101][110][201]]$

-----  
 --  
 Rules of T[L]:  
 R1) 0, -->0,0, --0,1, --  
 R2) 0,0, -->0,0,1, --0,0,2, --  
 R3) 0,1, -->0,1,0, --0,1,0, --  
 R4) 0,0,1, -->0,1,0, --  
 R5) 0,0,2, -->0,0,1, --0,1,0, --  
 R6) 0,1,0, -->  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,1, : 0,0,2, : 0,1,0, :  
 Number new nodes in level n is given by : 1,2,3,   DONE

-----Class

412-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][101][110][210]]$

-----  
 --  
 Rules of T[L]:  
 R1) 0, -->0,0, --0,1, --

R2) 0,0,-->0,0,1,--0,0,2,--  
 R3) 0,1,-->0,1,0,--0,1,0,--  
 R4) 0,0,1,-->0,1,0,--  
 R5) 0,0,2,-->0,0,1,--0,1,0,--  
 R6) 0,1,0,-->  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,1, : 0,0,2, : 0,1,0, :  
 Number new nodes in level n is given by : 1,2,3,    DONE

-----Class

413-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][101][120][201]]$

--  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,1,--0,0,2,--  
 R3) 0,1,-->0,1,0,--0,0,1,--  
 R4) 0,0,1,-->0,1,0,--  
 R5) 0,0,2,-->0,0,1,--0,0,2,2,--  
 R6) 0,1,0,-->  
 R7) 0,0,2,2,-->0,0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,1, : 0,0,2, : 0,1,0, :  
 LEN=4) 0,0,2,2, :  
 Number new nodes in level n is given by : 1,2,3,1,    DONE

-----Class

414-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][101][120][210]]$

--  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,1,--0,0,2,--  
 R3) 0,1,-->0,1,0,--0,0,1,--  
 R4) 0,0,1,-->0,1,0,--  
 R5) 0,0,2,-->0,0,1,--0,0,2,2,--  
 R6) 0,1,0,-->  
 R7) 0,0,2,2,-->0,0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,1, : 0,0,2, : 0,1,0, :  
 LEN=4) 0,0,2,2, :  
 Number new nodes in level n is given by : 1,2,3,1,    DONE

-----Class

415-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][101][201][210]]$

-----

--

Rules of T[L]:

- R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$
- R2)  $0, 0, \rightarrow 0, 0, 1, \rightarrow 0, 0, 2, \rightarrow$
- R3)  $0, 1, \rightarrow 0, 1, 0, \rightarrow 0, 0, 1, \rightarrow$
- R4)  $0, 0, 1, \rightarrow 0, 1, 0, \rightarrow$
- R5)  $0, 0, 2, \rightarrow 0, 0, 1, \rightarrow 0, 0, 2, 2, \rightarrow$
- R6)  $0, 1, 0, \rightarrow$
- R7)  $0, 0, 2, 2, \rightarrow 0, 0, 1, \rightarrow$

List of different nodes in T[L]

- LEN=1)  $0, :$
- LEN=2)  $0, 0, : 0, 1, :$
- LEN=3)  $0, 0, 1, : 0, 0, 2, : 0, 1, 0, :$
- LEN=4)  $0, 0, 2, 2, :$

Number new nodes in level n is given by : 1,2,3,1, DONE

-----Class

416-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][102][110][120]]$

-----

--

Rules of T[L]:

- R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$
- R2)  $0, 0, \rightarrow 0, 0, 1, \rightarrow 0, 1, \rightarrow$
- R3)  $0, 1, \rightarrow 0, 0, 1, \rightarrow 0, 1, 1, \rightarrow$
- R4)  $0, 0, 1, \rightarrow 0, 1, 1, \rightarrow$
- R5)  $0, 1, 1, \rightarrow$

List of different nodes in T[L]

- LEN=1)  $0, :$
- LEN=2)  $0, 0, : 0, 1, :$
- LEN=3)  $0, 0, 1, : 0, 1, 1, :$

Number new nodes in level n is given by : 1,2,2, DONE

-----Class

417-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][102][110][201]]$

-----

--

Rules of T[L]:

- R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$
- R2)  $0, 0, \rightarrow 0, 0, 1, \rightarrow 0, 1, \rightarrow$
- R3)  $0, 1, \rightarrow 0, 0, 1, \rightarrow 0, 1, 1, \rightarrow$
- R4)  $0, 0, 1, \rightarrow 0, 1, 1, \rightarrow$
- R5)  $0, 1, 1, \rightarrow$

List of different nodes in T[L]



LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,1, : 0,1,1, :  
Number new nodes in level n is given by : 1,2,2, DONE

-----Class

418-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][102][110][210]]$

-----  
--  
Rules of T[L]:  
R1) 0, -->0,0, --0,1, --  
R2) 0,0, -->0,0,1, --0,1, --  
R3) 0,1, -->0,0,1, --0,1,1, --  
R4) 0,0,1, -->0,1,1, --  
R5) 0,1,1, -->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,1, : 0,1,1, :  
Number new nodes in level n is given by : 1,2,2, DONE

-----Class

419-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][102][120][201]]$

-----  
--  
Rules of T[L]:  
R1) 0, -->0,0, --0,1, --  
R2) 0,0, -->0,0,1, --0,0,2, --  
R3) 0,1, -->0,0,1, --0,0,1, --  
R4) 0,0,1, -->0,0,1,1, --  
R5) 0,0,2, -->0,0,1, --0,0,2,2, --  
R6) 0,0,1,1, -->  
R7) 0,0,2,2, -->0,0,1, --  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,1, : 0,0,2, :  
LEN=4) 0,0,1,1, : 0,0,2,2, :  
Number new nodes in level n is given by : 1,2,2,2, DONE

-----Class

420-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][102][120][210]]$

-----  
--  
Rules of T[L]:  
R1) 0, -->0,0, --0,1, --  
R2) 0,0, -->0,0,1, --0,0,2, --

R3) 0,1,-->0,0,1,--0,0,1,--  
 R4) 0,0,1,-->0,0,1,1,--  
 R5) 0,0,2,-->0,0,1,--0,0,2,2,--  
 R6) 0,0,1,1,-->  
 R7) 0,0,2,2,-->0,0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,1, : 0,0,2, :  
 LEN=4) 0,0,1,1, : 0,0,2,2, :  
 Number new nodes in level n is given by : 1,2,2,2,   DONE

-----Class

421-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][102][201][210]]$

--  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,1,--0,0,2,--  
 R3) 0,1,-->0,0,1,--0,0,1,--  
 R4) 0,0,1,-->0,0,1,1,--  
 R5) 0,0,2,-->0,0,1,--0,0,2,2,--  
 R6) 0,0,1,1,-->  
 R7) 0,0,2,2,-->0,0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,1, : 0,0,2, :  
 LEN=4) 0,0,1,1, : 0,0,2,2, :  
 Number new nodes in level n is given by : 1,2,2,2,   DONE

-----Class

422-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][110][120][201]]$

--  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,1,--0,1,--  
 R3) 0,1,-->0,0,1,--0,1,1,--  
 R4) 0,0,1,-->0,1,1,--  
 R5) 0,1,1,-->  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,1, : 0,1,1, :  
 Number new nodes in level n is given by : 1,2,2,   DONE

-----Class

423-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][110][120][210]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,1,--0,1,--  
R3) 0,1,-->0,0,1,--0,1,1,--  
R4) 0,0,1,-->0,1,1,--  
R5) 0,1,1,-->  
List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,1, : 0,1,1, :  
Number new nodes in level n is given by : 1,2,2, DONE

-----Class  
424-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][110][201][210]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,1,--0,1,--  
R3) 0,1,-->0,0,1,--0,1,1,--  
R4) 0,0,1,-->0,1,1,--  
R5) 0,1,1,-->  
List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,1, : 0,1,1, :  
Number new nodes in level n is given by : 1,2,2, DONE

-----Class  
425-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][120][201][210]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,1,--0,0,2,--  
R3) 0,1,-->0,0,1,--0,0,1,--  
R4) 0,0,1,-->0,0,1,1,--  
R5) 0,0,2,-->0,0,1,--0,0,2,2,--  
R6) 0,0,1,1,-->  
R7) 0,0,2,2,-->0,0,1,--  
List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,1, : 0,0,2, :

LEN=4) 0,0,1,1,: 0,0,2,2,:  
Number new nodes in level n is given by : 1,2,2,2, DONE

-----Class

426-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][100][101][102]]$

-----  
--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,0,2,--
- R3) 0,1,-->0,1,0,--0,1,1,--0,1,--
- R4) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--
- R5) 0,0,2,-->0,0,--0,0,2,--
- R6) 0,1,0,-->
- R7) 0,1,1,-->0,1,0,--0,1,1,2,--0,1,--
- R8) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,0,2,--
- R9) 0,1,1,2,-->0,1,0,--0,1,1,2,2,--0,1,1,2,--0,1,--
- R10) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R11) 0,1,1,2,2,-->0,1,0,--0,1,1,2,2,3,--0,1,1,2,--0,1,--
- R12) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R13) 0,1,1,2,2,3,-->0,1,0,--0,1,1,2,2,3,3,--0,1,1,2,2,3,--0,1,1,2,--0,1,--
- R14) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R15) 0,1,1,2,2,3,3,-->0,1,0,--0,1,1,2,2,3,3,4,--0,1,1,2,2,3,--0,1,1,2,--0,1,--
- R16) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R17) 0,1,1,2,2,3,3,4,-->0,1,0,--0,1,1,2,2,3,3,4,4,--0,1,1,2,2,3,3,4,--0,1,1,2,2,3,--0,1,1,2,--0,1,--
- R18) 0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R19) 0,1,1,2,2,3,3,4,4,-->0,1,0,--0,1,1,2,2,3,3,4,4,5,--0,1,1,2,2,3,3,4,--0,1,1,2,2,3,--0,1,1,2,--0,1,--

List of different nodes in  $T[L]$

- LEN=1) 0,:
  - LEN=2) 0,0,: 0,1,:
  - LEN=3) 0,0,1,: 0,0,2,: 0,1,0,: 0,1,1,:
  - LEN=4) 0,0,1,1,: 0,1,1,2,:
  - LEN=5) 0,0,1,1,2,: 0,1,1,2,2,:
  - LEN=6) 0,0,1,1,2,2,: 0,1,1,2,2,3,:
  - LEN=7) 0,0,1,1,2,2,3,: 0,1,1,2,2,3,3,:
  - LEN=8) 0,0,1,1,2,2,3,3,: 0,1,1,2,2,3,3,4,:
  - LEN=9) 0,0,1,1,2,2,3,3,4,: 0,1,1,2,2,3,3,4,4,:
  - LEN=10) 0,0,1,1,2,2,3,3,4,4,: 0,1,1,2,2,3,3,4,4,5,:
- Number new nodes in level n is given by : 1,2,4,2,2,2,2,2,2,2,

-----Class

427-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][100][101][110]]$

-----

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,0,2,--
- R3) 0,1,-->0,0,--0,0,--0,1,--
- R4) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--
- R5) 0,0,2,-->0,0,--0,0,2,--
- R6) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,0,2,--
- R7) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R8) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R9) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R10) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R11) 0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--

List of different nodes in T[L]

- LEN=1) 0,:
  - LEN=2) 0,0,: 0,1,:
  - LEN=3) 0,0,1,: 0,0,2,:
  - LEN=4) 0,0,1,1,:
  - LEN=5) 0,0,1,1,2,:
  - LEN=6) 0,0,1,1,2,2,:
  - LEN=7) 0,0,1,1,2,2,3,:
  - LEN=8) 0,0,1,1,2,2,3,3,:
  - LEN=9) 0,0,1,1,2,2,3,3,4,:
  - LEN=10) 0,0,1,1,2,2,3,3,4,4,:
- Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class

428-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][100][101][120]]$

-----

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,0,2,--
- R3) 0,1,-->0,0,--0,0,1,--0,0,2,--
- R4) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--
- R5) 0,0,2,-->0,0,--0,0,2,--
- R6) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,0,2,--
- R7) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R8) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R9) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R10) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R11) 0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,1,: 0,0,2,:

LEN=4) 0,0,1,1,:

LEN=5) 0,0,1,1,2,:

LEN=6) 0,0,1,1,2,2,:

LEN=7) 0,0,1,1,2,2,3,:

LEN=8) 0,0,1,1,2,2,3,3,:

LEN=9) 0,0,1,1,2,2,3,3,4,:

LEN=10) 0,0,1,1,2,2,3,3,4,4,:

Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class

429-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][100][101][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,1,--0,0,2,--

R3) 0,1,-->0,0,--0,1,1,--0,1,--

R4) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--

R5) 0,0,2,-->0,0,--0,0,2,--

R6) 0,1,1,-->0,0,1,1,--0,1,1,2,--0,1,--

R7) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,0,2,--

R8) 0,1,1,2,-->0,0,1,1,--0,1,1,2,2,--0,1,1,2,--0,1,--

R9) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,0,2,--

R10) 0,1,1,2,2,-->0,0,1,1,2,2,--0,1,1,2,2,3,--0,1,1,2,--0,1,--

R11) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--

R12) 0,1,1,2,2,3,-->0,0,1,1,2,2,--0,1,1,2,2,3,3,--0,1,1,2,2,3,--0,1,1,2,--0,1,--

R13)

0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--

R14)

0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,--0,1,1,2,2,3,3,4,--0,1,1,2,2,3,--0,1,1,2,--0,1,--

R15)

0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--

R16)

0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,--0,1,1,2,2,3,3,4,4,--0,1,1,2,2,3,3,4,--0,1,1,2,2,3,--0,1,1,2,--0,1,--

2,3,--0,1,1,2,--0,1,--

R17)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--

1,1,2,--0,0,1,--0,0,2,--

R18)

0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,--0,1,1,2,2,3,3,4,4,5,--0,1,1,2,2,3,3,4,--

0,1,1,2,2,3,--0,1,1,2,--0,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0: 0,1,  
 LEN=3) 0,0,1: 0,0,2: 0,1,1,  
 LEN=4) 0,0,1,1: 0,1,1,2,  
 LEN=5) 0,0,1,1,2: 0,1,1,2,2,  
 LEN=6) 0,0,1,1,2,2: 0,1,1,2,2,3,  
 LEN=7) 0,0,1,1,2,2,3: 0,1,1,2,2,3,3,  
 LEN=8) 0,0,1,1,2,2,3,3: 0,1,1,2,2,3,3,4,  
 LEN=9) 0,0,1,1,2,2,3,3,4: 0,1,1,2,2,3,3,4,4,  
 LEN=10) 0,0,1,1,2,2,3,3,4,4: 0,1,1,2,2,3,3,4,4,5,  
 Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

-----Class

430-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][100][101][210]]$

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,0,2,--
- R3) 0,1,-->0,0,--0,1,1,--0,1,--
- R4) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--
- R5) 0,0,2,-->0,0,--0,0,2,--
- R6) 0,1,1,-->0,0,1,1,--0,1,1,2,--0,1,--
- R7) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,0,2,--
- R8) 0,1,1,2,-->0,0,1,1,--0,1,1,2,2,--0,1,1,2,--0,1,--
- R9) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R10) 0,1,1,2,2,-->0,0,1,1,2,2,--0,1,1,2,2,3,--0,1,1,2,--0,1,--
- R11) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R12) 0,1,1,2,2,3,-->0,0,1,1,2,2,--0,1,1,2,2,3,3,--0,1,1,2,2,3,--0,1,1,2,--0,1,--
- R13) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R14) 0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,--0,1,1,2,2,3,3,4,--0,1,1,2,2,3,--0,1,1,2,--0,1,--
- R15) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R16) 0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,--0,1,1,2,2,3,3,4,4,--0,1,1,2,2,3,3,4,--0,1,1,2,2,3,--0,1,1,2,--0,1,--
- R17) 0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R18) 0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,--0,1,1,2,2,3,3,4,4,5,--0,1,1,2,2,3,3,4,--0,1,1,2,2,3,--0,1,1,2,--0,1,--

List of different nodes in  $T[L]$

- LEN=1) 0,:
- LEN=2) 0,0: 0,1,:
- LEN=3) 0,0,1: 0,0,2: 0,1,1,:
- LEN=4) 0,0,1,1: 0,1,1,2,:
- LEN=5) 0,0,1,1,2: 0,1,1,2,2,:

LEN=6) 0,0,1,1,2,2,: 0,1,1,2,2,3,:  
 LEN=7) 0,0,1,1,2,2,3,: 0,1,1,2,2,3,3,:  
 LEN=8) 0,0,1,1,2,2,3,3,: 0,1,1,2,2,3,3,4,:  
 LEN=9) 0,0,1,1,2,2,3,3,4,: 0,1,1,2,2,3,3,4,4,:  
 LEN=10) 0,0,1,1,2,2,3,3,4,4,: 0,1,1,2,2,3,3,4,4,5,:  
 Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

-----Class

431-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][100][102][110]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,0,2,--
- R3) 0,1,-->0,1,0,--0,0,--0,1,2,--
- R4) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--
- R5) 0,0,2,-->0,0,--0,0,2,--
- R6) 0,1,0,-->0,1,0,1,--
- R7) 0,1,2,-->0,1,0,1,--0,0,--0,1,2,--
- R8) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,0,2,--
- R9) 0,1,0,1,-->
- R10) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R11) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R12)
- 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R13)
- 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R14)
- 0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,: 0,1,:
- LEN=3) 0,0,1,: 0,0,2,: 0,1,0,: 0,1,2,:
- LEN=4) 0,0,1,1,: 0,1,0,1,:
- LEN=5) 0,0,1,1,2,:
- LEN=6) 0,0,1,1,2,2,:
- LEN=7) 0,0,1,1,2,2,3,:
- LEN=8) 0,0,1,1,2,2,3,3,:
- LEN=9) 0,0,1,1,2,2,3,3,4,:
- LEN=10) 0,0,1,1,2,2,3,3,4,4,:
- Number new nodes in level n is given by : 1,2,4,2,1,1,1,1,1,1,

-----Class

432-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][100][102][120]]$

-----

--

Rules of T[L]:



- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,1, --0,0,2, --
- R3) 0,1, -->0,1,0, --0,1,1, --0,0,2, --
- R4) 0,0,1, -->0,0,1,1, --0,0,1, --0,0,2, --
- R5) 0,0,2, -->0,0, --0,0,2, --
- R6) 0,1,0, -->0,1,0,1, --
- R7) 0,1,1, -->0,1,0,1, --0,0,1, --0,0,2, --
- R8) 0,0,1,1, -->0,0,1,1,2, --0,0,1, --0,0,2, --
- R9) 0,1,0,1, -->
- R10) 0,0,1,1,2, -->0,0,1,1,2,2, --0,0,1,1,2, --0,0,1, --0,0,2, --
- R11) 0,0,1,1,2,2, -->0,0,1,1,2,2,3, --0,0,1,1,2, --0,0,1, --0,0,2, --
- R12)
- 0,0,1,1,2,2,3, -->0,0,1,1,2,2,3,3, --0,0,1,1,2,2,3, --0,0,1,1,2, --0,0,1, --0,0,2, --
- R13)
- 0,0,1,1,2,2,3,3, -->0,0,1,1,2,2,3,3,4, --0,0,1,1,2,2,3, --0,0,1,1,2, --0,0,1, --0,0,2, --
- R14)
- 0,0,1,1,2,2,3,3,4, -->0,0,1,1,2,2,3,3,4,4, --0,0,1,1,2,2,3,3,4, --0,0,1,1,2,2,3, --0,0,1,1,2, --0,0,1, --0,0,2, --

List of different nodes in T[L]

- LEN=1) 0, :
  - LEN=2) 0,0, : 0,1, :
  - LEN=3) 0,0,1, : 0,0,2, : 0,1,0, : 0,1,1, :
  - LEN=4) 0,0,1,1, : 0,1,0,1, :
  - LEN=5) 0,0,1,1,2, :
  - LEN=6) 0,0,1,1,2,2, :
  - LEN=7) 0,0,1,1,2,2,3, :
  - LEN=8) 0,0,1,1,2,2,3,3, :
  - LEN=9) 0,0,1,1,2,2,3,3,4, :
  - LEN=10) 0,0,1,1,2,2,3,3,4,4, :
- Number new nodes in level n is given by : 1,2,4,2,1,1,1,1,1,1,

-----Class

433-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][100][102][201]]$

-----

--

Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,1, --0,0,2, --
- R3) 0,1, -->0,1,0, --0,1,1, --0,1,2, --
- R4) 0,0,1, -->0,0,1,1, --0,0,1, --0,0,2, --
- R5) 0,0,2, -->0,0, --0,0,2, --
- R6) 0,1,0, -->0,1,0,1, --
- R7) 0,1,1, -->0,1,0,1, --0,1,1,2, --0,1,2, --
- R8) 0,1,2, -->0,1,0,1, --0,1,1, --0,1,2, --
- R9) 0,0,1,1, -->0,0,1,1,2, --0,0,1, --0,0,2, --
- R10) 0,1,0,1, -->
- R11) 0,1,1,2, -->0,1,0,1, --0,1,1,2,2, --0,1,1,2, --0,1,2, --
- R12) 0,0,1,1,2, -->0,0,1,1,2,2, --0,0,1,1,2, --0,0,1, --0,0,2, --
- R13) 0,1,1,2,2, -->0,1,0,1, --0,1,1,2,2,3, --0,1,1,2, --0,1,2, --

R14)  $0,0,1,1,2,2 \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$   
R15)  $0,1,1,2,2,3, \rightarrow 0,1,0,1, \rightarrow 0,1,1,2,2,3,3, \rightarrow 0,1,1,2,2,3, \rightarrow 0,1,1,2, \rightarrow 0,1,2, \rightarrow$   
R16)  $0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2,2,3,3, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$   
R17)  $0,1,1,2,2,3,3, \rightarrow 0,1,0,1, \rightarrow 0,1,1,2,2,3,3,4, \rightarrow 0,1,1,2,2,3, \rightarrow 0,1,1,2, \rightarrow 0,1,2, \rightarrow$   
R18)  $0,0,1,1,2,2,3,3, \rightarrow 0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$   
R19)  $0,1,1,2,2,3,3,4, \rightarrow 0,1,0,1, \rightarrow 0,1,1,2,2,3,3,4,4, \rightarrow 0,1,1,2,2,3,3,4, \rightarrow 0,1,1,2,2,3, \rightarrow 0,1,1,2, \rightarrow 0,1,2, \rightarrow$   
R20)  $0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3,3,4,4, \rightarrow 0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$   
R21)  $0,1,1,2,2,3,3,4,4, \rightarrow 0,1,0,1, \rightarrow 0,1,1,2,2,3,3,4,4,5, \rightarrow 0,1,1,2,2,3,3,4, \rightarrow 0,1,1,2,2,3, \rightarrow 0,1,1,2, \rightarrow 0,1,2, \rightarrow$

List of different nodes in  $T[L]$

LEN=1)  $0, :$   
LEN=2)  $0,0, : 0,1, :$   
LEN=3)  $0,0,1, : 0,0,2, : 0,1,0, : 0,1,1, : 0,1,2, :$   
LEN=4)  $0,0,1,1, : 0,1,0,1, : 0,1,1,2, :$   
LEN=5)  $0,0,1,1,2, : 0,1,1,2,2, :$   
LEN=6)  $0,0,1,1,2,2, : 0,1,1,2,2,3, :$   
LEN=7)  $0,0,1,1,2,2,3, : 0,1,1,2,2,3,3, :$   
LEN=8)  $0,0,1,1,2,2,3,3, : 0,1,1,2,2,3,3,4, :$   
LEN=9)  $0,0,1,1,2,2,3,3,4, : 0,1,1,2,2,3,3,4,4, :$   
LEN=10)  $0,0,1,1,2,2,3,3,4,4, : 0,1,1,2,2,3,3,4,4,5, :$   
Number new nodes in level n is given by :  $1,2,5,3,2,2,2,2,2,2,$

-----Class

434-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][100][102][210]]$

-----  
--  
Rules of  $T[L]$ :  
R1)  $0, \rightarrow 0,0, \rightarrow 0,1, \rightarrow$   
R2)  $0,0, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$   
R3)  $0,1, \rightarrow 0,1,0, \rightarrow 0,1,1, \rightarrow 0,1,2, \rightarrow$   
R4)  $0,0,1, \rightarrow 0,0,1,1, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$   
R5)  $0,0,2, \rightarrow 0,0, \rightarrow 0,0,2, \rightarrow$   
R6)  $0,1,0, \rightarrow 0,1,0,1, \rightarrow$   
R7)  $0,1,1, \rightarrow 0,1,0,1, \rightarrow 0,1,1,2, \rightarrow 0,1,2, \rightarrow$   
R8)  $0,1,2, \rightarrow 0,1,0,1, \rightarrow 0,1,1, \rightarrow 0,1,2, \rightarrow$   
R9)  $0,0,1,1, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$   
R10)  $0,1,0,1, \rightarrow$   
R11)  $0,1,1,2, \rightarrow 0,1,0,1, \rightarrow 0,1,1,2,2, \rightarrow 0,1,1,2, \rightarrow 0,1,2, \rightarrow$   
R12)  $0,0,1,1,2, \rightarrow 0,0,1,1,2,2, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$   
R13)  $0,1,1,2,2, \rightarrow 0,1,0,1, \rightarrow 0,1,1,2,2,3, \rightarrow 0,1,1,2, \rightarrow 0,1,2, \rightarrow$   
R14)  $0,0,1,1,2,2, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$   
R15)  $0,1,1,2,2,3, \rightarrow 0,1,0,1, \rightarrow 0,1,1,2,2,3,3, \rightarrow 0,1,1,2,2,3, \rightarrow 0,1,1,2, \rightarrow 0,1,2, \rightarrow$

R16)  
 $0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2,2,3,3, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$   
R17)  $0,1,1,2,2,3,3, \rightarrow 0,1,0,1, \rightarrow 0,1,1,2,2,3,3,4, \rightarrow 0,1,1,2,2,3, \rightarrow 0,1,1,2, \rightarrow 0,1,2, \rightarrow$   
R18)  
 $0,0,1,1,2,2,3,3, \rightarrow 0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$   
R19)  
 $0,1,1,2,2,3,3,4, \rightarrow 0,1,0,1, \rightarrow 0,1,1,2,2,3,3,4,4, \rightarrow 0,1,1,2,2,3,3,4, \rightarrow 0,1,1,2,2,3, \rightarrow 0,1,1,2, \rightarrow 0,1,2, \rightarrow$   
R20)  
 $0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3,3,4,4, \rightarrow 0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$   
R21)  
 $0,1,1,2,2,3,3,4,4, \rightarrow 0,1,0,1, \rightarrow 0,1,1,2,2,3,3,4,4,5, \rightarrow 0,1,1,2,2,3,3,4, \rightarrow 0,1,1,2,2,3, \rightarrow 0,1,1,2, \rightarrow 0,1,2, \rightarrow$

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,1, : 0,0,2, : 0,1,0, : 0,1,1, : 0,1,2, :  
LEN=4) 0,0,1,1, : 0,1,0,1, : 0,1,1,2, :  
LEN=5) 0,0,1,1,2, : 0,1,1,2,2, :  
LEN=6) 0,0,1,1,2,2, : 0,1,1,2,2,3, :  
LEN=7) 0,0,1,1,2,2,3, : 0,1,1,2,2,3,3, :  
LEN=8) 0,0,1,1,2,2,3,3, : 0,1,1,2,2,3,3,4, :  
LEN=9) 0,0,1,1,2,2,3,3,4, : 0,1,1,2,2,3,3,4,4, :  
LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,1,1,2,2,3,3,4,4,5, :  
Number new nodes in level n is given by : 1,2,5,3,2,2,2,2,2,2,

-----Class

435-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][100][110][120]]$

--

Rules of T[L]:

R1)  $0, \rightarrow 0,0, \rightarrow 0,1, \rightarrow$   
R2)  $0,0, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$   
R3)  $0,1, \rightarrow 0,0,1, \rightarrow 0,0, \rightarrow 0,0,2, \rightarrow$   
R4)  $0,0,1, \rightarrow 0,0,1,1, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$   
R5)  $0,0,2, \rightarrow 0,0, \rightarrow 0,0,2, \rightarrow$   
R6)  $0,0,1,1, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$   
R7)  $0,0,1,1,2, \rightarrow 0,0,1,1,2,2, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$   
R8)  $0,0,1,1,2,2, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$   
R9)  $0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2,2,3,3, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$   
R10)  
 $0,0,1,1,2,2,3,3, \rightarrow 0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$   
R11)  
 $0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3,3,4,4, \rightarrow 0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,1,: 0,0,2,:  
 LEN=4) 0,0,1,1,:  
 LEN=5) 0,0,1,1,2,:  
 LEN=6) 0,0,1,1,2,2,:  
 LEN=7) 0,0,1,1,2,2,3,:  
 LEN=8) 0,0,1,1,2,2,3,3,:  
 LEN=9) 0,0,1,1,2,2,3,3,4,:  
 LEN=10) 0,0,1,1,2,2,3,3,4,4,:  
 Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class

436-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][100][110][201]]$

Rules of  $T[L]$ :  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,1,--0,0,2,--  
 R3) 0,1,-->0,0,1,--0,0,--0,1,--  
 R4) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--  
 R5) 0,0,2,-->0,0,--0,0,2,--  
 R6) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,0,2,--  
 R7) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,0,2,--  
 R8) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
 R9) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
 R10) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
 R11) 0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--

List of different nodes in  $T[L]$

LEN=1) 0,:  
 LEN=2) 0,0,: 0,1,:  
 LEN=3) 0,0,1,: 0,0,2,:  
 LEN=4) 0,0,1,1,:  
 LEN=5) 0,0,1,1,2,:  
 LEN=6) 0,0,1,1,2,2,:  
 LEN=7) 0,0,1,1,2,2,3,:  
 LEN=8) 0,0,1,1,2,2,3,3,:  
 LEN=9) 0,0,1,1,2,2,3,3,4,:  
 LEN=10) 0,0,1,1,2,2,3,3,4,4,:  
 Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class

437-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][100][110][210]]$

Rules of  $T[L]$ :  
 R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,1,--0,0,2,--  
R3) 0,1,-->0,0,1,--0,0,--0,1,--  
R4) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--  
R5) 0,0,2,-->0,0,--0,0,2,--  
R6) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,0,2,--  
R7) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,0,2,--  
R8) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
R9) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
R10) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
R11) 0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,1, : 0,0,2, :  
LEN=4) 0,0,1,1, :  
LEN=5) 0,0,1,1,2, :  
LEN=6) 0,0,1,1,2,2, :  
LEN=7) 0,0,1,1,2,2,3, :  
LEN=8) 0,0,1,1,2,2,3,3, :  
LEN=9) 0,0,1,1,2,2,3,3,4, :  
LEN=10) 0,0,1,1,2,2,3,3,4,4, :  
Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class

438-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][100][120][201]]$

-----  
--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,1,--0,0,2,--  
R3) 0,1,-->0,0,1,--0,0,1,--0,0,2,--  
R4) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--  
R5) 0,0,2,-->0,0,--0,0,2,--  
R6) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,0,2,--  
R7) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,0,2,--  
R8) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
R9) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
R10) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
R11) 0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,1, : 0,0,2, :

LEN=4) 0,0,1,1, :  
 LEN=5) 0,0,1,1,2, :  
 LEN=6) 0,0,1,1,2,2, :  
 LEN=7) 0,0,1,1,2,2,3, :  
 LEN=8) 0,0,1,1,2,2,3,3, :  
 LEN=9) 0,0,1,1,2,2,3,3,4, :  
 LEN=10) 0,0,1,1,2,2,3,3,4,4, :  
 Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class

439-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][100][120][210]]$

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,0,2,--
- R3) 0,1,-->0,0,1,--0,0,1,--0,0,2,--
- R4) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--
- R5) 0,0,2,-->0,0,--0,0,2,--
- R6) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,0,2,--
- R7) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R8) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R9) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R10) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R11) 0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, : 0,1, :
- LEN=3) 0,0,1, : 0,0,2, :
- LEN=4) 0,0,1,1, :
- LEN=5) 0,0,1,1,2, :
- LEN=6) 0,0,1,1,2,2, :
- LEN=7) 0,0,1,1,2,2,3, :
- LEN=8) 0,0,1,1,2,2,3,3, :
- LEN=9) 0,0,1,1,2,2,3,3,4, :
- LEN=10) 0,0,1,1,2,2,3,3,4,4, :

Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class

440-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][100][201][210]]$

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,0,2,--

R3) 0,1,-->0,0,1,--0,1,1,--0,1,--  
 R4) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--  
 R5) 0,0,2,-->0,0,--0,0,2,--  
 R6) 0,1,1,-->0,0,1,1,--0,1,1,2,--0,1,--  
 R7) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,0,2,--  
 R8) 0,1,1,2,-->0,0,1,1,2,--0,1,1,2,2,--0,1,1,2,--0,1,--  
 R9) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,0,2,--  
 R10) 0,1,1,2,2,-->0,0,1,1,2,2,--0,1,1,2,2,3,--0,1,1,2,--0,1,--  
 R11) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
 R12) 0,1,1,2,2,3,-->0,0,1,1,2,2,3,--0,1,1,2,2,3,3,--0,1,1,2,2,3,--0,1,1,2,--0,1,--  
 R13) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
 R14) 0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,--0,1,1,2,2,3,3,4,--0,1,1,2,2,3,--0,1,1,2,--0,1,--  
 R15) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
 R16) 0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,--0,1,1,2,2,3,3,4,4,--0,1,1,2,2,3,3,4,--0,1,1,2,2,3,--0,1,1,2,--0,1,--  
 R17) 0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
 R18) 0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,--0,1,1,2,2,3,3,4,4,5,--0,1,1,2,2,3,3,4,--0,1,1,2,2,3,--0,1,1,2,--0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,1, : 0,0,2, : 0,1,1, :  
 LEN=4) 0,0,1,1, : 0,1,1,2, :  
 LEN=5) 0,0,1,1,2, : 0,1,1,2,2, :  
 LEN=6) 0,0,1,1,2,2, : 0,1,1,2,2,3, :  
 LEN=7) 0,0,1,1,2,2,3, : 0,1,1,2,2,3,3, :  
 LEN=8) 0,0,1,1,2,2,3,3, : 0,1,1,2,2,3,3,4, :  
 LEN=9) 0,0,1,1,2,2,3,3,4, : 0,1,1,2,2,3,3,4,4, :  
 LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,1,1,2,2,3,3,4,4,5, :  
 Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

-----Class

441-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][101][102][110]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,1,--0,0,2,--  
 R3) 0,1,-->0,1,0,--0,0,--0,1,--  
 R4) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--  
 R5) 0,0,2,-->0,0,--0,0,2,--  
 R6) 0,1,0,-->

R7) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,0,2,--  
R8) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,0,2,--  
R9) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
R10)  
0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
R11)  
0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
R12)  
0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,  
1,1,2,--0,0,1,--0,0,2,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,1, : 0,0,2, : 0,1,0, :  
LEN=4) 0,0,1,1, :  
LEN=5) 0,0,1,1,2, :  
LEN=6) 0,0,1,1,2,2, :  
LEN=7) 0,0,1,1,2,2,3, :  
LEN=8) 0,0,1,1,2,2,3,3, :  
LEN=9) 0,0,1,1,2,2,3,3,4, :  
LEN=10) 0,0,1,1,2,2,3,3,4,4, :  
Number new nodes in level n is given by : 1,2,3,1,1,1,1,1,1,1,

-----Class

442-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][101][102][120]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,1,--0,0,2,--  
R3) 0,1,-->0,1,0,--0,1,1,--0,0,2,--  
R4) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--  
R5) 0,0,2,-->0,0,--0,0,2,--  
R6) 0,1,0,-->  
R7) 0,1,1,-->0,1,0,--0,0,1,--0,0,2,--  
R8) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,0,2,--  
R9) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,0,2,--  
R10) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
R11)  
0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
R12)  
0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
R13)  
0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,  
1,1,2,--0,0,1,--0,0,2,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,1, : 0,0,2, : 0,1,0, : 0,1,1, :



LEN=4) 0,0,1,1, :  
 LEN=5) 0,0,1,1,2, :  
 LEN=6) 0,0,1,1,2,2, :  
 LEN=7) 0,0,1,1,2,2,3, :  
 LEN=8) 0,0,1,1,2,2,3,3, :  
 LEN=9) 0,0,1,1,2,2,3,3,4, :  
 LEN=10) 0,0,1,1,2,2,3,3,4,4, :  
 Number new nodes in level n is given by : 1,2,4,1,1,1,1,1,1,1,

-----Class

443-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][101][102][201]]$

--  
 Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,0,2,--
- R3) 0,1,-->0,1,0,--0,1,1,--0,1,--
- R4) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--
- R5) 0,0,2,-->0,0,--0,0,2,--
- R6) 0,1,0,-->
- R7) 0,1,1,-->0,1,0,--0,1,1,2,--0,1,--
- R8) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,0,2,--
- R9) 0,1,1,2,-->0,1,0,--0,1,1,2,2,--0,1,1,2,--0,1,--
- R10) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R11) 0,1,1,2,2,-->0,1,0,--0,1,1,2,2,3,--0,1,1,2,--0,1,--
- R12) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R13) 0,1,1,2,2,3,-->0,1,0,--0,1,1,2,2,3,3,--0,1,1,2,2,3,--0,1,1,2,--0,1,--
- R14) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R15) 0,1,1,2,2,3,3,-->0,1,0,--0,1,1,2,2,3,3,4,--0,1,1,2,2,3,--0,1,1,2,--0,1,--
- R16) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R17) 0,1,1,2,2,3,3,4,-->0,1,0,--0,1,1,2,2,3,3,4,4,--0,1,1,2,2,3,3,4,--0,1,1,2,2,3,--0,1,1,2,--0,1,--
- R18) 0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R19) 0,1,1,2,2,3,3,4,4,-->0,1,0,--0,1,1,2,2,3,3,4,4,5,--0,1,1,2,2,3,3,4,--0,1,1,2,2,3,--0,1,1,2,--0,1,--

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, : 0,1, :
- LEN=3) 0,0,1, : 0,0,2, : 0,1,0, : 0,1,1, :
- LEN=4) 0,0,1,1, : 0,1,1,2, :
- LEN=5) 0,0,1,1,2, : 0,1,1,2,2, :
- LEN=6) 0,0,1,1,2,2, : 0,1,1,2,2,3, :
- LEN=7) 0,0,1,1,2,2,3, : 0,1,1,2,2,3,3, :

LEN=8) 0,0,1,1,2,2,3,3, : 0,1,1,2,2,3,3,4, :  
 LEN=9) 0,0,1,1,2,2,3,3,4, : 0,1,1,2,2,3,3,4,4, :  
 LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,1,1,2,2,3,3,4,4,5, :  
 Number new nodes in level n is given by : 1,2,4,2,2,2,2,2,2,2,

-----Class

444-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][101][102][210]]$   
 -----

--

Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,1, --0,0,2, --
- R3) 0,1, -->0,1,0, --0,1,1, --0,1, --
- R4) 0,0,1, -->0,0,1,1, --0,0,1, --0,0,2, --
- R5) 0,0,2, -->0,0, --0,0,2, --
- R6) 0,1,0, -->
- R7) 0,1,1, -->0,1,0, --0,1,1,2, --0,1, --
- R8) 0,0,1,1, -->0,0,1,1,2, --0,0,1, --0,0,2, --
- R9) 0,1,1,2, -->0,1,0, --0,1,1,2,2, --0,1,1,2, --0,1, --
- R10) 0,0,1,1,2, -->0,0,1,1,2,2, --0,0,1,1,2, --0,0,1, --0,0,2, --
- R11) 0,1,1,2,2, -->0,1,0, --0,1,1,2,2,3, --0,1,1,2, --0,1, --
- R12) 0,0,1,1,2,2, -->0,0,1,1,2,2,3, --0,0,1,1,2, --0,0,1, --0,0,2, --
- R13) 0,1,1,2,2,3, -->0,1,0, --0,1,1,2,2,3,3, --0,1,1,2,2,3, --0,1,1,2, --0,1, --
- R14) 0,0,1,1,2,2,3, -->0,0,1,1,2,2,3,3, --0,0,1,1,2,2,3, --0,0,1,1,2, --0,0,1, --0,0,2, --
- R15) 0,1,1,2,2,3,3, -->0,1,0, --0,1,1,2,2,3,3,4, --0,1,1,2,2,3, --0,1,1,2, --0,1, --
- R16) 0,0,1,1,2,2,3,3, -->0,0,1,1,2,2,3,3,4, --0,0,1,1,2,2,3, --0,0,1,1,2, --0,0,1, --0,0,2, --
- R17) 0,1,1,2,2,3,3,4, -->0,1,0, --0,1,1,2,2,3,3,4,4, --0,1,1,2,2,3,3,4, --0,1,1,2,2,3, --0,1,1,2, --0,1, --
- R18) 0,0,1,1,2,2,3,3,4, -->0,0,1,1,2,2,3,3,4,4, --0,0,1,1,2,2,3,3,4, --0,0,1,1,2,2,3, --0,0,1,1,2, --0,0,1, --0,0,2, --
- R19) 0,1,1,2,2,3,3,4,4, -->0,1,0, --0,1,1,2,2,3,3,4,4,5, --0,1,1,2,2,3,3,4, --0,1,1,2,2,3, --0,1,1,2, --0,1, --

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, : 0,1, :
- LEN=3) 0,0,1, : 0,0,2, : 0,1,0, : 0,1,1, :
- LEN=4) 0,0,1,1, : 0,1,1,2, :
- LEN=5) 0,0,1,1,2, : 0,1,1,2,2, :
- LEN=6) 0,0,1,1,2,2, : 0,1,1,2,2,3, :
- LEN=7) 0,0,1,1,2,2,3, : 0,1,1,2,2,3,3, :
- LEN=8) 0,0,1,1,2,2,3,3, : 0,1,1,2,2,3,3,4, :
- LEN=9) 0,0,1,1,2,2,3,3,4, : 0,1,1,2,2,3,3,4,4, :
- LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,1,1,2,2,3,3,4,4,5, :  
 Number new nodes in level n is given by : 1,2,4,2,2,2,2,2,2,2,

-----Class

445-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][101][110][120]]$

-----

--

Rules of  $T[L]$ :

R1)  $0, -- \rightarrow 0, 0, -- 0, 1, --$

R2)  $0, 0, -- \rightarrow 0, 0, 1, -- 0, 0, 2, --$

R3)  $0, 1, -- \rightarrow 0, 0, -- 0, 0, -- 0, 0, 2, --$

R4)  $0, 0, 1, -- \rightarrow 0, 0, 1, 1, -- 0, 0, 1, -- 0, 0, 2, --$

R5)  $0, 0, 2, -- \rightarrow 0, 0, -- 0, 0, 2, --$

R6)  $0, 0, 1, 1, -- \rightarrow 0, 0, 1, 1, 2, -- 0, 0, 1, -- 0, 0, 2, --$

R7)  $0, 0, 1, 1, 2, -- \rightarrow 0, 0, 1, 1, 2, 2, -- 0, 0, 1, 1, 2, -- 0, 0, 1, -- 0, 0, 2, --$

R8)  $0, 0, 1, 1, 2, 2, -- \rightarrow 0, 0, 1, 1, 2, 2, 3, -- 0, 0, 1, 1, 2, -- 0, 0, 1, -- 0, 0, 2, --$

R9)  $0, 0, 1, 1, 2, 2, 3, -- \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, -- 0, 0, 1, 1, 2, 2, 3, -- 0, 0, 1, 1, 2, -- 0, 0, 1, -- 0, 0, 2, --$

R10)

$0, 0, 1, 1, 2, 2, 3, 3, -- \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, -- 0, 0, 1, 1, 2, 2, 3, -- 0, 0, 1, 1, 2, -- 0, 0, 1, -- 0, 0, 2, --$

R11)

$0, 0, 1, 1, 2, 2, 3, 3, 4, -- \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, 4, -- 0, 0, 1, 1, 2, 2, 3, 3, 4, -- 0, 0, 1, 1, 2, 2, 3, -- 0, 0,$

$1, 1, 2, -- 0, 0, 1, -- 0, 0, 2, --$

List of different nodes in  $T[L]$

LEN=1)  $0, :$

LEN=2)  $0, 0, : 0, 1, :$

LEN=3)  $0, 0, 1, : 0, 0, 2, :$

LEN=4)  $0, 0, 1, 1, :$

LEN=5)  $0, 0, 1, 1, 2, :$

LEN=6)  $0, 0, 1, 1, 2, 2, :$

LEN=7)  $0, 0, 1, 1, 2, 2, 3, :$

LEN=8)  $0, 0, 1, 1, 2, 2, 3, 3, :$

LEN=9)  $0, 0, 1, 1, 2, 2, 3, 3, 4, :$

LEN=10)  $0, 0, 1, 1, 2, 2, 3, 3, 4, 4, :$

Number new nodes in level n is given by :  $1, 2, 2, 1, 1, 1, 1, 1, 1, 1,$

-----Class

446-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][101][110][201]]$

-----

--

Rules of  $T[L]$ :

R1)  $0, -- \rightarrow 0, 0, -- 0, 1, --$

R2)  $0, 0, -- \rightarrow 0, 0, 1, -- 0, 0, 2, --$

R3)  $0, 1, -- \rightarrow 0, 0, -- 0, 0, -- 0, 1, --$

R4)  $0, 0, 1, -- \rightarrow 0, 0, 1, 1, -- 0, 0, 1, -- 0, 0, 2, --$

R5)  $0, 0, 2, -- \rightarrow 0, 0, -- 0, 0, 2, --$

R6)  $0, 0, 1, 1, -- \rightarrow 0, 0, 1, 1, 2, -- 0, 0, 1, -- 0, 0, 2, --$

R7)  $0, 0, 1, 1, 2, -- \rightarrow 0, 0, 1, 1, 2, 2, -- 0, 0, 1, 1, 2, -- 0, 0, 1, -- 0, 0, 2, --$

R8)  $0, 0, 1, 1, 2, 2, -- \rightarrow 0, 0, 1, 1, 2, 2, 3, -- 0, 0, 1, 1, 2, -- 0, 0, 1, -- 0, 0, 2, --$

R9)  $0, 0, 1, 1, 2, 2, 3, -- \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, -- 0, 0, 1, 1, 2, 2, 3, -- 0, 0, 1, 1, 2, -- 0, 0, 1, -- 0, 0, 2, --$

R10)

0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
R11)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,  
1,1,2,--0,0,1,--0,0,2,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,1,: 0,0,2,:

LEN=4) 0,0,1,1,:

LEN=5) 0,0,1,1,2,:

LEN=6) 0,0,1,1,2,2,:

LEN=7) 0,0,1,1,2,2,3,:

LEN=8) 0,0,1,1,2,2,3,3,:

LEN=9) 0,0,1,1,2,2,3,3,4,:

LEN=10) 0,0,1,1,2,2,3,3,4,4,:

Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class

447-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][101][110][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,1,--0,0,2,--

R3) 0,1,-->0,0,--0,0,--0,1,--

R4) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--

R5) 0,0,2,-->0,0,--0,0,2,--

R6) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,0,2,--

R7) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,0,2,--

R8) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--

R9) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--

R10)

0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--

R11)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,

1,1,2,--0,0,1,--0,0,2,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,1,: 0,0,2,:

LEN=4) 0,0,1,1,:

LEN=5) 0,0,1,1,2,:

LEN=6) 0,0,1,1,2,2,:

LEN=7) 0,0,1,1,2,2,3,:

LEN=8) 0,0,1,1,2,2,3,3,:

LEN=9) 0,0,1,1,2,2,3,3,4,:

LEN=10) 0,0,1,1,2,2,3,3,4,4,:

Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class

448-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][101][120][201]]$

-----  
--

Rules of  $T[L]$ :

- R1)  $0, -->0,0, --0,1, --$
- R2)  $0,0, -->0,0,1, --0,0,2, --$
- R3)  $0,1, -->0,0, --0,0,1, --0,0,2, --$
- R4)  $0,0,1, -->0,0,1,1, --0,0,1, --0,0,2, --$
- R5)  $0,0,2, -->0,0, --0,0,2, --$
- R6)  $0,0,1,1, -->0,0,1,1,2, --0,0,1, --0,0,2, --$
- R7)  $0,0,1,1,2, -->0,0,1,1,2,2, --0,0,1,1,2, --0,0,1, --0,0,2, --$
- R8)  $0,0,1,1,2,2, -->0,0,1,1,2,2,3, --0,0,1,1,2, --0,0,1, --0,0,2, --$
- R9)  $0,0,1,1,2,2,3, -->0,0,1,1,2,2,3,3, --0,0,1,1,2,2,3, --0,0,1,1,2, --0,0,1, --0,0,2, --$
- R10)  $0,0,1,1,2,2,3,3, -->0,0,1,1,2,2,3,3,4, --0,0,1,1,2,2,3, --0,0,1,1,2, --0,0,1, --0,0,2, --$
- R11)  $0,0,1,1,2,2,3,3,4, -->0,0,1,1,2,2,3,3,4,4, --0,0,1,1,2,2,3,3,4, --0,0,1,1,2,2,3, --0,0,1,1,2, --0,0,1, --0,0,2, --$

List of different nodes in  $T[L]$

- LEN=1)  $0, :$
  - LEN=2)  $0,0, : 0,1, :$
  - LEN=3)  $0,0,1, : 0,0,2, :$
  - LEN=4)  $0,0,1,1, :$
  - LEN=5)  $0,0,1,1,2, :$
  - LEN=6)  $0,0,1,1,2,2, :$
  - LEN=7)  $0,0,1,1,2,2,3, :$
  - LEN=8)  $0,0,1,1,2,2,3,3, :$
  - LEN=9)  $0,0,1,1,2,2,3,3,4, :$
  - LEN=10)  $0,0,1,1,2,2,3,3,4,4, :$
- Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class

449-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][101][120][210]]$

-----  
--

Rules of  $T[L]$ :

- R1)  $0, -->0,0, --0,1, --$
- R2)  $0,0, -->0,0,1, --0,0,2, --$
- R3)  $0,1, -->0,0, --0,0,1, --0,0,2, --$
- R4)  $0,0,1, -->0,0,1,1, --0,0,1, --0,0,2, --$
- R5)  $0,0,2, -->0,0, --0,0,2, --$
- R6)  $0,0,1,1, -->0,0,1,1,2, --0,0,1, --0,0,2, --$
- R7)  $0,0,1,1,2, -->0,0,1,1,2,2, --0,0,1,1,2, --0,0,1, --0,0,2, --$
- R8)  $0,0,1,1,2,2, -->0,0,1,1,2,2,3, --0,0,1,1,2, --0,0,1, --0,0,2, --$
- R9)  $0,0,1,1,2,2,3, -->0,0,1,1,2,2,3,3, --0,0,1,1,2,2,3, --0,0,1,1,2, --0,0,1, --0,0,2, --$
- R10)  $0,0,1,1,2,2,3,3, -->0,0,1,1,2,2,3,3,4, --0,0,1,1,2,2,3, --0,0,1,1,2, --0,0,1, --0,0,2, --$

R11)  
 0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,  
 1,1,2,--0,0,1,--0,0,2,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,1, : 0,0,2, :  
 LEN=4) 0,0,1,1, :  
 LEN=5) 0,0,1,1,2, :  
 LEN=6) 0,0,1,1,2,2, :  
 LEN=7) 0,0,1,1,2,2,3, :  
 LEN=8) 0,0,1,1,2,2,3,3, :  
 LEN=9) 0,0,1,1,2,2,3,3,4, :  
 LEN=10) 0,0,1,1,2,2,3,3,4,4, :  
 Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class

450-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][101][201][210]]$

-----

--  
 Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,1,--0,0,2,--  
 R3) 0,1,-->0,0,--0,1,1,--0,1,--  
 R4) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--  
 R5) 0,0,2,-->0,0,--0,0,2,--  
 R6) 0,1,1,-->0,0,1,1,--0,1,1,2,--0,1,--  
 R7) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,0,2,--  
 R8) 0,1,1,2,-->0,0,1,1,--0,1,1,2,2,--0,1,1,2,--0,1,--  
 R9) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,0,2,--  
 R10) 0,1,1,2,2,-->0,0,1,1,2,2,--0,1,1,2,2,3,--0,1,1,2,--0,1,--  
 R11) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
 R12) 0,1,1,2,2,3,-->0,0,1,1,2,2,--0,1,1,2,2,3,3,--0,1,1,2,2,3,--0,1,1,2,--0,1,--  
 R13)  
 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
 R14)  
 0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,--0,1,1,2,2,3,3,4,--0,1,1,2,2,3,--0,1,1,2,--0,1,--  
 R15)  
 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
 R16)  
 0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,--0,1,1,2,2,3,3,4,4,--0,1,1,2,2,3,3,4,--0,1,1,2,  
 2,3,--0,1,1,2,--0,1,--  
 R17)  
 0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,  
 1,1,2,--0,0,1,--0,0,2,--  
 R18)  
 0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,--0,1,1,2,2,3,3,4,4,5,--0,1,1,2,2,3,3,4,--  
 0,1,1,2,2,3,--0,1,1,2,--0,1,--  
 List of different nodes in T[L]

LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,1, : 0,0,2, : 0,1,1, :  
 LEN=4) 0,0,1,1, : 0,1,1,2, :  
 LEN=5) 0,0,1,1,2, : 0,1,1,2,2, :  
 LEN=6) 0,0,1,1,2,2, : 0,1,1,2,2,3, :  
 LEN=7) 0,0,1,1,2,2,3, : 0,1,1,2,2,3,3, :  
 LEN=8) 0,0,1,1,2,2,3,3, : 0,1,1,2,2,3,3,4, :  
 LEN=9) 0,0,1,1,2,2,3,3,4, : 0,1,1,2,2,3,3,4,4, :  
 LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,1,1,2,2,3,3,4,4,5, :  
 Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

-----Class

451-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][102][110][120]]$

-----

--

Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,1, --0,0,2, --
- R3) 0,1, -->0,1,0, --0,0,2, --
- R4) 0,0,1, -->0,0,1,1, --0,0,1, --0,0,2, --
- R5) 0,0,2, -->0,0, --0,0,2, --
- R6) 0,1,0, -->0,1,0,1, --
- R7) 0,0,1,1, -->0,0,1,1,2, --0,0,1, --0,0,2, --
- R8) 0,1,0,1, -->
- R9) 0,0,1,1,2, -->0,0,1,1,2,2, --0,0,1,1,2, --0,0,1, --0,0,2, --
- R10) 0,0,1,1,2,2, -->0,0,1,1,2,2,3, --0,0,1,1,2, --0,0,1, --0,0,2, --
- R11) 0,0,1,1,2,2,3, -->0,0,1,1,2,2,3,3, --0,0,1,1,2,2,3, --0,0,1,1,2, --0,0,1, --0,0,2, --
- R12) 0,0,1,1,2,2,3,3, -->0,0,1,1,2,2,3,3,4, --0,0,1,1,2,2,3, --0,0,1,1,2, --0,0,1, --0,0,2, --
- R13) 0,0,1,1,2,2,3,3,4, -->0,0,1,1,2,2,3,3,4,4, --0,0,1,1,2,2,3,3,4, --0,0,1,1,2,2,3, --0,0,1,1,2, --0,0,1, --0,0,2, --

List of different nodes in T[L]

LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,1, : 0,0,2, : 0,1,0, :  
 LEN=4) 0,0,1,1, : 0,1,0,1, :  
 LEN=5) 0,0,1,1,2, :  
 LEN=6) 0,0,1,1,2,2, :  
 LEN=7) 0,0,1,1,2,2,3, :  
 LEN=8) 0,0,1,1,2,2,3,3, :  
 LEN=9) 0,0,1,1,2,2,3,3,4, :  
 LEN=10) 0,0,1,1,2,2,3,3,4,4, :  
 Number new nodes in level n is given by : 1,2,3,2,1,1,1,1,1,1,

-----Class

452-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][102][110][201]]$

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,0,2,--
- R3) 0,1,-->0,1,0,--0,0,--0,1,2,--
- R4) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--
- R5) 0,0,2,-->0,0,--0,0,2,--
- R6) 0,1,0,-->0,1,0,1,--
- R7) 0,1,2,-->0,1,0,1,--0,0,--0,1,2,--
- R8) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,0,2,--
- R9) 0,1,0,1,-->
- R10) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R11) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R12) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R13) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R14) 0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--

List of different nodes in T[L]

- LEN=1) 0,:
  - LEN=2) 0,0,: 0,1,:
  - LEN=3) 0,0,1,: 0,0,2,: 0,1,0,: 0,1,2,:
  - LEN=4) 0,0,1,1,: 0,1,0,1,:
  - LEN=5) 0,0,1,1,2,:
  - LEN=6) 0,0,1,1,2,2,:
  - LEN=7) 0,0,1,1,2,2,3,:
  - LEN=8) 0,0,1,1,2,2,3,3,:
  - LEN=9) 0,0,1,1,2,2,3,3,4,:
  - LEN=10) 0,0,1,1,2,2,3,3,4,4,:
- Number new nodes in level n is given by : 1,2,4,2,1,1,1,1,1,1,

-----Class

453-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][102][110][210]]$

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,0,2,--
- R3) 0,1,-->0,1,0,--0,0,--0,1,2,--
- R4) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--
- R5) 0,0,2,-->0,0,--0,0,2,--
- R6) 0,1,0,-->0,1,0,1,--
- R7) 0,1,2,-->0,1,0,1,--0,0,--0,1,2,--
- R8) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,0,2,--
- R9) 0,1,0,1,-->



R10) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,0,2,--  
 R11) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
 R12)  
 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
 R13)  
 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
 R14)  
 0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,  
 1,1,2,--0,0,1,--0,0,2,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,1, : 0,0,2, : 0,1,0, : 0,1,2, :  
 LEN=4) 0,0,1,1, : 0,1,0,1, :  
 LEN=5) 0,0,1,1,2, :  
 LEN=6) 0,0,1,1,2,2, :  
 LEN=7) 0,0,1,1,2,2,3, :  
 LEN=8) 0,0,1,1,2,2,3,3, :  
 LEN=9) 0,0,1,1,2,2,3,3,4, :  
 LEN=10) 0,0,1,1,2,2,3,3,4,4, :  
 Number new nodes in level n is given by : 1,2,4,2,1,1,1,1,1,1,

-----Class

454-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][102][120][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,1,--0,0,2,--  
 R3) 0,1,-->0,1,0,--0,1,1,--0,0,2,--  
 R4) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--  
 R5) 0,0,2,-->0,0,--0,0,2,--  
 R6) 0,1,0,-->0,1,0,1,--  
 R7) 0,1,1,-->0,1,0,1,--0,0,1,--0,0,2,--  
 R8) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,0,2,--  
 R9) 0,1,0,1,-->  
 R10) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,0,2,--  
 R11) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
 R12)  
 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
 R13)  
 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
 R14)  
 0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,  
 1,1,2,--0,0,1,--0,0,2,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,1, : 0,0,2, : 0,1,0, : 0,1,1, :

LEN=4) 0,0,1,1,: 0,1,0,1,:  
 LEN=5) 0,0,1,1,2,:  
 LEN=6) 0,0,1,1,2,2,:  
 LEN=7) 0,0,1,1,2,2,3,:  
 LEN=8) 0,0,1,1,2,2,3,3,:  
 LEN=9) 0,0,1,1,2,2,3,3,4,:  
 LEN=10) 0,0,1,1,2,2,3,3,4,4,:  
 Number new nodes in level n is given by : 1,2,4,2,1,1,1,1,1,1,

-----Class

455-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][102][120][210]]$

--  
 Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,0,2,--
- R3) 0,1,-->0,1,0,--0,1,1,--0,0,2,--
- R4) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--
- R5) 0,0,2,-->0,0,--0,0,2,--
- R6) 0,1,0,-->0,1,0,1,--
- R7) 0,1,1,-->0,1,0,1,--0,0,1,--0,0,2,--
- R8) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,0,2,--
- R9) 0,1,0,1,-->
- R10) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R11) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R12) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R13) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R14) 0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,: 0,1,:
- LEN=3) 0,0,1,: 0,0,2,: 0,1,0,: 0,1,1,:
- LEN=4) 0,0,1,1,: 0,1,0,1,:
- LEN=5) 0,0,1,1,2,:
- LEN=6) 0,0,1,1,2,2,:
- LEN=7) 0,0,1,1,2,2,3,:
- LEN=8) 0,0,1,1,2,2,3,3,:
- LEN=9) 0,0,1,1,2,2,3,3,4,:
- LEN=10) 0,0,1,1,2,2,3,3,4,4,:
- Number new nodes in level n is given by : 1,2,4,2,1,1,1,1,1,1,1,

-----Class

456-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][102][201][210]]$

--

Rules of T[L]:

- R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$
- R2)  $0, 0, \rightarrow 0, 0, 1, \rightarrow 0, 0, 2, \rightarrow$
- R3)  $0, 1, \rightarrow 0, 1, 0, \rightarrow 0, 1, 1, \rightarrow 0, 1, 2, \rightarrow$
- R4)  $0, 0, 1, \rightarrow 0, 0, 1, 1, \rightarrow 0, 0, 1, \rightarrow 0, 0, 2, \rightarrow$
- R5)  $0, 0, 2, \rightarrow 0, 0, \rightarrow 0, 0, 2, \rightarrow$
- R6)  $0, 1, 0, \rightarrow 0, 1, 0, 1, \rightarrow$
- R7)  $0, 1, 1, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 1, 2, \rightarrow 0, 1, 2, \rightarrow$
- R8)  $0, 1, 2, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 1, \rightarrow 0, 1, 2, \rightarrow$
- R9)  $0, 0, 1, 1, \rightarrow 0, 0, 1, 1, 2, \rightarrow 0, 0, 1, \rightarrow 0, 0, 2, \rightarrow$
- R10)  $0, 1, 0, 1, \rightarrow$
- R11)  $0, 1, 1, 2, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 1, 2, 2, \rightarrow 0, 1, 1, 2, \rightarrow 0, 1, 2, \rightarrow$
- R12)  $0, 0, 1, 1, 2, \rightarrow 0, 0, 1, 1, 2, 2, \rightarrow 0, 0, 1, 1, 2, \rightarrow 0, 0, 1, \rightarrow 0, 0, 2, \rightarrow$
- R13)  $0, 1, 1, 2, 2, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 1, 2, 2, 3, \rightarrow 0, 1, 1, 2, \rightarrow 0, 1, 2, \rightarrow$
- R14)  $0, 0, 1, 1, 2, 2, \rightarrow 0, 0, 1, 1, 2, 2, 3, \rightarrow 0, 0, 1, 1, 2, \rightarrow 0, 0, 1, \rightarrow 0, 0, 2, \rightarrow$
- R15)  $0, 1, 1, 2, 2, 3, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 1, 2, 2, 3, 3, \rightarrow 0, 1, 1, 2, 2, 3, \rightarrow 0, 1, 1, 2, \rightarrow 0, 1, 2, \rightarrow$
- R16)  $0, 0, 1, 1, 2, 2, 3, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, \rightarrow 0, 0, 1, 1, 2, 2, 3, \rightarrow 0, 0, 1, 1, 2, \rightarrow 0, 0, 1, \rightarrow 0, 0, 2, \rightarrow$
- R17)  $0, 1, 1, 2, 2, 3, 3, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 1, 2, 2, 3, 3, 4, \rightarrow 0, 1, 1, 2, 2, 3, \rightarrow 0, 1, 1, 2, \rightarrow 0, 1, 2, \rightarrow$
- R18)  $0, 0, 1, 1, 2, 2, 3, 3, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, \rightarrow 0, 0, 1, 1, 2, 2, 3, \rightarrow 0, 0, 1, 1, 2, \rightarrow 0, 0, 1, \rightarrow 0, 0, 2, \rightarrow$
- R19)  $0, 1, 1, 2, 2, 3, 3, 4, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 1, 2, 2, 3, 3, 4, 4, \rightarrow 0, 1, 1, 2, 2, 3, 3, 4, \rightarrow 0, 1, 1, 2, 2, 3, \rightarrow 0, 1, 1, 2, \rightarrow 0, 1, 2, \rightarrow$
- R20)  $0, 0, 1, 1, 2, 2, 3, 3, 4, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, 4, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, \rightarrow 0, 0, 1, 1, 2, 2, 3, \rightarrow 0, 0, 1, 1, 2, \rightarrow 0, 0, 1, \rightarrow 0, 0, 2, \rightarrow$
- R21)  $0, 1, 1, 2, 2, 3, 3, 4, 4, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 1, 2, 2, 3, 3, 4, 4, 5, \rightarrow 0, 1, 1, 2, 2, 3, 3, 4, \rightarrow 0, 1, 1, 2, 2, 3, \rightarrow 0, 1, 1, 2, \rightarrow 0, 1, 2, \rightarrow$

List of different nodes in T[L]

- LEN=1)  $0, :$
  - LEN=2)  $0, 0, : 0, 1, :$
  - LEN=3)  $0, 0, 1, : 0, 0, 2, : 0, 1, 0, : 0, 1, 1, : 0, 1, 2, :$
  - LEN=4)  $0, 0, 1, 1, : 0, 1, 0, 1, : 0, 1, 1, 2, :$
  - LEN=5)  $0, 0, 1, 1, 2, : 0, 1, 1, 2, 2, :$
  - LEN=6)  $0, 0, 1, 1, 2, 2, : 0, 1, 1, 2, 2, 3, :$
  - LEN=7)  $0, 0, 1, 1, 2, 2, 3, : 0, 1, 1, 2, 2, 3, 3, :$
  - LEN=8)  $0, 0, 1, 1, 2, 2, 3, 3, : 0, 1, 1, 2, 2, 3, 3, 4, :$
  - LEN=9)  $0, 0, 1, 1, 2, 2, 3, 3, 4, : 0, 1, 1, 2, 2, 3, 3, 4, 4, :$
  - LEN=10)  $0, 0, 1, 1, 2, 2, 3, 3, 4, 4, : 0, 1, 1, 2, 2, 3, 3, 4, 4, 5, :$
- Number new nodes in level n is given by : 1, 2, 5, 3, 2, 2, 2, 2, 2, 2,

-----Class

457-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][110][120][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,1,--0,0,2,--  
 R3) 0,1,-->0,0,1,--0,0,--0,0,2,--  
 R4) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--  
 R5) 0,0,2,-->0,0,--0,0,2,--  
 R6) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,0,2,--  
 R7) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,0,2,--  
 R8) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
 R9) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
 R10)  
 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
 R11)  
 0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
 1,1,2,--0,0,1,--0,0,2,--

List of different nodes in T[L]

LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,1, : 0,0,2, :  
 LEN=4) 0,0,1,1, :  
 LEN=5) 0,0,1,1,2, :  
 LEN=6) 0,0,1,1,2,2, :  
 LEN=7) 0,0,1,1,2,2,3, :  
 LEN=8) 0,0,1,1,2,2,3,3, :  
 LEN=9) 0,0,1,1,2,2,3,3,4, :  
 LEN=10) 0,0,1,1,2,2,3,3,4,4, :

Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class

458-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][110][120][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,1,--0,0,2,--  
 R3) 0,1,-->0,0,1,--0,0,--0,0,2,--  
 R4) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--  
 R5) 0,0,2,-->0,0,--0,0,2,--  
 R6) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,0,2,--  
 R7) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,0,2,--  
 R8) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
 R9) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
 R10)  
 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
 R11)  
 0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
 1,1,2,--0,0,1,--0,0,2,--

List of different nodes in T[L]

LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,1,: 0,0,2,:  
 LEN=4) 0,0,1,1,:  
 LEN=5) 0,0,1,1,2,:  
 LEN=6) 0,0,1,1,2,2,:  
 LEN=7) 0,0,1,1,2,2,3,:  
 LEN=8) 0,0,1,1,2,2,3,3,:  
 LEN=9) 0,0,1,1,2,2,3,3,4,:  
 LEN=10) 0,0,1,1,2,2,3,3,4,4,:  
 Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class

459-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][110][201][210]]$

Rules of  $T[L]$ :  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,1,--0,0,2,--  
 R3) 0,1,-->0,0,1,--0,0,--0,1,--  
 R4) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--  
 R5) 0,0,2,-->0,0,--0,0,2,--  
 R6) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,0,2,--  
 R7) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,0,2,--  
 R8) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
 R9) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
 R10) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--  
 R11) 0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--

List of different nodes in  $T[L]$

LEN=1) 0,:  
 LEN=2) 0,0,: 0,1,:  
 LEN=3) 0,0,1,: 0,0,2,:  
 LEN=4) 0,0,1,1,:  
 LEN=5) 0,0,1,1,2,:  
 LEN=6) 0,0,1,1,2,2,:  
 LEN=7) 0,0,1,1,2,2,3,:  
 LEN=8) 0,0,1,1,2,2,3,3,:  
 LEN=9) 0,0,1,1,2,2,3,3,4,:  
 LEN=10) 0,0,1,1,2,2,3,3,4,4,:  
 Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class

460-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][120][201][210]]$

Rules of  $T[L]$ :  
 R1) 0,-->0,0,--0,1,--

- R2) 0,0,-->0,0,1,--0,0,2,--
- R3) 0,1,-->0,0,1,--0,0,1,--0,0,2,--
- R4) 0,0,1,-->0,0,1,1,--0,0,1,--0,0,2,--
- R5) 0,0,2,-->0,0,--0,0,2,--
- R6) 0,0,1,1,-->0,0,1,1,2,--0,0,1,--0,0,2,--
- R7) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R8) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R9) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R10) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--
- R11) 0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,--0,0,1,--0,0,2,--

List of different nodes in T[L]

- LEN=1) 0,:
  - LEN=2) 0,0,: 0,1,:
  - LEN=3) 0,0,1,: 0,0,2,:
  - LEN=4) 0,0,1,1,:
  - LEN=5) 0,0,1,1,2,:
  - LEN=6) 0,0,1,1,2,2,:
  - LEN=7) 0,0,1,1,2,2,3,:
  - LEN=8) 0,0,1,1,2,2,3,3,:
  - LEN=9) 0,0,1,1,2,2,3,3,4,:
  - LEN=10) 0,0,1,1,2,2,3,3,4,4,:
- Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class

461-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding L=[[000][100][101][102][110]]

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,1,--
- R3) 0,1,-->0,1,0,--0,0,--0,1,2,--
- R4) 0,0,1,-->0,0,1,1,--0,0,1,2,--0,0,1,3,--
- R5) 0,1,0,-->
- R6) 0,1,2,-->0,1,0,--0,1,0,--0,0,--0,1,2,3,--
- R7) 0,0,1,1,-->0,0,1,1,2,--0,0,1,2,--0,0,1,3,--
- R8) 0,0,1,2,-->0,1,0,--0,0,1,1,--0,0,1,2,3,--0,0,1,2,4,--
- R9) 0,0,1,3,-->0,0,1,3,1,--0,0,1,3,1,--0,0,--0,0,1,3,4,--
- R10) 0,1,2,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,--
- R11) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--
- R12) 0,0,1,2,3,-->0,1,0,--0,1,0,--0,0,1,1,--0,0,1,2,3,4,--0,0,1,2,3,5,--
- R13) 0,0,1,2,4,-->0,1,0,--0,0,1,3,1,--0,0,1,2,4,3,--0,0,--0,0,1,2,4,5,--
- R14) 0,0,1,3,1,-->0,1,0,--
- R15) 0,0,1,3,4,-->0,0,1,3,1,--0,0,1,3,1,--0,1,0,--0,0,--0,0,1,3,4,5,--
- R16) 0,1,2,3,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,--
- R17) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--
- R18)

0,0,1,1,2,3,-->0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,3,4,--0,0,1,1,2,3,5,--0,0,1,1,2,3,6,  
--

R19)

0,0,1,1,2,4,-->0,0,1,3,1,--0,0,1,3,1,--0,0,1,1,--0,0,1,1,2,4,5,--0,0,1,1,2,4,6,--

R20)

0,0,1,1,2,5,-->0,0,1,1,2,5,2,--0,0,1,1,2,5,3,--0,0,1,1,2,5,2,--0,0,--0,0,1,1,2,5,6,  
--

R21)

0,0,1,2,3,4,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,2,3,4,5,--0,0,1,2,3,4,6,--

R22)

0,0,1,2,3,5,-->0,1,0,--0,1,0,--0,0,1,3,1,--0,0,1,2,3,5,4,--0,0,--0,0,1,2,3,5,6,--

R23)

0,0,1,2,4,3,-->0,1,0,--0,1,0,--

R24)

0,0,1,2,4,5,-->0,1,0,--0,0,1,3,1,--0,0,1,2,4,3,--0,1,0,--0,0,--0,0,1,2,4,5,6,--

R25) 0,0,1,3,4,5,-->0,0,1,3,1,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,--0,0,1,3,4,5,6,--

R26) 0,1,2,3,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,6,--

R27)

0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,  
3,6,--0,0,1,1,2,2,3,7,--

R28)

0,0,1,1,2,3,4,-->0,1,0,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,3,4,5,--0,0,1,1,2,3,4,6,--

0,0,1,1,2,3,4,7,--

R29)

0,0,1,1,2,3,5,-->0,1,0,--0,0,1,3,1,--0,0,1,2,4,3,--0,0,1,1,--0,0,1,1,2,3,5,6,--0,0,  
1,1,2,3,5,7,--

R30)

0,0,1,1,2,3,6,-->0,1,0,--0,0,1,1,2,5,2,--0,0,1,1,2,3,6,4,--0,0,1,1,2,3,6,5,--0,0,--

0,0,1,1,2,3,6,7,--

R31)

0,0,1,1,2,4,5,-->0,0,1,3,1,--0,0,1,3,1,--0,1,0,--0,0,1,1,--0,0,1,1,2,4,5,6,--0,0,1,  
1,2,4,5,7,--

R32)

0,0,1,1,2,4,6,-->0,0,1,3,1,--0,0,1,3,1,--0,0,1,3,1,--0,0,1,1,2,4,6,5,--0,0,--0,0,1,  
1,2,4,6,7,--

R33) 0,0,1,1,2,5,2,-->0,0,1,3,1,--0,0,1,3,1,--

R34) 0,0,1,1,2,5,3,-->0,1,0,--0,0,1,3,1,--

R35)

0,0,1,1,2,5,6,-->0,0,1,1,2,5,2,--0,0,1,1,2,5,3,--0,0,1,1,2,5,2,--0,1,0,--0,0,--0,0,  
1,1,2,5,6,7,--

R36)

0,0,1,2,3,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,2,3,4,5,6,--0,0,1,  
2,3,4,5,7,--

R37)

0,0,1,2,3,4,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,0,1,2,3,4,6,5,--0,0,--0,0,1,  
2,3,4,6,7,--

R38) 0,0,1,2,3,5,4,-->0,1,0,--0,1,0,--0,1,0,--

R39)

0,0,1,2,3,5,6,-->0,1,0,--0,1,0,--0,0,1,3,1,--0,0,1,2,3,5,4,--0,1,0,--0,0,--0,0,1,2,  
3,5,6,7,--

R40)

0,0,1,2,4,5,6,-->0,1,0,--0,0,1,3,1,--0,0,1,2,4,3,--0,1,0,--0,1,0,--0,0,--0,0,1,2,4,5,6,7,--

R41)

0,0,1,3,4,5,6,-->0,0,1,3,1,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,1,3,4,5,6,7,--

R42)

0,1,2,3,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,6,7,--

R43)

0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--

R44)

0,0,1,1,2,2,3,4,-->0,1,0,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,5,--0,0,1,1,2,2,3,4,6,--0,0,1,1,2,2,3,4,7,--0,0,1,1,2,2,3,4,8,--

R45)

0,0,1,1,2,2,3,5,-->0,0,1,3,1,--0,0,1,3,1,--0,0,1,1,2,2,--0,0,1,1,2,2,3,5,6,--0,0,1,1,2,2,3,5,7,--0,0,1,1,2,2,3,5,8,--

R46)

0,0,1,1,2,2,3,6,-->0,0,1,1,2,5,2,--0,0,1,1,2,5,3,--0,0,1,1,2,5,2,--0,0,1,1,--0,0,1,1,2,2,3,6,7,--0,0,1,1,2,2,3,6,8,--

R47)

0,0,1,1,2,2,3,7,-->0,0,1,1,2,2,3,7,3,--0,0,1,1,2,2,3,7,4,--0,0,1,1,2,2,3,7,5,--0,0,1,1,2,2,3,7,3,--0,0,--0,0,1,1,2,2,3,7,8,--

R48)

0,0,1,1,2,3,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,3,4,5,6,--0,0,1,1,2,3,4,5,7,--0,0,1,1,2,3,4,5,8,--

R49)

0,0,1,1,2,3,4,6,-->0,1,0,--0,1,0,--0,0,1,3,1,--0,0,1,2,3,5,4,--0,0,1,1,--0,0,1,1,2,3,4,6,7,--0,0,1,1,2,3,4,6,8,--

R50)

0,0,1,1,2,3,4,7,-->0,1,0,--0,1,0,--0,0,1,1,2,5,2,--0,0,1,1,2,3,4,7,5,--0,0,1,1,2,3,4,7,6,--0,0,--0,0,1,1,2,3,4,7,8,--

R51)

0,0,1,1,2,3,5,6,-->0,1,0,--0,0,1,3,1,--0,0,1,2,4,3,--0,1,0,--0,0,1,1,--0,0,1,1,2,3,5,6,7,--0,0,1,1,2,3,5,6,8,--

R52)

0,0,1,1,2,3,5,7,-->0,1,0,--0,0,1,3,1,--0,0,1,2,4,3,--0,0,1,3,1,--0,0,1,1,2,3,5,7,6,--0,0,--0,0,1,1,2,3,5,7,8,--

R53) 0,0,1,1,2,3,6,4,-->0,1,0,--0,1,0,--0,0,1,2,4,3,--

R54) 0,0,1,1,2,3,6,5,-->0,1,0,--0,0,1,3,1,--0,0,1,2,4,3,--

R55)

0,0,1,1,2,3,6,7,-->0,1,0,--0,0,1,1,2,5,2,--0,0,1,1,2,3,6,4,--0,0,1,1,2,3,6,5,--0,1,0,--0,0,--0,0,1,1,2,3,6,7,8,--

R56)

0,0,1,1,2,4,5,6,-->0,0,1,3,1,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,1,2,4,5,6,7,--0,0,1,1,2,4,5,6,8,--

R57)

0,0,1,1,2,4,5,7,-->0,0,1,3,1,--0,0,1,3,1,--0,1,0,--0,0,1,3,1,--0,0,1,1,2,4,5,7,6,--0,0,--0,0,1,1,2,4,5,7,8,--

R58) 0,0,1,1,2,4,6,5,-->0,0,1,3,1,--0,0,1,3,1,--0,1,0,--



R59)

0,0,1,1,2,4,6,7,-->0,0,1,3,1,--0,0,1,3,1,--0,0,1,3,1,--0,0,1,1,2,4,6,5,--0,1,0,--0,  
0,--0,0,1,1,2,4,6,7,8,--

R60)

0,0,1,1,2,5,6,7,-->0,0,1,1,2,5,2,--0,0,1,1,2,5,3,--0,0,1,1,2,5,2,--0,1,0,--0,1,0,--  
0,0,--0,0,1,1,2,5,6,7,8,--

R61)

0,0,1,2,3,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,2,3,4,5,  
6,7,--0,0,1,2,3,4,5,6,8,--

R62)

0,0,1,2,3,4,5,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,0,1,2,3,4,5,7,6,--  
0,0,--0,0,1,2,3,4,5,7,8,--

R63) 0,0,1,2,3,4,6,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--

R64)

0,0,1,2,3,4,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,0,1,2,3,4,6,5,--0,1,0,--0,  
0,--0,0,1,2,3,4,6,7,8,--

R65)

0,0,1,2,3,5,6,7,-->0,1,0,--0,1,0,--0,0,1,3,1,--0,0,1,2,3,5,4,--0,1,0,--0,1,0,--0,0,  
--0,0,1,2,3,5,6,7,8,--

R66)

0,0,1,2,4,5,6,7,-->0,1,0,--0,0,1,3,1,--0,0,1,2,4,3,--0,1,0,--0,1,0,--0,1,0,--0,0,--  
0,0,1,2,4,5,6,7,8,--

R67)

0,0,1,3,4,5,6,7,-->0,0,1,3,1,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,  
0,1,3,4,5,6,7,8,--

R68)

0,1,2,3,4,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,  
1,2,3,4,5,6,7,8,--

R69)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,--0,0,1,1,2,2,3,3,4,  
6,--0,0,1,1,2,2,3,3,4,7,--0,0,1,1,2,2,3,3,4,8,--0,0,1,1,2,2,3,3,4,9,--

R70)

0,0,1,1,2,2,3,4,5,-->0,1,0,--0,1,0,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,5,6,--0,0,1,  
1,2,2,3,4,5,7,--0,0,1,1,2,2,3,4,5,8,--0,0,1,1,2,2,3,4,5,9,--

R71)

0,0,1,1,2,2,3,4,6,-->0,1,0,--0,0,1,3,1,--0,0,1,2,4,3,--0,0,1,1,2,2,--0,0,1,1,2,2,3,  
4,6,7,--0,0,1,1,2,2,3,4,6,8,--0,0,1,1,2,2,3,4,6,9,--

R72)

0,0,1,1,2,2,3,4,7,-->0,1,0,--0,0,1,1,2,5,2,--0,0,1,1,2,3,6,4,--0,0,1,1,2,3,6,5,--0,  
0,1,1,--0,0,1,1,2,2,3,4,7,8,--0,0,1,1,2,2,3,4,7,9,--

R73)

0,0,1,1,2,2,3,4,8,-->0,1,0,--0,0,1,1,2,2,3,7,3,--0,0,1,1,2,2,3,4,8,5,--0,0,1,1,2,2,  
3,4,8,6,--0,0,1,1,2,2,3,4,8,7,--0,0,--0,0,1,1,2,2,3,4,8,9,--

R74)

0,0,1,1,2,2,3,5,6,-->0,0,1,3,1,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,2,3,5,  
6,7,--0,0,1,1,2,2,3,5,6,8,--0,0,1,1,2,2,3,5,6,9,--

R75)

0,0,1,1,2,2,3,5,7,-->0,0,1,3,1,--0,0,1,3,1,--0,0,1,3,1,--0,0,1,1,2,4,6,5,--0,0,1,1,  
--0,0,1,1,2,2,3,5,7,8,--0,0,1,1,2,2,3,5,7,9,--

R76)

0,0,1,1,2,2,3,5,8,-->0,0,1,3,1,--0,0,1,3,1,--0,0,1,1,2,5,2,--0,0,1,1,2,2,3,5,8,6,--  
0,0,1,1,2,2,3,5,8,7,--0,0,--0,0,1,1,2,2,3,5,8,9,--

R77)

0,0,1,1,2,2,3,6,7,-->0,0,1,1,2,5,2,--0,0,1,1,2,5,3,--0,0,1,1,2,5,2,--0,1,0,--0,0,1,  
1,--0,0,1,1,2,2,3,6,7,8,--0,0,1,1,2,2,3,6,7,9,--

R78)

0,0,1,1,2,2,3,6,8,-->0,0,1,1,2,5,2,--0,0,1,1,2,5,3,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,  
0,1,1,2,2,3,6,8,7,--0,0,--0,0,1,1,2,2,3,6,8,9,--

R79) 0,0,1,1,2,2,3,7,3,-->0,0,1,1,2,5,2,--0,0,1,1,2,5,3,--0,0,1,1,2,5,2,--

R80) 0,0,1,1,2,2,3,7,4,-->0,1,0,--0,0,1,1,2,5,3,--0,0,1,1,2,5,3,--

R81) 0,0,1,1,2,2,3,7,5,-->0,0,1,3,1,--0,0,1,3,1,--0,0,1,1,2,5,2,--

R82)

0,0,1,1,2,2,3,7,8,-->0,0,1,1,2,2,3,7,3,--0,0,1,1,2,2,3,7,4,--0,0,1,1,2,2,3,7,5,--0,  
0,1,1,2,2,3,7,3,--0,1,0,--0,0,--0,0,1,1,2,2,3,7,8,9,--

R83)

0,0,1,1,2,3,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,3,4,5,  
6,7,--0,0,1,1,2,3,4,5,6,8,--0,0,1,1,2,3,4,5,6,9,--

R84)

0,0,1,1,2,3,4,5,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,0,1,2,3,4,6,5,--0,0,1,1,  
--0,0,1,1,2,3,4,5,7,8,--0,0,1,1,2,3,4,5,7,9,--

R85)

0,0,1,1,2,3,4,5,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,5,2,--0,0,1,1,2,3,4,5,8,6,--  
0,0,1,1,2,3,4,5,8,7,--0,0,--0,0,1,1,2,3,4,5,8,9,--

R86)

0,0,1,1,2,3,4,6,7,-->0,1,0,--0,1,0,--0,0,1,3,1,--0,0,1,2,3,5,4,--0,1,0,--0,0,1,1,--  
0,0,1,1,2,3,4,6,7,8,--0,0,1,1,2,3,4,6,7,9,--

R87)

0,0,1,1,2,3,4,6,8,-->0,1,0,--0,1,0,--0,0,1,3,1,--0,0,1,2,3,5,4,--0,0,1,3,1,--0,0,1,  
1,2,3,4,6,8,7,--0,0,--0,0,1,1,2,3,4,6,8,9,--

R88) 0,0,1,1,2,3,4,7,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--

R89) 0,0,1,1,2,3,4,7,6,-->0,1,0,--0,1,0,--0,0,1,3,1,--0,0,1,2,3,5,4,--

R90)

0,0,1,1,2,3,4,7,8,-->0,1,0,--0,1,0,--0,0,1,1,2,5,2,--0,0,1,1,2,3,4,7,5,--0,0,1,1,2,  
3,4,7,6,--0,1,0,--0,0,--0,0,1,1,2,3,4,7,8,9,--

R91)

0,0,1,1,2,3,5,6,7,-->0,1,0,--0,0,1,3,1,--0,0,1,2,4,3,--0,1,0,--0,1,0,--0,0,1,1,--0,  
0,1,1,2,3,5,6,7,8,--0,0,1,1,2,3,5,6,7,9,--

R92)

0,0,1,1,2,3,5,6,8,-->0,1,0,--0,0,1,3,1,--0,0,1,2,4,3,--0,1,0,--0,0,1,3,1,--0,0,1,1,  
2,3,5,6,8,7,--0,0,--0,0,1,1,2,3,5,6,8,9,--

R93) 0,0,1,1,2,3,5,7,6,-->0,1,0,--0,0,1,3,1,--0,0,1,2,4,3,--0,1,0,--

R94)

0,0,1,1,2,3,5,7,8,-->0,1,0,--0,0,1,3,1,--0,0,1,2,4,3,--0,0,1,3,1,--0,0,1,1,2,3,5,7,  
6,--0,1,0,--0,0,--0,0,1,1,2,3,5,7,8,9,--

R95)

0,0,1,1,2,3,6,7,8,-->0,1,0,--0,0,1,1,2,5,2,--0,0,1,1,2,3,6,4,--0,0,1,1,2,3,6,5,--0,  
1,0,--0,1,0,--0,0,--0,0,1,1,2,3,6,7,8,9,--

R96)

0,0,1,1,2,4,5,6,7,-->0,0,1,3,1,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,--0,0,  
1,1,2,4,5,6,7,8,--0,0,1,1,2,4,5,6,7,9,--

R97)

0,0,1,1,2,4,5,6,8,-->0,0,1,3,1,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,3,1,--0,0,1,1,2,4,5,6,8,7,--0,0,--0,0,1,1,2,4,5,6,8,9,--

R98) 0,0,1,1,2,4,5,7,6,-->0,0,1,3,1,--0,0,1,3,1,--0,1,0,--0,1,0,--

R99)

0,0,1,1,2,4,5,7,8,-->0,0,1,3,1,--0,0,1,3,1,--0,1,0,--0,0,1,3,1,--0,0,1,1,2,4,5,7,6,--0,1,0,--0,0,--0,0,1,1,2,4,5,7,8,9,--

R100)

0,0,1,1,2,4,6,7,8,-->0,0,1,3,1,--0,0,1,3,1,--0,0,1,3,1,--0,0,1,1,2,4,6,5,--0,1,0,--0,1,0,--0,0,--0,0,1,1,2,4,6,7,8,9,--

R101)

0,0,1,1,2,5,6,7,8,-->0,0,1,1,2,5,2,--0,0,1,1,2,5,3,--0,0,1,1,2,5,2,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,5,6,7,8,9,--

R102)

0,0,1,2,3,4,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,2,3,4,5,6,7,8,--0,0,1,2,3,4,5,6,7,9,--

R103)

0,0,1,2,3,4,5,6,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,0,1,2,3,4,5,6,8,7,--0,0,--0,0,1,2,3,4,5,6,8,9,--

R104) 0,0,1,2,3,4,5,7,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--

R105)

0,0,1,2,3,4,5,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,0,1,2,3,4,5,7,6,--0,1,0,--0,0,--0,0,1,2,3,4,5,7,8,9,--

R106)

0,0,1,2,3,4,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,0,1,2,3,4,6,5,--0,1,0,--0,1,0,--0,0,--0,0,1,2,3,4,6,7,8,9,--

R107)

0,0,1,2,3,5,6,7,8,-->0,1,0,--0,1,0,--0,0,1,3,1,--0,0,1,2,3,5,4,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,--0,0,1,2,3,5,6,7,8,9,--

R108)

0,0,1,2,4,5,6,7,8,-->0,1,0,--0,0,1,3,1,--0,0,1,2,4,3,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,1,2,4,5,6,7,8,9,--

R109)

0,0,1,3,4,5,6,7,8,-->0,0,1,3,1,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,1,3,4,5,6,7,8,9,--

R110)

0,1,2,3,4,5,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,1,2,3,4,5,6,7,8,9,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,1, : 0,1,0, : 0,1,2, :

LEN=4) 0,0,1,1, : 0,0,1,2, : 0,0,1,3, : 0,1,2,3, :

LEN=5) 0,0,1,1,2, : 0,0,1,2,3, : 0,0,1,2,4, : 0,0,1,3,1, : 0,0,1,3,4, : 0,1,2,3,4, :

LEN=6) 0,0,1,1,2,2, : 0,0,1,1,2,3, : 0,0,1,1,2,4, : 0,0,1,1,2,5, : 0,0,1,2,3,4, :

0,0,1,2,3,5, : 0,0,1,2,4,3, : 0,0,1,2,4,5, : 0,0,1,3,4,5, : 0,1,2,3,4,5, :

LEN=7) 0,0,1,1,2,2,3, : 0,0,1,1,2,3,4, : 0,0,1,1,2,3,5, : 0,0,1,1,2,3,6, :

0,0,1,1,2,4,5, : 0,0,1,1,2,4,6, : 0,0,1,1,2,5,2, : 0,0,1,1,2,5,3, : 0,0,1,1,2,5,6, :

0,0,1,2,3,4,5, : 0,0,1,2,3,4,6, : 0,0,1,2,3,5,4, : 0,0,1,2,3,5,6, : 0,0,1,2,4,5,6, :

0,0,1,3,4,5,6, : 0,1,2,3,4,5,6, :

LEN=8) 0,0,1,1,2,2,3,3,: 0,0,1,1,2,2,3,4,: 0,0,1,1,2,2,3,5,: 0,0,1,1,2,2,3,6,:  
 0,0,1,1,2,2,3,7,: 0,0,1,1,2,3,4,5,: 0,0,1,1,2,3,4,6,: 0,0,1,1,2,3,4,7,:  
 0,0,1,1,2,3,5,6,: 0,0,1,1,2,3,5,7,: 0,0,1,1,2,3,6,4,: 0,0,1,1,2,3,6,5,:  
 0,0,1,1,2,3,6,7,: 0,0,1,1,2,4,5,6,: 0,0,1,1,2,4,5,7,: 0,0,1,1,2,4,6,5,:  
 0,0,1,1,2,4,6,7,: 0,0,1,1,2,5,6,7,: 0,0,1,2,3,4,5,6,: 0,0,1,2,3,4,5,7,:  
 0,0,1,2,3,4,6,5,: 0,0,1,2,3,4,6,7,: 0,0,1,2,3,5,6,7,: 0,0,1,2,4,5,6,7,:  
 0,0,1,3,4,5,6,7,: 0,1,2,3,4,5,6,7,:

LEN=9) 0,0,1,1,2,2,3,3,4,: 0,0,1,1,2,2,3,4,5,: 0,0,1,1,2,2,3,4,6,:  
 0,0,1,1,2,2,3,4,7,: 0,0,1,1,2,2,3,4,8,: 0,0,1,1,2,2,3,5,6,: 0,0,1,1,2,2,3,5,7,:  
 0,0,1,1,2,2,3,5,8,: 0,0,1,1,2,2,3,6,7,: 0,0,1,1,2,2,3,6,8,: 0,0,1,1,2,2,3,7,3,:  
 0,0,1,1,2,2,3,7,4,: 0,0,1,1,2,2,3,7,5,: 0,0,1,1,2,2,3,7,8,: 0,0,1,1,2,3,4,5,6,:  
 0,0,1,1,2,3,4,5,7,: 0,0,1,1,2,3,4,5,8,: 0,0,1,1,2,3,4,6,7,: 0,0,1,1,2,3,4,6,8,:  
 0,0,1,1,2,3,4,7,5,: 0,0,1,1,2,3,4,7,6,: 0,0,1,1,2,3,4,7,8,: 0,0,1,1,2,3,5,6,7,:  
 0,0,1,1,2,3,5,6,8,: 0,0,1,1,2,3,5,7,6,: 0,0,1,1,2,3,5,7,8,: 0,0,1,1,2,3,6,7,8,:  
 0,0,1,1,2,4,5,6,7,: 0,0,1,1,2,4,5,6,8,: 0,0,1,1,2,4,5,7,6,: 0,0,1,1,2,4,5,7,8,:  
 0,0,1,1,2,4,6,7,8,: 0,0,1,1,2,5,6,7,8,: 0,0,1,2,3,4,5,6,7,: 0,0,1,2,3,4,5,6,8,:  
 0,0,1,2,3,4,5,7,6,: 0,0,1,2,3,4,5,7,8,: 0,0,1,2,3,4,6,7,8,: 0,0,1,2,3,5,6,7,8,:  
 0,0,1,2,4,5,6,7,8,: 0,0,1,3,4,5,6,7,8,: 0,1,2,3,4,5,6,7,8,:

LEN=10) 0,0,1,1,2,2,3,3,4,4,: 0,0,1,1,2,2,3,3,4,5,: 0,0,1,1,2,2,3,3,4,6,:  
 0,0,1,1,2,2,3,3,4,7,: 0,0,1,1,2,2,3,3,4,8,: 0,0,1,1,2,2,3,3,4,9,:  
 0,0,1,1,2,2,3,4,5,6,: 0,0,1,1,2,2,3,4,5,7,: 0,0,1,1,2,2,3,4,5,8,:  
 0,0,1,1,2,2,3,4,5,9,: 0,0,1,1,2,2,3,4,6,7,: 0,0,1,1,2,2,3,4,6,8,:  
 0,0,1,1,2,2,3,4,6,9,: 0,0,1,1,2,2,3,4,7,8,: 0,0,1,1,2,2,3,4,7,9,:  
 0,0,1,1,2,2,3,4,8,5,: 0,0,1,1,2,2,3,4,8,6,: 0,0,1,1,2,2,3,4,8,7,:  
 0,0,1,1,2,2,3,4,8,9,: 0,0,1,1,2,2,3,5,6,7,: 0,0,1,1,2,2,3,5,6,8,:  
 0,0,1,1,2,2,3,5,6,9,: 0,0,1,1,2,2,3,5,7,8,: 0,0,1,1,2,2,3,5,7,9,:  
 0,0,1,1,2,2,3,5,8,6,: 0,0,1,1,2,2,3,5,8,7,: 0,0,1,1,2,2,3,5,8,9,:  
 0,0,1,1,2,2,3,6,7,8,: 0,0,1,1,2,2,3,6,7,9,: 0,0,1,1,2,2,3,6,8,7,:  
 0,0,1,1,2,2,3,6,8,9,: 0,0,1,1,2,2,3,7,8,9,: 0,0,1,1,2,3,4,5,6,7,:  
 0,0,1,1,2,3,4,5,6,8,: 0,0,1,1,2,3,4,5,6,9,: 0,0,1,1,2,3,4,5,7,8,:  
 0,0,1,1,2,3,4,5,7,9,: 0,0,1,1,2,3,4,5,8,6,: 0,0,1,1,2,3,4,5,8,7,:  
 0,0,1,1,2,3,4,5,8,9,: 0,0,1,1,2,3,4,6,7,8,: 0,0,1,1,2,3,4,6,7,9,:  
 0,0,1,1,2,3,4,6,8,7,: 0,0,1,1,2,3,4,6,8,9,: 0,0,1,1,2,3,4,7,8,9,:  
 0,0,1,1,2,3,5,6,7,8,: 0,0,1,1,2,3,5,6,7,9,: 0,0,1,1,2,3,5,6,8,7,:  
 0,0,1,1,2,3,5,6,8,9,: 0,0,1,1,2,3,5,7,8,9,: 0,0,1,1,2,3,6,7,8,9,:  
 0,0,1,1,2,4,5,6,7,8,: 0,0,1,1,2,4,5,6,7,9,: 0,0,1,1,2,4,5,6,8,7,:  
 0,0,1,1,2,4,5,6,8,9,: 0,0,1,1,2,4,5,7,8,9,: 0,0,1,1,2,4,6,7,8,9,:  
 0,0,1,1,2,5,6,7,8,9,: 0,0,1,2,3,4,5,6,7,8,: 0,0,1,2,3,4,5,6,7,9,:  
 0,0,1,2,3,4,5,6,8,7,: 0,0,1,2,3,4,5,6,8,9,: 0,0,1,2,3,4,5,7,8,9,:  
 0,0,1,2,3,4,6,7,8,9,: 0,0,1,2,3,5,6,7,8,9,: 0,0,1,2,4,5,6,7,8,9,:  
 0,0,1,3,4,5,6,7,8,9,: 0,1,2,3,4,5,6,7,8,9,:

Number new nodes in level n is given by : 1,2,3,4,6,10,16,26,42,68,

-----Class

462-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][100][101][102][120]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,1,--0,1,--  
R3) 0,1,-->0,1,0,--0,1,1,--0,1,--  
R4) 0,0,1,-->0,0,1,1,--0,0,1,2,--0,0,1,3,--  
R5) 0,1,0,-->  
R6) 0,1,1,-->0,1,0,--0,0,1,--0,1,--  
R7) 0,0,1,1,-->0,0,1,1,2,--0,0,1,2,--0,0,1,3,--  
R8) 0,0,1,2,-->0,1,0,--0,0,1,2,2,--0,0,1,2,--0,0,1,3,--  
R9) 0,0,1,3,-->0,0,1,3,1,--0,0,1,3,1,--0,0,1,3,3,--0,1,--  
R10) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--  
R11) 0,0,1,2,2,-->0,1,0,--0,0,1,1,2,--0,0,1,2,--0,0,1,3,--  
R12) 0,0,1,3,1,-->0,1,0,--  
R13) 0,0,1,3,3,-->0,0,1,3,1,--0,0,1,3,1,--0,0,1,--0,1,--  
R14) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--  
R15)  
0,0,1,1,2,3,-->0,1,0,--0,0,1,1,2,3,3,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--  
R16) 0,0,1,1,2,4,-->0,0,1,3,1,--0,0,1,3,1,--0,0,1,1,2,4,4,--0,0,1,2,--0,0,1,3,--  
R17)  
0,0,1,1,2,5,-->0,0,1,1,2,5,2,--0,0,1,1,2,5,3,--0,0,1,1,2,5,2,--0,0,1,1,2,5,5,--0,1,  
--  
R18)  
0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,  
3,6,--0,0,1,1,2,2,3,7,--  
R19)  
0,0,1,1,2,3,3,-->0,1,0,--0,0,1,1,2,2,3,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--  
R20) 0,0,1,1,2,4,4,-->0,0,1,3,1,--0,0,1,3,1,--0,0,1,1,2,--0,0,1,2,--0,0,1,3,--  
R21) 0,0,1,1,2,5,2,-->0,0,1,3,1,--0,0,1,3,1,--  
R22) 0,0,1,1,2,5,3,-->0,1,0,--0,1,0,--  
R23)  
0,0,1,1,2,5,5,-->0,0,1,1,2,5,2,--0,0,1,1,2,5,3,--0,0,1,1,2,5,2,--0,0,1,--0,1,--  
R24)  
0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,  
2,2,3,6,--0,0,1,1,2,2,3,7,--  
R25)  
0,0,1,1,2,2,3,4,-->0,1,0,--0,0,1,1,2,2,3,4,4,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--  
0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--  
R26)  
0,0,1,1,2,2,3,5,-->0,0,1,3,1,--0,0,1,3,1,--0,0,1,1,2,2,3,5,5,--0,0,1,1,2,3,--0,0,1,  
1,2,4,--0,0,1,1,2,5,--  
R27)  
0,0,1,1,2,2,3,6,-->0,0,1,1,2,5,2,--0,0,1,1,2,5,3,--0,0,1,1,2,5,2,--0,0,1,1,2,2,3,6,  
6,--0,0,1,2,--0,0,1,3,--  
R28)  
0,0,1,1,2,2,3,7,-->0,0,1,1,2,2,3,7,3,--0,0,1,1,2,2,3,7,4,--0,0,1,1,2,2,3,7,5,--0,0,  
1,1,2,2,3,7,3,--0,0,1,1,2,2,3,7,7,--0,1,--  
R29)  
0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,--0,0,1,1,2,2,3,3,4,  
6,--0,0,1,1,2,2,3,3,4,7,--0,0,1,1,2,2,3,3,4,8,--0,0,1,1,2,2,3,3,4,9,--  
R30)  
0,0,1,1,2,2,3,4,4,-->0,1,0,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,  
--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--

R31) 0,0,1,1,2,2,3,5,5,-->0,0,1,3,1,--0,0,1,3,1,--0,0,1,1,2,2,3,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--

R32) 0,0,1,1,2,2,3,6,6,-->0,0,1,1,2,5,2,--0,0,1,1,2,5,3,--0,0,1,1,2,5,2,--0,0,1,1,2,--0,0,1,2,--0,0,1,3,--

R33) 0,0,1,1,2,2,3,7,3,-->0,0,1,1,2,5,2,--0,0,1,1,2,5,3,--0,0,1,1,2,5,2,--

R34) 0,0,1,1,2,2,3,7,4,-->0,1,0,--0,0,1,3,1,--0,0,1,3,1,--

R35) 0,0,1,1,2,2,3,7,5,-->0,0,1,3,1,--0,0,1,3,1,--0,1,0,--

R36) 0,0,1,1,2,2,3,7,7,-->0,0,1,1,2,2,3,7,3,--0,0,1,1,2,2,3,7,4,--0,0,1,1,2,2,3,7,5,--0,0,1,1,2,2,3,7,3,--0,0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,1,: 0,1,0,: 0,1,1,:

LEN=4) 0,0,1,1,: 0,0,1,2,: 0,0,1,3,:

LEN=5) 0,0,1,1,2,: 0,0,1,2,2,: 0,0,1,3,1,: 0,0,1,3,3,:

LEN=6) 0,0,1,1,2,2,: 0,0,1,1,2,3,: 0,0,1,1,2,4,: 0,0,1,1,2,5,:

LEN=7) 0,0,1,1,2,2,3,: 0,0,1,1,2,3,3,: 0,0,1,1,2,4,4,: 0,0,1,1,2,5,2,:

0,0,1,1,2,5,3,: 0,0,1,1,2,5,5,:

LEN=8) 0,0,1,1,2,2,3,3,: 0,0,1,1,2,2,3,4,: 0,0,1,1,2,2,3,5,: 0,0,1,1,2,2,3,6,:

0,0,1,1,2,2,3,7,:

LEN=9) 0,0,1,1,2,2,3,3,4,: 0,0,1,1,2,2,3,4,4,: 0,0,1,1,2,2,3,5,5,:

0,0,1,1,2,2,3,6,6,: 0,0,1,1,2,2,3,7,3,: 0,0,1,1,2,2,3,7,4,: 0,0,1,1,2,2,3,7,5,:

0,0,1,1,2,2,3,7,7,:

LEN=10) 0,0,1,1,2,2,3,3,4,4,: 0,0,1,1,2,2,3,3,4,5,: 0,0,1,1,2,2,3,3,4,6,:

0,0,1,1,2,2,3,3,4,7,: 0,0,1,1,2,2,3,3,4,8,: 0,0,1,1,2,2,3,3,4,9,:

Number new nodes in level n is given by : 1,2,3,3,4,4,6,5,8,6,

-----Class

463-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][100][101][102][201]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,1,--
- R3) 0,1,-->0,1,0,--0,1,1,--0,1,2,--
- R4) 0,0,1,-->0,0,1,1,--0,0,1,2,--0,1,2,--
- R5) 0,1,0,-->
- R6) 0,1,1,-->0,1,0,--0,0,1,2,--0,1,2,--
- R7) 0,1,2,-->0,1,0,--0,1,2,1,--0,1,2,2,--0,1,2,3,--
- R8) 0,0,1,1,-->0,0,1,1,2,--0,0,1,2,--0,1,2,--
- R9) 0,0,1,2,-->0,1,0,--0,0,1,2,2,--0,0,1,2,3,--0,1,2,3,--
- R10) 0,1,2,1,-->0,1,0,--
- R11) 0,1,2,2,-->0,1,0,--0,1,2,1,--0,0,1,2,3,--0,1,2,3,--
- R12) 0,1,2,3,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,1,2,3,3,--0,1,2,3,4,--
- R13) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,2,3,--0,1,2,3,--
- R14) 0,0,1,2,2,-->0,1,0,--0,0,1,1,2,3,--0,0,1,2,3,--0,1,2,3,--

R15) 0,0,1,2,3,-->0,1,0,--0,1,2,1,--0,0,1,2,3,3,--0,0,1,2,3,4,--0,1,2,3,4,--  
R16) 0,1,2,3,2,-->0,1,0,--0,1,2,1,--  
R17) 0,1,2,3,3,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,0,1,2,3,4,--0,1,2,3,4,--  
R18)  
0,1,2,3,4,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,1,2,3,4,3,--0,1,2,3,4,4,--0,1,2,3,4,5,  
--  
R19) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,3,--0,0,1,2,3,--0,1,2,3,--  
R20)  
0,0,1,1,2,3,-->0,1,0,--0,0,1,1,2,3,3,--0,0,1,1,2,3,4,--0,0,1,2,3,4,--0,1,2,3,4,--  
R21) 0,0,1,2,3,3,-->0,1,0,--0,1,2,1,--0,0,1,1,2,3,4,--0,0,1,2,3,4,--0,1,2,3,4,--  
R22)  
0,0,1,2,3,4,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,0,1,2,3,4,4,--0,0,1,2,3,4,5,--0,1,2,  
3,4,5,--  
R23) 0,1,2,3,4,3,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--  
R24)  
0,1,2,3,4,4,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,1,2,3,4,3,--0,0,1,2,3,4,5,--0,1,2,3,  
4,5,--  
R25)  
0,1,2,3,4,5,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,1,2,3,4,3,--0,1,2,3,4,5,4,--0,1,2,3,  
4,5,5,--0,1,2,3,4,5,6,--  
R26)  
0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,1,1,2,3,4,--0,0,1,2,3,4,--  
0,1,2,3,4,--  
R27)  
0,0,1,1,2,3,3,-->0,1,0,--0,0,1,1,2,2,3,4,--0,0,1,1,2,3,4,--0,0,1,2,3,4,--0,1,2,3,4,  
--  
R28)  
0,0,1,1,2,3,4,-->0,1,0,--0,1,2,1,--0,0,1,1,2,3,4,4,--0,0,1,1,2,3,4,5,--0,0,1,2,3,4,  
5,--0,1,2,3,4,5,--  
R29)  
0,0,1,2,3,4,4,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,0,1,1,2,3,4,5,--0,0,1,2,3,4,5,--0,  
1,2,3,4,5,--  
R30)  
0,0,1,2,3,4,5,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,1,2,3,4,3,--0,0,1,2,3,4,5,5,--0,0,  
1,2,3,4,5,6,--0,1,2,3,4,5,6,--  
R31) 0,1,2,3,4,5,4,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,1,2,3,4,3,--  
R32)  
0,1,2,3,4,5,5,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,1,2,3,4,3,--0,1,2,3,4,5,4,--0,0,1,  
2,3,4,5,6,--0,1,2,3,4,5,6,--  
R33)  
0,1,2,3,4,5,6,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,1,2,3,4,3,--0,1,2,3,4,5,4,--0,1,2,  
3,4,5,6,5,--0,1,2,3,4,5,6,6,--0,1,2,3,4,5,6,7,--  
R34)  
0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,4,--0,0,1,1,2,3,4,--0,0,1,2,3,  
4,--0,1,2,3,4,--  
R35)  
0,0,1,1,2,2,3,4,-->0,1,0,--0,0,1,1,2,2,3,4,4,--0,0,1,1,2,2,3,4,5,--0,0,1,1,2,3,4,5,  
--0,0,1,2,3,4,5,--0,1,2,3,4,5,--  
R36)  
0,0,1,1,2,3,4,4,-->0,1,0,--0,1,2,1,--0,0,1,1,2,2,3,4,5,--0,0,1,1,2,3,4,5,--0,0,1,2,

3,4,5,--0,1,2,3,4,5,--

R37)

0,0,1,1,2,3,4,5,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,0,1,1,2,3,4,5,5,--0,0,1,1,2,3,4,5,6,--0,0,1,2,3,4,5,6,--0,1,2,3,4,5,6,--

R38)

0,0,1,2,3,4,5,5,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,1,2,3,4,3,--0,0,1,1,2,3,4,5,6,--0,0,1,2,3,4,5,6,--0,1,2,3,4,5,6,--

R39)

0,0,1,2,3,4,5,6,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,1,2,3,4,3,--0,1,2,3,4,5,4,--0,0,1,2,3,4,5,6,6,--0,0,1,2,3,4,5,6,7,--0,1,2,3,4,5,6,7,--

R40)

0,1,2,3,4,5,6,5,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,1,2,3,4,3,--0,1,2,3,4,5,4,--

R41)

0,1,2,3,4,5,6,6,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,1,2,3,4,3,--0,1,2,3,4,5,4,--0,1,2,3,4,5,6,5,--0,0,1,2,3,4,5,6,7,--0,1,2,3,4,5,6,7,--

R42)

0,1,2,3,4,5,6,7,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,1,2,3,4,3,--0,1,2,3,4,5,4,--0,1,2,3,4,5,6,5,--0,1,2,3,4,5,6,7,6,--0,1,2,3,4,5,6,7,7,--0,1,2,3,4,5,6,7,8,--

R43)

0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,--0,0,1,1,2,2,3,4,5,--0,0,1,1,2,3,4,5,--0,0,1,2,3,4,5,--

R44)

0,0,1,1,2,2,3,4,4,-->0,1,0,--0,0,1,1,2,2,3,3,4,5,--0,0,1,1,2,2,3,4,5,--0,0,1,1,2,3,4,5,--0,0,1,2,3,4,5,--

R45)

0,0,1,1,2,2,3,4,5,-->0,1,0,--0,1,2,1,--0,0,1,1,2,2,3,4,5,5,--0,0,1,1,2,2,3,4,5,6,--0,0,1,1,2,3,4,5,6,--0,0,1,2,3,4,5,6,--0,1,2,3,4,5,6,--

R46)

0,0,1,1,2,3,4,5,5,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,0,1,1,2,2,3,4,5,6,--0,0,1,1,2,3,4,5,6,--0,0,1,1,2,3,4,5,6,--0,0,1,2,3,4,5,6,--

R47)

0,0,1,1,2,3,4,5,6,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,1,2,3,4,3,--0,0,1,1,2,3,4,5,6,6,--0,0,1,1,2,3,4,5,6,7,--0,0,1,2,3,4,5,6,7,--0,1,2,3,4,5,6,7,--

R48)

0,0,1,2,3,4,5,6,6,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,1,2,3,4,3,--0,1,2,3,4,5,4,--0,0,1,1,2,3,4,5,6,7,--0,0,1,2,3,4,5,6,7,--0,1,2,3,4,5,6,7,--

R49)

0,0,1,2,3,4,5,6,7,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,1,2,3,4,3,--0,1,2,3,4,5,4,--0,1,2,3,4,5,6,5,--0,0,1,2,3,4,5,6,7,7,--0,0,1,2,3,4,5,6,7,8,--0,1,2,3,4,5,6,7,8,--

R50)

0,1,2,3,4,5,6,7,6,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,1,2,3,4,3,--0,1,2,3,4,5,4,--0,1,2,3,4,5,6,5,--

R51)

0,1,2,3,4,5,6,7,7,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,1,2,3,4,3,--0,1,2,3,4,5,4,--0,1,2,3,4,5,6,5,--0,1,2,3,4,5,6,7,6,--0,0,1,2,3,4,5,6,7,8,--0,1,2,3,4,5,6,7,8,--

R52)

0,1,2,3,4,5,6,7,8,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,1,2,3,4,3,--0,1,2,3,4,5,4,--0,1,2,3,4,5,6,5,--0,1,2,3,4,5,6,7,6,--0,1,2,3,4,5,6,7,8,7,--0,1,2,3,4,5,6,7,8,8,--0,1,2,3,4,5,6,7,8,9,--

List of different nodes in T[L]



LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,1, : 0,1,0, : 0,1,1, : 0,1,2, :  
 LEN=4) 0,0,1,1, : 0,0,1,2, : 0,1,2,1, : 0,1,2,2, : 0,1,2,3, :  
 LEN=5) 0,0,1,1,2, : 0,0,1,2,2, : 0,0,1,2,3, : 0,1,2,3,2, : 0,1,2,3,3, : 0,1,2,3,4, :  
 LEN=6) 0,0,1,1,2,2, : 0,0,1,1,2,3, : 0,0,1,2,3,3, : 0,0,1,2,3,4, : 0,1,2,3,4,3, :  
 0,1,2,3,4,4, : 0,1,2,3,4,5, :  
 LEN=7) 0,0,1,1,2,2,3, : 0,0,1,1,2,3,3, : 0,0,1,1,2,3,4, : 0,0,1,2,3,4,4, :  
 0,0,1,2,3,4,5, : 0,1,2,3,4,5,4, : 0,1,2,3,4,5,5, : 0,1,2,3,4,5,6, :  
 LEN=8) 0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,3,4, : 0,0,1,1,2,3,4,4, : 0,0,1,1,2,3,4,5, :  
 0,0,1,2,3,4,5,5, : 0,0,1,2,3,4,5,6, : 0,1,2,3,4,5,6,5, : 0,1,2,3,4,5,6,6, :  
 0,1,2,3,4,5,6,7, :  
 LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,4,4, : 0,0,1,1,2,2,3,4,5, :  
 0,0,1,1,2,3,4,5,5, : 0,0,1,1,2,3,4,5,6, : 0,0,1,2,3,4,5,6,6, : 0,0,1,2,3,4,5,6,7, :  
 0,1,2,3,4,5,6,7,6, : 0,1,2,3,4,5,6,7,7, : 0,1,2,3,4,5,6,7,8, :  
 LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,4,5, : 0,0,1,1,2,2,3,4,5,5, :  
 0,0,1,1,2,2,3,4,5,6, : 0,0,1,1,2,3,4,5,6,6, : 0,0,1,1,2,3,4,5,6,7, :  
 0,0,1,2,3,4,5,6,7,7, : 0,0,1,2,3,4,5,6,7,8, : 0,1,2,3,4,5,6,7,8,7, :  
 0,1,2,3,4,5,6,7,8,8, : 0,1,2,3,4,5,6,7,8,9, :  
 Number new nodes in level n is given by : 1,2,4,5,6,7,8,9,10,11,

-----Class

464-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][100][101][102][210]]$

-----

--

Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,1, --0,1, --
- R3) 0,1, -->0,1,0, --0,1,1, --0,1,2, --
- R4) 0,0,1, -->0,0,1,1, --0,0,1,2, --0,0,1,3, --
- R5) 0,1,0, -->
- R6) 0,1,1, -->0,1,0, --0,0,1,2, --0,1,2, --
- R7) 0,1,2, -->0,1,0, --0,1,0, --0,1,2,2, --0,1,2,3, --
- R8) 0,0,1,1, -->0,0,1,1,2, --0,0,1,2, --0,0,1,3, --
- R9) 0,0,1,2, -->0,1,0, --0,0,1,2,2, --0,0,1,2,3, --0,0,1,2,4, --
- R10) 0,0,1,3, -->0,0,1,3,1, --0,1,0, --0,0,1,3,3, --0,0,1,3,4, --
- R11) 0,1,2,2, -->0,1,0, --0,1,0, --0,0,1,2,3, --0,1,2,3, --
- R12) 0,1,2,3, -->0,1,0, --0,1,0, --0,1,0, --0,1,2,3,3, --0,1,2,3,4, --
- R13) 0,0,1,1,2, -->0,0,1,1,2,2, --0,0,1,1,2,3, --0,0,1,1,2,4, --0,0,1,1,2,5, --
- R14) 0,0,1,2,2, -->0,1,0, --0,0,1,1,2,3, --0,0,1,2,3, --0,0,1,2,4, --
- R15) 0,0,1,2,3, -->0,1,0, --0,1,0, --0,0,1,2,3,3, --0,0,1,2,3,4, --0,0,1,2,3,5, --
- R16) 0,0,1,2,4, -->0,1,0, --0,0,1,3,1, --0,1,0, --0,0,1,2,4,4, --0,0,1,2,4,5, --
- R17) 0,0,1,3,1, -->0,1,0, --
- R18) 0,0,1,3,3, -->0,0,1,3,1, --0,1,0, --0,0,1,1,2,4, --0,0,1,3,4, --
- R19) 0,0,1,3,4, -->0,0,1,3,1, --0,1,0, --0,1,0, --0,0,1,3,4,4, --0,0,1,3,4,5, --
- R20) 0,1,2,3,3, -->0,1,0, --0,1,0, --0,1,0, --0,0,1,2,3,4, --0,1,2,3,4, --
- R21) 0,1,2,3,4, -->0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,1,2,3,4,4, --0,1,2,3,4,5, --
- R22) 0,0,1,1,2,2, -->0,0,1,1,2,2,3, --0,0,1,1,2,3, --0,0,1,1,2,4, --0,0,1,1,2,5, --
- R23)

0,0,1,1,2,3,-->0,1,0,--0,0,1,1,2,3,3,--0,0,1,1,2,3,4,--0,0,1,1,2,3,5,--0,0,1,1,2,3,6,--

R24)

0,0,1,1,2,4,-->0,0,1,3,1,--0,1,0,--0,0,1,1,2,4,4,--0,0,1,1,2,4,5,--0,0,1,1,2,4,6,--

R25)

0,0,1,1,2,5,-->0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,5,5,--0,0,1,1,2,5,6,--

R26)

0,0,1,2,3,3,-->0,1,0,--0,1,0,--0,0,1,1,2,3,4,--0,0,1,2,3,4,--0,0,1,2,3,5,--

R27)

0,0,1,2,3,4,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,4,--0,0,1,2,3,4,5,--0,0,1,2,3,4,6,--

R28)

0,0,1,2,3,5,-->0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,2,3,5,5,--0,0,1,2,3,5,6,--

R29)

0,0,1,2,4,4,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,3,5,--0,0,1,2,4,5,--

R30)

0,0,1,2,4,5,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,2,4,5,5,--0,0,1,2,4,5,6,--

R31)

0,0,1,3,4,4,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,1,2,4,5,--0,0,1,3,4,5,--

R32)

0,0,1,3,4,5,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,3,4,5,5,--0,0,1,3,4,5,6,--

R33)

0,1,2,3,4,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,5,--0,1,2,3,4,5,--

R34)

0,1,2,3,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,3,4,5,5,--0,1,2,3,4,5,6,--

R35)

0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--

R36)

0,0,1,1,2,3,3,-->0,1,0,--0,0,1,1,2,2,3,4,--0,0,1,1,2,3,4,--0,0,1,1,2,3,5,--0,0,1,1,2,3,6,--

R37)

0,0,1,1,2,3,4,-->0,1,0,--0,1,0,--0,0,1,1,2,3,4,4,--0,0,1,1,2,3,4,5,--0,0,1,1,2,3,4,6,--0,0,1,1,2,3,4,7,--

R38)

0,0,1,1,2,3,5,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,3,5,5,--0,0,1,1,2,3,5,6,--0,0,1,1,2,3,5,7,--

R39)

0,0,1,1,2,3,6,-->0,1,0,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,3,6,6,--0,0,1,1,2,3,6,7,--

R40)

0,0,1,1,2,4,4,-->0,0,1,3,1,--0,1,0,--0,0,1,1,2,2,3,5,--0,0,1,1,2,4,5,--0,0,1,1,2,4,6,--

R41)

0,0,1,1,2,4,5,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,1,2,4,5,5,--0,0,1,1,2,4,5,6,--0,0,1,1,2,4,5,7,--

R42)

0,0,1,1,2,4,6,-->0,0,1,3,1,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,4,6,6,--0,0,1,1,2,4,6,7,--

R43) 0,0,1,1,2,5,2,-->0,0,1,3,1,--0,1,0,--

R44)

0,0,1,1,2,5,5,-->0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,2,3,6,--0,0,1,1,2,5,6,--

R45)

0,0,1,1,2,5,6,-->0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,1,2,5,6,6,--0,0,  
1,1,2,5,6,7,--

R46)

0,0,1,2,3,4,4,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,3,4,5,--0,0,1,2,3,4,5,--0,0,1,2,  
3,4,6,--

R47)

0,0,1,2,3,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,5,5,--0,0,1,2,3,4,5,6,  
--0,0,1,2,3,4,5,7,--

R48)

0,0,1,2,3,4,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,2,3,4,6,6,--0,0,  
1,2,3,4,6,7,--

R49)

0,0,1,2,3,5,5,-->0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,3,4,6,--0,0,1,2,3,5,  
6,--

R50)

0,0,1,2,3,5,6,-->0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,2,3,5,6,6,--0,0,  
1,2,3,5,6,7,--

R51)

0,0,1,2,4,5,5,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,1,2,3,5,6,--0,0,1,2,4,5,  
6,--

R52)

0,0,1,2,4,5,6,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,5,6,6,--0,0,  
1,2,4,5,6,7,--

R53)

0,0,1,3,4,5,5,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,4,5,6,--0,0,1,3,4,5,  
6,--

R54)

0,0,1,3,4,5,6,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,3,4,5,6,6,--0,0,  
1,3,4,5,6,7,--

R55)

0,1,2,3,4,5,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,5,6,--0,1,2,3,  
4,5,6,--

R56)

0,1,2,3,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,3,4,5,6,6,--  
0,1,2,3,4,5,6,7,--

R57)

0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,  
2,2,3,6,--0,0,1,1,2,2,3,7,--

R58)

0,0,1,1,2,2,3,4,-->0,1,0,--0,0,1,1,2,2,3,4,4,--0,0,1,1,2,2,3,4,5,--0,0,1,1,2,2,3,4,  
6,--0,0,1,1,2,2,3,4,7,--0,0,1,1,2,2,3,4,8,--

R59)

0,0,1,1,2,2,3,5,-->0,0,1,3,1,--0,1,0,--0,0,1,1,2,2,3,5,5,--0,0,1,1,2,2,3,5,6,--0,0,  
1,1,2,2,3,5,7,--0,0,1,1,2,2,3,5,8,--

R60)

0,0,1,1,2,2,3,6,-->0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,2,3,6,6,--0,0,1,1,  
2,2,3,6,7,--0,0,1,1,2,2,3,6,8,--

R61)

0,0,1,1,2,2,3,7,-->0,0,1,1,2,2,3,7,3,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,0,1,1,

2,2,3,7,7,--0,0,1,1,2,2,3,7,8,--

R62)

0,0,1,1,2,3,4,4,-->0,1,0,--0,1,0,--0,0,1,1,2,2,3,4,5,--0,0,1,1,2,3,4,5,--0,0,1,1,2,3,4,6,--0,0,1,1,2,3,4,7,--

R63)

0,0,1,1,2,3,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,3,4,5,5,--0,0,1,1,2,3,4,5,6,--0,0,1,1,2,3,4,5,7,--0,0,1,1,2,3,4,5,8,--

R64)

0,0,1,1,2,3,4,6,-->0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,3,4,6,6,--0,0,1,1,2,3,4,6,7,--0,0,1,1,2,3,4,6,8,--

R65)

0,0,1,1,2,3,4,7,-->0,1,0,--0,1,0,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,3,4,7,7,--0,0,1,1,2,3,4,7,8,--

R66)

0,0,1,1,2,3,5,5,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,2,3,4,6,--0,0,1,1,2,3,5,6,--0,0,1,1,2,3,5,7,--

R67)

0,0,1,1,2,3,5,6,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,1,2,3,5,6,6,--0,0,1,1,2,3,5,6,7,--0,0,1,1,2,3,5,6,8,--

R68)

0,0,1,1,2,3,5,7,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,3,5,7,7,--0,0,1,1,2,3,5,7,8,--

R69)

0,0,1,1,2,3,6,6,-->0,1,0,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,2,3,4,7,--0,0,1,1,2,3,6,7,--

R70)

0,0,1,1,2,3,6,7,-->0,1,0,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,1,2,3,6,7,7,--0,0,1,1,2,3,6,7,8,--

R71)

0,0,1,1,2,4,5,5,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,1,2,2,3,5,6,--0,0,1,1,2,4,5,6,--0,0,1,1,2,4,5,7,--

R72)

0,0,1,1,2,4,5,6,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,4,5,6,6,--0,0,1,1,2,4,5,6,7,--0,0,1,1,2,4,5,6,8,--

R73)

0,0,1,1,2,4,5,7,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,4,5,7,7,--0,0,1,1,2,4,5,7,8,--

R74)

0,0,1,1,2,4,6,6,-->0,0,1,3,1,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,2,3,5,7,--0,0,1,1,2,4,6,7,--

R75)

0,0,1,1,2,4,6,7,-->0,0,1,3,1,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,1,2,4,6,7,7,--0,0,1,1,2,4,6,7,8,--

R76)

0,0,1,1,2,5,6,6,-->0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,1,2,2,3,6,7,--0,0,1,1,2,5,6,7,--

R77)

0,0,1,1,2,5,6,7,-->0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,5,6,7,7,--0,0,1,1,2,5,6,7,8,--

R78)

0,0,1,2,3,4,5,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,3,4,5,6,--0,0,1,2,3,4,5,6,--0,0,1,2,3,4,5,7,--

R79)

0,0,1,2,3,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,5,6,6,--0,0,1,2,3,4,5,6,7,--0,0,1,2,3,4,5,6,8,--

R80)

0,0,1,2,3,4,5,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,2,3,4,5,7,7,--0,0,1,2,3,4,5,7,8,--

R81)

0,0,1,2,3,4,6,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,3,4,5,7,--0,0,1,2,3,4,6,7,--

R82)

0,0,1,2,3,4,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,2,3,4,6,7,7,--0,0,1,2,3,4,6,7,8,--

R83)

0,0,1,2,3,5,6,6,-->0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,1,2,3,4,6,7,--0,0,1,2,3,5,6,7,--

R84)

0,0,1,2,3,5,6,7,-->0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,6,7,7,--0,0,1,2,3,5,6,7,8,--

R85)

0,0,1,2,4,5,6,6,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,3,5,6,7,--0,0,1,2,4,5,6,7,--

R86)

0,0,1,2,4,5,6,7,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,5,6,7,7,--0,0,1,2,4,5,6,7,8,--

R87)

0,0,1,3,4,5,6,6,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,4,5,6,7,--0,0,1,3,4,5,6,7,--

R88)

0,0,1,3,4,5,6,7,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,3,4,5,6,7,7,--0,0,1,3,4,5,6,7,8,--

R89)

0,1,2,3,4,5,6,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,5,6,7,--0,1,2,3,4,5,6,7,--

R90)

0,1,2,3,4,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,3,4,5,6,7,7,--0,1,2,3,4,5,6,7,8,--

R91)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,--0,0,1,1,2,2,3,3,4,6,--0,0,1,1,2,2,3,3,4,7,--0,0,1,1,2,2,3,3,4,8,--0,0,1,1,2,2,3,3,4,9,--

R92)

0,0,1,1,2,2,3,4,4,-->0,1,0,--0,0,1,1,2,2,3,3,4,5,--0,0,1,1,2,2,3,4,5,--0,0,1,1,2,2,3,4,6,--0,0,1,1,2,2,3,4,7,--0,0,1,1,2,2,3,4,8,--

R93)

0,0,1,1,2,2,3,4,5,-->0,1,0,--0,1,0,--0,0,1,1,2,2,3,4,5,5,--0,0,1,1,2,2,3,4,5,6,--0,0,1,1,2,2,3,4,5,7,--0,0,1,1,2,2,3,4,5,8,--0,0,1,1,2,2,3,4,5,9,--

R94)

0,0,1,1,2,2,3,4,6,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,2,3,4,6,6,--0,0,1,1,2,2,3,4,6,7,--0,0,1,1,2,2,3,4,6,8,--0,0,1,1,2,2,3,4,6,9,--

R95)

0,0,1,1,2,2,3,4,7,-->0,1,0,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,2,3,4,7,  
7,--0,0,1,1,2,2,3,4,7,8,--0,0,1,1,2,2,3,4,7,9,--

R96)

0,0,1,1,2,2,3,4,8,-->0,1,0,--0,0,1,1,2,2,3,7,3,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,  
--0,0,1,1,2,2,3,4,8,8,--0,0,1,1,2,2,3,4,8,9,--

R97)

0,0,1,1,2,2,3,5,5,-->0,0,1,3,1,--0,1,0,--0,0,1,1,2,2,3,3,4,6,--0,0,1,1,2,2,3,5,6,--  
0,0,1,1,2,2,3,5,7,--0,0,1,1,2,2,3,5,8,--

R98)

0,0,1,1,2,2,3,5,6,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,1,2,2,3,5,6,6,--0,0,1,1,2,2,  
3,5,6,7,--0,0,1,1,2,2,3,5,6,8,--0,0,1,1,2,2,3,5,6,9,--

R99)

0,0,1,1,2,2,3,5,7,-->0,0,1,3,1,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,2,3,5,7,7,--  
0,0,1,1,2,2,3,5,7,8,--0,0,1,1,2,2,3,5,7,9,--

R100)

0,0,1,1,2,2,3,5,8,-->0,0,1,3,1,--0,1,0,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,0,1,  
1,2,2,3,5,8,8,--0,0,1,1,2,2,3,5,8,9,--

R101)

0,0,1,1,2,2,3,6,6,-->0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,2,3,3,4,7,--0,0,  
1,1,2,2,3,6,7,--0,0,1,1,2,2,3,6,8,--

R102)

0,0,1,1,2,2,3,6,7,-->0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,1,2,2,3,6,7,  
7,--0,0,1,1,2,2,3,6,7,8,--0,0,1,1,2,2,3,6,7,9,--

R103)

0,0,1,1,2,2,3,6,8,-->0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,  
1,2,2,3,6,8,8,--0,0,1,1,2,2,3,6,8,9,--

R104) 0,0,1,1,2,2,3,7,3,-->0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--

R105)

0,0,1,1,2,2,3,7,7,-->0,0,1,1,2,2,3,7,3,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,0,1,  
1,2,2,3,3,4,8,--0,0,1,1,2,2,3,7,8,--

R106)

0,0,1,1,2,2,3,7,8,-->0,0,1,1,2,2,3,7,3,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,1,0,  
--0,0,1,1,2,2,3,7,8,8,--0,0,1,1,2,2,3,7,8,9,--

R107)

0,0,1,1,2,3,4,5,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,2,3,4,5,6,--0,0,1,1,2,3,4,5,  
6,--0,0,1,1,2,3,4,5,7,--0,0,1,1,2,3,4,5,8,--

R108)

0,0,1,1,2,3,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,3,4,5,6,6,--0,0,1,1,  
2,3,4,5,6,7,--0,0,1,1,2,3,4,5,6,8,--0,0,1,1,2,3,4,5,6,9,--

R109)

0,0,1,1,2,3,4,5,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,3,4,5,7,  
7,--0,0,1,1,2,3,4,5,7,8,--0,0,1,1,2,3,4,5,7,9,--

R110)

0,0,1,1,2,3,4,5,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,  
0,1,1,2,3,4,5,8,8,--0,0,1,1,2,3,4,5,8,9,--

R111)

0,0,1,1,2,3,4,6,6,-->0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,2,3,4,5,7,--0,0,  
1,1,2,3,4,6,7,--0,0,1,1,2,3,4,6,8,--

R112)

0,0,1,1,2,3,4,6,7,-->0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,1,2,3,4,6,7,  
7,--0,0,1,1,2,3,4,6,7,8,--0,0,1,1,2,3,4,6,7,9,--

R113)

0,0,1,1,2,3,4,6,8,-->0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,  
1,2,3,4,6,8,8,--0,0,1,1,2,3,4,6,8,9,--

R114)

0,0,1,1,2,3,4,7,7,-->0,1,0,--0,1,0,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,  
2,3,4,5,8,--0,0,1,1,2,3,4,7,8,--

R115)

0,0,1,1,2,3,4,7,8,-->0,1,0,--0,1,0,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,1,0,--0,  
0,1,1,2,3,4,7,8,8,--0,0,1,1,2,3,4,7,8,9,--

R116)

0,0,1,1,2,3,5,6,6,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,1,2,2,3,4,6,7,--0,0,  
1,1,2,3,5,6,7,--0,0,1,1,2,3,5,6,8,--

R117)

0,0,1,1,2,3,5,6,7,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,3,5,6,7,  
7,--0,0,1,1,2,3,5,6,7,8,--0,0,1,1,2,3,5,6,7,9,--

R118)

0,0,1,1,2,3,5,6,8,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,  
1,2,3,5,6,8,8,--0,0,1,1,2,3,5,6,8,9,--

R119)

0,0,1,1,2,3,5,7,7,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,2,3,  
4,6,8,--0,0,1,1,2,3,5,7,8,--

R120)

0,0,1,1,2,3,5,7,8,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,  
1,2,3,5,7,8,8,--0,0,1,1,2,3,5,7,8,9,--

R121)

0,0,1,1,2,3,6,7,7,-->0,1,0,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,1,2,  
2,3,4,7,8,--0,0,1,1,2,3,6,7,8,--

R122)

0,0,1,1,2,3,6,7,8,-->0,1,0,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,  
0,1,1,2,3,6,7,8,8,--0,0,1,1,2,3,6,7,8,9,--

R123)

0,0,1,1,2,4,5,6,6,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,2,3,5,6,7,--0,0,  
1,1,2,4,5,6,7,--0,0,1,1,2,4,5,6,8,--

R124)

0,0,1,1,2,4,5,6,7,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,4,5,6,7,  
7,--0,0,1,1,2,4,5,6,7,8,--0,0,1,1,2,4,5,6,7,9,--

R125)

0,0,1,1,2,4,5,6,8,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,  
1,2,4,5,6,8,8,--0,0,1,1,2,4,5,6,8,9,--

R126)

0,0,1,1,2,4,5,7,7,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,2,3,  
5,6,8,--0,0,1,1,2,4,5,7,8,--

R127)

0,0,1,1,2,4,5,7,8,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,  
1,2,4,5,7,8,8,--0,0,1,1,2,4,5,7,8,9,--

R128)

0,0,1,1,2,4,6,7,7,-->0,0,1,3,1,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,1,2,2,3,  
5,7,8,--0,0,1,1,2,4,6,7,8,--

R129)

0,0,1,1,2,4,6,7,8,-->0,0,1,3,1,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,  
1,2,4,6,7,8,8,--0,0,1,1,2,4,6,7,8,9,--

R130)

0,0,1,1,2,5,6,7,7,-->0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,  
2,3,6,7,8,--0,0,1,1,2,5,6,7,8,--

R131)

0,0,1,1,2,5,6,7,8,-->0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,  
0,1,1,2,5,6,7,8,8,--0,0,1,1,2,5,6,7,8,9,--

R132)

0,0,1,2,3,4,5,6,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,3,4,5,6,7,--  
0,0,1,2,3,4,5,6,7,--0,0,1,2,3,4,5,6,8,--

R133)

0,0,1,2,3,4,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,5,  
6,7,7,--0,0,1,2,3,4,5,6,7,8,--0,0,1,2,3,4,5,6,7,9,--

R134)

0,0,1,2,3,4,5,6,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,  
0,1,2,3,4,5,6,8,8,--0,0,1,2,3,4,5,6,8,9,--

R135)

0,0,1,2,3,4,5,7,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,  
3,4,5,6,8,--0,0,1,2,3,4,5,7,8,--

R136)

0,0,1,2,3,4,5,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,  
0,1,2,3,4,5,7,8,8,--0,0,1,2,3,4,5,7,8,9,--

R137)

0,0,1,2,3,4,6,7,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,1,2,  
3,4,5,7,8,--0,0,1,2,3,4,6,7,8,--

R138)

0,0,1,2,3,4,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,  
0,1,2,3,4,6,7,8,8,--0,0,1,2,3,4,6,7,8,9,--

R139)

0,0,1,2,3,5,6,7,7,-->0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,  
3,4,6,7,8,--0,0,1,2,3,5,6,7,8,--

R140)

0,0,1,2,3,5,6,7,8,-->0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,  
0,1,2,3,5,6,7,8,8,--0,0,1,2,3,5,6,7,8,9,--

R141)

0,0,1,2,4,5,6,7,7,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,  
3,5,6,7,8,--0,0,1,2,4,5,6,7,8,--

R142)

0,0,1,2,4,5,6,7,8,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,  
0,1,2,4,5,6,7,8,8,--0,0,1,2,4,5,6,7,8,9,--

R143)

0,0,1,3,4,5,6,7,7,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,  
4,5,6,7,8,--0,0,1,3,4,5,6,7,8,--

R144)

0,0,1,3,4,5,6,7,8,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,  
0,1,3,4,5,6,7,8,8,--0,0,1,3,4,5,6,7,8,9,--

R145)

0,1,2,3,4,5,6,7,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,



2,3,4,5,6,7,8,--0,1,2,3,4,5,6,7,8,--

R146)

0,1,2,3,4,5,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,  
--0,1,2,3,4,5,6,7,8,8,--0,1,2,3,4,5,6,7,8,9,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,1,: 0,1,0,: 0,1,1,: 0,1,2,:

LEN=4) 0,0,1,1,: 0,0,1,2,: 0,0,1,3,: 0,1,2,2,: 0,1,2,3,:

LEN=5) 0,0,1,1,2,: 0,0,1,2,2,: 0,0,1,2,3,: 0,0,1,2,4,: 0,0,1,3,1,: 0,0,1,3,3,:

0,0,1,3,4,: 0,1,2,3,3,: 0,1,2,3,4,:

LEN=6) 0,0,1,1,2,2,: 0,0,1,1,2,3,: 0,0,1,1,2,4,: 0,0,1,1,2,5,: 0,0,1,2,3,3,:

0,0,1,2,3,4,: 0,0,1,2,3,5,: 0,0,1,2,4,4,: 0,0,1,2,4,5,: 0,0,1,3,4,4,: 0,0,1,3,4,5,:

0,1,2,3,4,4,: 0,1,2,3,4,5,:

LEN=7) 0,0,1,1,2,2,3,: 0,0,1,1,2,3,3,: 0,0,1,1,2,3,4,: 0,0,1,1,2,3,5,:

0,0,1,1,2,3,6,: 0,0,1,1,2,4,4,: 0,0,1,1,2,4,5,: 0,0,1,1,2,4,6,: 0,0,1,1,2,5,2,:

0,0,1,1,2,5,5,: 0,0,1,1,2,5,6,: 0,0,1,2,3,4,4,: 0,0,1,2,3,4,5,: 0,0,1,2,3,4,6,:

0,0,1,2,3,5,5,: 0,0,1,2,3,5,6,: 0,0,1,2,4,5,5,: 0,0,1,2,4,5,6,: 0,0,1,3,4,5,5,:

0,0,1,3,4,5,6,: 0,1,2,3,4,5,5,: 0,1,2,3,4,5,6,:

LEN=8) 0,0,1,1,2,2,3,3,: 0,0,1,1,2,2,3,4,: 0,0,1,1,2,2,3,5,: 0,0,1,1,2,2,3,6,:

0,0,1,1,2,2,3,7,: 0,0,1,1,2,3,4,4,: 0,0,1,1,2,3,4,5,: 0,0,1,1,2,3,4,6,:

0,0,1,1,2,3,4,7,: 0,0,1,1,2,3,5,5,: 0,0,1,1,2,3,5,6,: 0,0,1,1,2,3,5,7,:

0,0,1,1,2,3,6,6,: 0,0,1,1,2,3,6,7,: 0,0,1,1,2,4,5,5,: 0,0,1,1,2,4,5,6,:

0,0,1,1,2,4,5,7,: 0,0,1,1,2,4,6,6,: 0,0,1,1,2,4,6,7,: 0,0,1,1,2,5,6,6,:

0,0,1,1,2,5,6,7,: 0,0,1,2,3,4,5,5,: 0,0,1,2,3,4,5,6,: 0,0,1,2,3,4,5,7,:

0,0,1,2,3,4,6,6,: 0,0,1,2,3,4,6,7,: 0,0,1,2,3,5,6,6,: 0,0,1,2,3,5,6,7,:

0,0,1,2,4,5,6,6,: 0,0,1,2,4,5,6,7,: 0,0,1,3,4,5,6,6,: 0,0,1,3,4,5,6,7,:

0,1,2,3,4,5,6,6,: 0,1,2,3,4,5,6,7,:

LEN=9) 0,0,1,1,2,2,3,3,4,: 0,0,1,1,2,2,3,4,4,: 0,0,1,1,2,2,3,4,5,:

0,0,1,1,2,2,3,4,6,: 0,0,1,1,2,2,3,4,7,: 0,0,1,1,2,2,3,4,8,: 0,0,1,1,2,2,3,5,5,:

0,0,1,1,2,2,3,5,6,: 0,0,1,1,2,2,3,5,7,: 0,0,1,1,2,2,3,5,8,: 0,0,1,1,2,2,3,6,6,:

0,0,1,1,2,2,3,6,7,: 0,0,1,1,2,2,3,6,8,: 0,0,1,1,2,2,3,7,3,: 0,0,1,1,2,2,3,7,7,:

0,0,1,1,2,2,3,7,8,: 0,0,1,1,2,3,4,5,5,: 0,0,1,1,2,3,4,5,6,: 0,0,1,1,2,3,4,5,7,:

0,0,1,1,2,3,4,5,8,: 0,0,1,1,2,3,4,6,6,: 0,0,1,1,2,3,4,6,7,: 0,0,1,1,2,3,4,6,8,:

0,0,1,1,2,3,4,7,7,: 0,0,1,1,2,3,4,7,8,: 0,0,1,1,2,3,5,6,6,: 0,0,1,1,2,3,5,6,7,:

0,0,1,1,2,3,5,6,8,: 0,0,1,1,2,3,5,7,7,: 0,0,1,1,2,3,5,7,8,: 0,0,1,1,2,3,6,7,7,:

0,0,1,1,2,3,6,7,8,: 0,0,1,1,2,4,5,6,6,: 0,0,1,1,2,4,5,6,7,: 0,0,1,1,2,4,5,6,8,:

0,0,1,1,2,4,5,7,7,: 0,0,1,1,2,4,5,7,8,: 0,0,1,1,2,4,6,7,7,: 0,0,1,1,2,4,6,7,8,:

0,0,1,1,2,5,6,7,7,: 0,0,1,1,2,5,6,7,8,: 0,0,1,2,3,4,5,6,6,: 0,0,1,2,3,4,5,6,7,:

0,0,1,2,3,4,5,6,8,: 0,0,1,2,3,4,5,7,7,: 0,0,1,2,3,4,5,7,8,: 0,0,1,2,3,4,6,7,7,:

0,0,1,2,3,4,6,7,8,: 0,0,1,2,3,5,6,7,7,: 0,0,1,2,3,5,6,7,8,: 0,0,1,2,4,5,6,7,7,:

0,0,1,2,4,5,6,7,8,: 0,0,1,3,4,5,6,7,7,: 0,0,1,3,4,5,6,7,8,: 0,1,2,3,4,5,6,7,7,:

0,1,2,3,4,5,6,7,8,:

LEN=10) 0,0,1,1,2,2,3,3,4,4,: 0,0,1,1,2,2,3,3,4,5,:

0,0,1,1,2,2,3,3,4,7,: 0,0,1,1,2,2,3,3,4,8,: 0,0,1,1,2,2,3,3,4,9,:

0,0,1,1,2,2,3,4,5,5,: 0,0,1,1,2,2,3,4,5,6,: 0,0,1,1,2,2,3,4,5,7,:

0,0,1,1,2,2,3,4,5,8,: 0,0,1,1,2,2,3,4,5,9,: 0,0,1,1,2,2,3,4,6,6,:

0,0,1,1,2,2,3,4,6,7,: 0,0,1,1,2,2,3,4,6,8,: 0,0,1,1,2,2,3,4,6,9,:

0,0,1,1,2,2,3,4,7,7,: 0,0,1,1,2,2,3,4,7,8,: 0,0,1,1,2,2,3,4,7,9,:

0,0,1,1,2,2,3,4,8,8,: 0,0,1,1,2,2,3,4,8,9,: 0,0,1,1,2,2,3,5,6,6,:

0,0,1,1,2,2,3,5,6,7, : 0,0,1,1,2,2,3,5,6,8, : 0,0,1,1,2,2,3,5,6,9, :  
 0,0,1,1,2,2,3,5,7,7, : 0,0,1,1,2,2,3,5,7,8, : 0,0,1,1,2,2,3,5,7,9, :  
 0,0,1,1,2,2,3,5,8,8, : 0,0,1,1,2,2,3,5,8,9, : 0,0,1,1,2,2,3,6,7,7, :  
 0,0,1,1,2,2,3,6,7,8, : 0,0,1,1,2,2,3,6,7,9, : 0,0,1,1,2,2,3,6,8,8, :  
 0,0,1,1,2,2,3,6,8,9, : 0,0,1,1,2,2,3,7,8,8, : 0,0,1,1,2,2,3,7,8,9, :  
 0,0,1,1,2,3,4,5,6,6, : 0,0,1,1,2,3,4,5,6,7, : 0,0,1,1,2,3,4,5,6,8, :  
 0,0,1,1,2,3,4,5,6,9, : 0,0,1,1,2,3,4,5,7,7, : 0,0,1,1,2,3,4,5,7,8, :  
 0,0,1,1,2,3,4,5,7,9, : 0,0,1,1,2,3,4,5,8,8, : 0,0,1,1,2,3,4,5,8,9, :  
 0,0,1,1,2,3,4,6,7,7, : 0,0,1,1,2,3,4,6,7,8, : 0,0,1,1,2,3,4,6,7,9, :  
 0,0,1,1,2,3,4,6,8,8, : 0,0,1,1,2,3,4,6,8,9, : 0,0,1,1,2,3,4,7,8,8, :  
 0,0,1,1,2,3,4,7,8,9, : 0,0,1,1,2,3,5,6,7,7, : 0,0,1,1,2,3,5,6,7,8, :  
 0,0,1,1,2,3,5,6,7,9, : 0,0,1,1,2,3,5,6,8,8, : 0,0,1,1,2,3,5,6,8,9, :  
 0,0,1,1,2,3,5,7,8,8, : 0,0,1,1,2,3,5,7,8,9, : 0,0,1,1,2,3,6,7,8,8, :  
 0,0,1,1,2,3,6,7,8,9, : 0,0,1,1,2,4,5,6,7,7, : 0,0,1,1,2,4,5,6,7,8, :  
 0,0,1,1,2,4,5,6,7,9, : 0,0,1,1,2,4,5,6,8,8, : 0,0,1,1,2,4,5,6,8,9, :  
 0,0,1,1,2,4,5,7,8,8, : 0,0,1,1,2,4,5,7,8,9, : 0,0,1,1,2,4,6,7,8,8, :  
 0,0,1,1,2,4,6,7,8,9, : 0,0,1,1,2,5,6,7,8,8, : 0,0,1,1,2,5,6,7,8,9, :  
 0,0,1,2,3,4,5,6,7,7, : 0,0,1,2,3,4,5,6,7,8, : 0,0,1,2,3,4,5,6,7,9, :  
 0,0,1,2,3,4,5,6,8,8, : 0,0,1,2,3,4,5,6,8,9, : 0,0,1,2,3,4,5,7,8,8, :  
 0,0,1,2,3,4,5,7,8,9, : 0,0,1,2,3,4,6,7,8,8, : 0,0,1,2,3,4,6,7,8,9, :  
 0,0,1,2,3,5,6,7,8,8, : 0,0,1,2,3,5,6,7,8,9, : 0,0,1,2,4,5,6,7,8,8, :  
 0,0,1,2,4,5,6,7,8,9, : 0,0,1,3,4,5,6,7,8,8, : 0,0,1,3,4,5,6,7,8,9, :  
 0,1,2,3,4,5,6,7,8,8, : 0,1,2,3,4,5,6,7,8,9, :  
 Number new nodes in level n is given by : 1,2,4,5,9,13,22,34,56,89,

-----Class

465-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][100][101][110][120]]$

-----

--

Rules of  $T[L]$ :

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,1,--0,1,--

R3) 0,1,-->0,0,--0,0,--0,1,--

R4) 0,0,1,-->0,0,1,1,--0,0,1,2,--0,0,1,3,--

R5) 0,0,1,1,-->0,0,1,1,2,--0,0,1,2,--0,0,1,3,--

R6) 0,0,1,2,-->0,0,1,1,--0,0,1,1,--0,0,1,2,--0,0,1,3,--

R7) 0,0,1,3,-->0,0,1,3,1,--0,0,1,3,1,--0,0,--0,1,--

R8) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--

R9) 0,0,1,3,1,-->0,0,1,1,--0,0,1,--0,1,--

R10) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--

R11)

0,0,1,1,2,3,-->0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--

--

R12) 0,0,1,1,2,4,-->0,0,1,1,2,4,2,--0,0,1,1,2,4,2,--0,0,1,1,--0,0,1,2,--0,0,1,3,--

R13) 0,0,1,1,2,5,-->0,0,1,1,2,5,2,--0,0,1,1,2,5,3,--0,0,1,1,2,5,2,--0,0,--0,1,--

R14)

0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--

R15) 0,0,1,1,2,4,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,2,--0,0,1,3,--

R16) 0,0,1,1,2,5,2,-->0,0,1,1,2,4,2,--0,0,1,1,2,4,2,--0,0,1,--0,1,--  
R17) 0,0,1,1,2,5,3,-->0,0,1,1,2,4,2,--0,0,1,1,--0,0,1,--0,1,--  
R18)  
0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,  
2,2,3,6,--0,0,1,1,2,2,3,7,--  
R19)  
0,0,1,1,2,2,3,4,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,1,1,2,  
2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--  
R20)  
0,0,1,1,2,2,3,5,-->0,0,1,1,2,2,3,5,3,--0,0,1,1,2,2,3,5,3,--0,0,1,1,2,2,--0,0,1,1,2,  
3,--0,0,1,1,2,4,--0,0,1,1,2,5,--  
R21)  
0,0,1,1,2,2,3,6,-->0,0,1,1,2,2,3,6,3,--0,0,1,1,2,2,3,6,4,--0,0,1,1,2,2,3,6,3,--0,0,  
1,1,--0,0,1,2,--0,0,1,3,--  
R22)  
0,0,1,1,2,2,3,7,-->0,0,1,1,2,2,3,7,3,--0,0,1,1,2,2,3,7,4,--0,0,1,1,2,2,3,7,5,--0,0,  
1,1,2,2,3,7,3,--0,0,--0,1,--  
R23)  
0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,--0,0,1,1,2,2,3,3,4,  
6,--0,0,1,1,2,2,3,3,4,7,--0,0,1,1,2,2,3,3,4,8,--0,0,1,1,2,2,3,3,4,9,--  
R24)  
0,0,1,1,2,2,3,5,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,3,--0,0,1,1,2,4,--  
0,0,1,1,2,5,--  
R25)  
0,0,1,1,2,2,3,6,3,-->0,0,1,1,2,2,3,5,3,--0,0,1,1,2,2,3,5,3,--0,0,1,1,2,--0,0,1,2,--  
0,0,1,3,--  
R26)  
0,0,1,1,2,2,3,6,4,-->0,0,1,1,2,2,3,5,3,--0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,2,--0,0,1,  
3,--  
R27)  
0,0,1,1,2,2,3,7,3,-->0,0,1,1,2,2,3,6,3,--0,0,1,1,2,2,3,6,4,--0,0,1,1,2,2,3,6,3,--0,  
0,1,--0,1,--  
R28)  
0,0,1,1,2,2,3,7,4,-->0,0,1,1,2,2,3,6,3,--0,0,1,1,2,4,2,--0,0,1,1,2,4,2,--0,0,1,--0,  
1,--  
R29)  
0,0,1,1,2,2,3,7,5,-->0,0,1,1,2,2,3,6,4,--0,0,1,1,2,2,3,6,4,--0,0,1,1,--0,0,1,--0,1,  
--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,1, :  
LEN=4) 0,0,1,1, : 0,0,1,2, : 0,0,1,3, :  
LEN=5) 0,0,1,1,2, : 0,0,1,3,1, :  
LEN=6) 0,0,1,1,2,2, : 0,0,1,1,2,3, : 0,0,1,1,2,4, : 0,0,1,1,2,5, :  
LEN=7) 0,0,1,1,2,2,3, : 0,0,1,1,2,4,2, : 0,0,1,1,2,5,2, : 0,0,1,1,2,5,3, :  
LEN=8) 0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,3,4, : 0,0,1,1,2,2,3,5, : 0,0,1,1,2,2,3,6, :  
0,0,1,1,2,2,3,7, :  
LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,5,3, : 0,0,1,1,2,2,3,6,3, :  
0,0,1,1,2,2,3,6,4, : 0,0,1,1,2,2,3,7,3, : 0,0,1,1,2,2,3,7,4, : 0,0,1,1,2,2,3,7,5, :

LEN=10) 0,0,1,1,2,2,3,3,4,4,: 0,0,1,1,2,2,3,3,4,5,: 0,0,1,1,2,2,3,3,4,6,:  
 0,0,1,1,2,2,3,3,4,7,: 0,0,1,1,2,2,3,3,4,8,: 0,0,1,1,2,2,3,3,4,9,:  
 Number new nodes in level n is given by : 1,2,1,3,2,4,4,5,7,6,

-----Class

466-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][100][101][110][201]]$

-----

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,1,--
- R3) 0,1,-->0,0,--0,0,--0,1,2,--
- R4) 0,0,1,-->0,0,1,1,--0,0,1,2,--0,0,1,3,--
- R5) 0,1,2,-->0,0,--0,0,--0,0,--0,1,2,3,--
- R6) 0,0,1,1,-->0,0,1,1,2,--0,0,1,2,--0,0,1,3,--
- R7) 0,0,1,2,-->0,0,1,1,--0,0,1,1,--0,0,1,2,3,--0,0,1,2,4,--
- R8) 0,0,1,3,-->0,0,--0,0,1,--0,0,--0,0,1,3,4,--
- R9) 0,1,2,3,-->0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,--
- R10) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--
- R11) 0,0,1,2,3,-->0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,2,3,4,--0,0,1,2,3,5,--
- R12) 0,0,1,2,4,-->0,0,--0,0,--0,0,1,2,--0,0,--0,0,1,2,4,5,--
- R13) 0,0,1,3,4,-->0,0,--0,0,1,--0,0,--0,0,--0,0,1,3,4,5,--
- R14) 0,1,2,3,4,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,--
- R15) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--
- R16) 0,0,1,1,2,3,-->0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,3,4,--0,0,1,1,2,3,5,--0,0,1,1,2,3,6,--
- R17) 0,0,1,1,2,4,-->0,0,1,1,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,2,4,5,--0,0,1,1,2,4,6,--
- R18) 0,0,1,1,2,5,-->0,0,--0,0,1,--0,0,1,1,2,5,4,--0,0,--0,0,1,1,2,5,6,--
- R19) 0,0,1,2,3,4,-->0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,2,3,4,5,--0,0,1,2,3,4,6,--
- R20) 0,0,1,2,3,5,-->0,0,--0,0,--0,0,--0,0,1,2,3,--0,0,--0,0,1,2,3,5,6,--
- R21) 0,0,1,2,4,5,-->0,0,--0,0,--0,0,1,2,--0,0,--0,0,--0,0,1,2,4,5,6,--
- R22) 0,0,1,3,4,5,-->0,0,--0,0,1,--0,0,--0,0,--0,0,--0,0,1,3,4,5,6,--
- R23) 0,1,2,3,4,5,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,--
- R24) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--
- R25) 0,0,1,1,2,3,4,-->0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,3,4,5,--0,0,1,1,2,3,4,6,--0,0,1,1,2,3,4,7,--
- R26) 0,0,1,1,2,3,5,-->0,0,1,1,--0,0,1,1,--0,0,1,1,2,3,--0,0,1,1,--0,0,1,1,2,3,5,6,--0,0,1,1,2,3,5,7,--
- R27) 0,0,1,1,2,3,6,-->0,0,--0,0,--0,0,1,2,--0,0,1,1,2,3,6,5,--0,0,--0,0,1,1,2,3,6,7,--
- R28)

0,0,1,1,2,4,5,-->0,0,1,1,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,--0,0,1,1,2,4,5,6,--0,0,1,  
 1,2,4,5,7,--  
 R29) 0,0,1,1,2,4,6,-->0,0,--0,0,1,--0,0,--0,0,1,1,2,4,--0,0,--0,0,1,1,2,4,6,7,--  
 R30) 0,0,1,1,2,5,4,-->0,0,1,1,--0,0,1,1,2,--0,0,1,1,2,4,--0,0,1,1,2,5,--  
 R31) 0,0,1,1,2,5,6,-->0,0,--0,0,1,--0,0,1,1,2,5,4,--0,0,--0,0,--0,0,1,1,2,5,6,7,--  
 R32)  
 0,0,1,2,3,4,5,-->0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,2,3,4,5,6,  
 --0,0,1,2,3,4,5,7,--  
 R33)  
 0,0,1,2,3,4,6,-->0,0,--0,0,--0,0,--0,0,--0,0,1,2,3,4,--0,0,--0,0,1,2,3,4,6,7,--  
 R34) 0,0,1,2,3,5,6,-->0,0,--0,0,--0,0,--0,0,1,2,3,--0,0,--0,0,--0,0,1,2,3,5,6,7,--  
 R35) 0,0,1,2,4,5,6,-->0,0,--0,0,--0,0,1,2,--0,0,--0,0,--0,0,--0,0,1,2,4,5,6,7,--  
 R36) 0,0,1,3,4,5,6,-->0,0,--0,0,1,--0,0,--0,0,--0,0,--0,0,--0,0,1,3,4,5,6,7,--  
 R37) 0,1,2,3,4,5,6,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,1,2,3,4,5,6,7,--  
 R38)  
 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,  
 2,2,3,6,--0,0,1,1,2,2,3,7,--  
 R39)  
 0,0,1,1,2,2,3,4,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,5,--0,0,1,1,  
 2,2,3,4,6,--0,0,1,1,2,2,3,4,7,--0,0,1,1,2,2,3,4,8,--  
 R40)  
 0,0,1,1,2,2,3,5,-->0,0,1,1,2,2,--0,0,1,1,2,2,3,--0,0,1,1,2,2,--0,0,1,1,2,2,3,5,6,--  
 0,0,1,1,2,2,3,5,7,--0,0,1,1,2,2,3,5,8,--  
 R41)  
 0,0,1,1,2,2,3,6,-->0,0,1,1,--0,0,1,1,2,--0,0,1,1,2,2,3,6,5,--0,0,1,1,--0,0,1,1,2,2,  
 3,6,7,--0,0,1,1,2,2,3,6,8,--  
 R42)  
 0,0,1,1,2,2,3,7,-->0,0,--0,0,1,--0,0,1,1,2,5,4,--0,0,1,1,2,2,3,7,6,--0,0,--0,0,1,1,  
 2,2,3,7,8,--  
 R43)  
 0,0,1,1,2,3,4,5,-->0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,  
 2,3,4,5,6,--0,0,1,1,2,3,4,5,7,--0,0,1,1,2,3,4,5,8,--  
 R44)  
 0,0,1,1,2,3,4,6,-->0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,2,3,4,--0,0,1,1,--0,0,1,1,  
 2,3,4,6,7,--0,0,1,1,2,3,4,6,8,--  
 R45)  
 0,0,1,1,2,3,4,7,-->0,0,--0,0,--0,0,--0,0,1,2,3,--0,0,1,1,2,3,4,7,6,--0,0,--0,0,1,1,  
 2,3,4,7,8,--  
 R46)  
 0,0,1,1,2,3,5,6,-->0,0,1,1,--0,0,1,1,--0,0,1,1,2,3,--0,0,1,1,--0,0,1,1,--0,0,1,1,2,  
 3,5,6,7,--0,0,1,1,2,3,5,6,8,--  
 R47)  
 0,0,1,1,2,3,5,7,-->0,0,--0,0,--0,0,1,2,--0,0,--0,0,1,1,2,3,5,--0,0,--0,0,1,1,2,3,5,  
 7,8,--  
 R48)  
 0,0,1,1,2,3,6,5,-->0,0,1,1,--0,0,1,1,--0,0,1,1,2,3,--0,0,1,1,2,3,5,--0,0,1,1,2,3,6,  
 --  
 R49)  
 0,0,1,1,2,3,6,7,-->0,0,--0,0,--0,0,1,2,--0,0,1,1,2,3,6,5,--0,0,--0,0,--0,0,1,1,2,3,  
 6,7,8,--

R50)

0,0,1,1,2,4,5,6,-->0,0,1,1,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,2,4,  
5,6,7,--0,0,1,1,2,4,5,6,8,--

R51)

0,0,1,1,2,4,5,7,-->0,0,--0,0,1,--0,0,--0,0,--0,0,1,1,2,4,5,--0,0,--0,0,1,1,2,4,5,7,  
8,--

R52)

0,0,1,1,2,4,6,7,-->0,0,--0,0,1,--0,0,--0,0,1,1,2,4,--0,0,--0,0,--0,0,1,1,2,4,6,7,8,  
--

R53)

0,0,1,1,2,5,6,7,-->0,0,--0,0,1,--0,0,1,1,2,5,4,--0,0,--0,0,--0,0,--0,0,1,1,2,5,6,7,  
8,--

R54)

0,0,1,2,3,4,5,6,-->0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,  
1,2,3,4,5,6,7,--0,0,1,2,3,4,5,6,8,--

R55)

0,0,1,2,3,4,5,7,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,1,2,3,4,5,--0,0,--0,0,1,2,3,4,  
5,7,8,--

R56)

0,0,1,2,3,4,6,7,-->0,0,--0,0,--0,0,--0,0,--0,0,1,2,3,4,--0,0,--0,0,--0,0,1,2,3,4,6,  
7,8,--

R57)

0,0,1,2,3,5,6,7,-->0,0,--0,0,--0,0,--0,0,1,2,3,--0,0,--0,0,--0,0,--0,0,1,2,3,5,6,7,  
8,--

R58)

0,0,1,2,4,5,6,7,-->0,0,--0,0,--0,0,1,2,--0,0,--0,0,--0,0,--0,0,--0,0,1,2,4,5,6,7,8,  
--

R59)

0,0,1,3,4,5,6,7,-->0,0,--0,0,1,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,1,3,4,5,6,7,8,--

R60)

0,1,2,3,4,5,6,7,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,1,2,3,4,5,6,7,  
8,--

R61)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,--0,0,1,1,2,2,3,3,4,  
6,--0,0,1,1,2,2,3,3,4,7,--0,0,1,1,2,2,3,3,4,8,--0,0,1,1,2,2,3,3,4,9,--

R62)

0,0,1,1,2,2,3,4,5,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,--0,0,1,1,  
2,2,3,4,5,6,--0,0,1,1,2,2,3,4,5,7,--0,0,1,1,2,2,3,4,5,8,--0,0,1,1,2,2,3,4,5,9,--

R63)

0,0,1,1,2,2,3,4,6,-->0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,--0,  
0,1,1,2,2,3,4,6,7,--0,0,1,1,2,2,3,4,6,8,--0,0,1,1,2,2,3,4,6,9,--

R64)

0,0,1,1,2,2,3,4,7,-->0,0,1,1,--0,0,1,1,--0,0,1,1,2,3,--0,0,1,1,2,2,3,4,7,6,--0,0,1,  
1,--0,0,1,1,2,2,3,4,7,8,--0,0,1,1,2,2,3,4,7,9,--

R65)

0,0,1,1,2,2,3,4,8,-->0,0,--0,0,--0,0,1,2,--0,0,1,1,2,3,6,5,--0,0,1,1,2,2,3,4,8,7,--  
0,0,--0,0,1,1,2,2,3,4,8,9,--

R66)

0,0,1,1,2,2,3,5,6,-->0,0,1,1,2,2,--0,0,1,1,2,2,3,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,  
1,1,2,2,3,5,6,7,--0,0,1,1,2,2,3,5,6,8,--0,0,1,1,2,2,3,5,6,9,--

R67)

0,0,1,1,2,2,3,5,7,-->0,0,1,1,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,2,2,3,5,--0,0,1,1,--0,0,1,1,2,2,3,5,7,8,--0,0,1,1,2,2,3,5,7,9,--

R68)

0,0,1,1,2,2,3,5,8,-->0,0,--0,0,1,--0,0,--0,0,1,1,2,4,--0,0,1,1,2,2,3,5,8,7,--0,0,--0,0,1,1,2,2,3,5,8,9,--

R69)

0,0,1,1,2,2,3,6,5,-->0,0,1,1,2,2,--0,0,1,1,2,2,3,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--

R70)

0,0,1,1,2,2,3,6,7,-->0,0,1,1,--0,0,1,1,2,--0,0,1,1,2,2,3,6,5,--0,0,1,1,--0,0,1,1,--0,0,1,1,2,2,3,6,7,8,--0,0,1,1,2,2,3,6,7,9,--

R71)

0,0,1,1,2,2,3,6,8,-->0,0,--0,0,1,--0,0,1,1,2,5,4,--0,0,--0,0,1,1,2,2,3,6,--0,0,--0,0,1,1,2,2,3,6,8,9,--

R72)

0,0,1,1,2,2,3,7,6,-->0,0,1,1,--0,0,1,1,2,--0,0,1,1,2,2,3,6,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--

R73)

0,0,1,1,2,2,3,7,8,-->0,0,--0,0,1,--0,0,1,1,2,5,4,--0,0,1,1,2,2,3,7,6,--0,0,--0,0,--0,0,1,1,2,2,3,7,8,9,--

R74)

0,0,1,1,2,3,4,5,6,-->0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,3,4,5,6,7,--0,0,1,1,2,3,4,5,6,8,--0,0,1,1,2,3,4,5,6,9,--

R75)

0,0,1,1,2,3,4,5,7,-->0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,2,3,4,5,--0,0,1,1,--0,0,1,1,2,3,4,5,7,8,--0,0,1,1,2,3,4,5,7,9,--

R76)

0,0,1,1,2,3,4,5,8,-->0,0,--0,0,--0,0,--0,0,--0,0,1,2,3,4,--0,0,1,1,2,3,4,5,8,7,--0,0,--0,0,1,1,2,3,4,5,8,9,--

R77)

0,0,1,1,2,3,4,6,7,-->0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,2,3,4,--0,0,1,1,--0,0,1,1,--0,0,1,1,2,3,4,6,7,8,--0,0,1,1,2,3,4,6,7,9,--

R78)

0,0,1,1,2,3,4,6,8,-->0,0,--0,0,--0,0,--0,0,1,2,3,--0,0,--0,0,1,1,2,3,4,6,--0,0,--0,0,1,1,2,3,4,6,8,9,--

R79)

0,0,1,1,2,3,4,7,6,-->0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,2,3,4,--0,0,1,1,2,3,4,6,--0,0,1,1,2,3,4,7,--

R80)

0,0,1,1,2,3,4,7,8,-->0,0,--0,0,--0,0,--0,0,1,2,3,--0,0,1,1,2,3,4,7,6,--0,0,--0,0,--0,0,1,1,2,3,4,7,8,9,--

R81)

0,0,1,1,2,3,5,6,7,-->0,0,1,1,--0,0,1,1,--0,0,1,1,2,3,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,2,3,5,6,7,8,--0,0,1,1,2,3,5,6,7,9,--

R82)

0,0,1,1,2,3,5,6,8,-->0,0,--0,0,--0,0,1,2,--0,0,--0,0,--0,0,1,1,2,3,5,6,--0,0,--0,0,1,1,2,3,5,6,8,9,--

R83)

0,0,1,1,2,3,5,7,8,-->0,0,--0,0,--0,0,1,2,--0,0,--0,0,1,1,2,3,5,--0,0,--0,0,--0,0,1,1,2,3,5,7,8,--

1,2,3,5,7,8,9,--  
 R84)  
 0,0,1,1,2,3,6,7,8,-->0,0,--0,0,--0,0,1,2,--0,0,1,1,2,3,6,5,--0,0,--0,0,--0,0,--0,0,  
 1,1,2,3,6,7,8,9,--  
 R85)  
 0,0,1,1,2,4,5,6,7,-->0,0,1,1,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--  
 0,0,1,1,2,4,5,6,7,8,--0,0,1,1,2,4,5,6,7,9,--  
 R86)  
 0,0,1,1,2,4,5,6,8,-->0,0,--0,0,1,--0,0,--0,0,--0,0,--0,0,1,1,2,4,5,6,--0,0,--0,0,1,  
 1,2,4,5,6,8,9,--  
 R87)  
 0,0,1,1,2,4,5,7,8,-->0,0,--0,0,1,--0,0,--0,0,--0,0,1,1,2,4,5,--0,0,--0,0,--0,0,1,1,  
 2,4,5,7,8,9,--  
 R88)  
 0,0,1,1,2,4,6,7,8,-->0,0,--0,0,1,--0,0,--0,0,1,1,2,4,--0,0,--0,0,--0,0,--0,0,1,1,2,  
 4,6,7,8,9,--  
 R89)  
 0,0,1,1,2,5,6,7,8,-->0,0,--0,0,1,--0,0,1,1,2,5,4,--0,0,--0,0,--0,0,--0,0,--0,0,1,1,  
 2,5,6,7,8,9,--  
 R90)  
 0,0,1,2,3,4,5,6,7,-->0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,  
 0,1,1,--0,0,1,2,3,4,5,6,7,8,--0,0,1,2,3,4,5,6,7,9,--  
 R91)  
 0,0,1,2,3,4,5,6,8,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,1,2,3,4,5,6,--0,0,--0,  
 0,1,2,3,4,5,6,8,9,--  
 R92)  
 0,0,1,2,3,4,5,7,8,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,1,2,3,4,5,--0,0,--0,0,--0,0,  
 1,2,3,4,5,7,8,9,--  
 R93)  
 0,0,1,2,3,4,6,7,8,-->0,0,--0,0,--0,0,--0,0,--0,0,1,2,3,4,--0,0,--0,0,--0,0,--0,0,1,  
 2,3,4,6,7,8,9,--  
 R94)  
 0,0,1,2,3,5,6,7,8,-->0,0,--0,0,--0,0,--0,0,1,2,3,--0,0,--0,0,--0,0,--0,0,--0,0,1,2,  
 3,5,6,7,8,9,--  
 R95)  
 0,0,1,2,4,5,6,7,8,-->0,0,--0,0,--0,0,1,2,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,1,2,4,  
 5,6,7,8,9,--  
 R96)  
 0,0,1,3,4,5,6,7,8,-->0,0,--0,0,1,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,1,3,4,5,  
 6,7,8,9,--  
 R97)  
 0,1,2,3,4,5,6,7,8,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,1,2,3,  
 4,5,6,7,8,9,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,1, : 0,1,2, :  
 LEN=4) 0,0,1,1, : 0,0,1,2, : 0,0,1,3, : 0,1,2,3, :  
 LEN=5) 0,0,1,1,2, : 0,0,1,2,3, : 0,0,1,2,4, : 0,0,1,3,4, : 0,1,2,3,4, :  
 LEN=6) 0,0,1,1,2,2, : 0,0,1,1,2,3, : 0,0,1,1,2,4, : 0,0,1,1,2,5, : 0,0,1,2,3,4, :



0,0,1,2,3,5,: 0,0,1,2,4,5,: 0,0,1,3,4,5,: 0,1,2,3,4,5,:  
 LEN=7) 0,0,1,1,2,2,3,: 0,0,1,1,2,3,4,: 0,0,1,1,2,3,5,: 0,0,1,1,2,3,6,:  
 0,0,1,1,2,4,5,: 0,0,1,1,2,4,6,: 0,0,1,1,2,5,4,: 0,0,1,1,2,5,6,: 0,0,1,2,3,4,5,:  
 0,0,1,2,3,4,6,: 0,0,1,2,3,5,6,: 0,0,1,2,4,5,6,: 0,0,1,3,4,5,6,: 0,1,2,3,4,5,6,:  
 LEN=8) 0,0,1,1,2,2,3,3,: 0,0,1,1,2,2,3,4,: 0,0,1,1,2,2,3,5,: 0,0,1,1,2,2,3,6,:  
 0,0,1,1,2,2,3,7,: 0,0,1,1,2,3,4,5,: 0,0,1,1,2,3,4,6,: 0,0,1,1,2,3,4,7,:  
 0,0,1,1,2,3,5,6,: 0,0,1,1,2,3,5,7,: 0,0,1,1,2,3,6,5,: 0,0,1,1,2,3,6,7,:  
 0,0,1,1,2,4,5,6,: 0,0,1,1,2,4,5,7,: 0,0,1,1,2,4,6,7,: 0,0,1,1,2,5,6,7,:  
 0,0,1,2,3,4,5,6,: 0,0,1,2,3,4,5,7,: 0,0,1,2,3,4,6,7,: 0,0,1,2,3,5,6,7,:  
 0,0,1,2,4,5,6,7,: 0,0,1,3,4,5,6,7,: 0,1,2,3,4,5,6,7,:  
 LEN=9) 0,0,1,1,2,2,3,3,4,: 0,0,1,1,2,2,3,4,5,: 0,0,1,1,2,2,3,4,6,:  
 0,0,1,1,2,2,3,4,7,: 0,0,1,1,2,2,3,4,8,: 0,0,1,1,2,2,3,5,6,: 0,0,1,1,2,2,3,5,7,:  
 0,0,1,1,2,2,3,5,8,: 0,0,1,1,2,2,3,6,5,: 0,0,1,1,2,2,3,6,7,: 0,0,1,1,2,2,3,6,8,:  
 0,0,1,1,2,2,3,7,6,: 0,0,1,1,2,2,3,7,8,: 0,0,1,1,2,3,4,5,6,: 0,0,1,1,2,3,4,5,7,:  
 0,0,1,1,2,3,4,5,8,: 0,0,1,1,2,3,4,6,7,: 0,0,1,1,2,3,4,6,8,: 0,0,1,1,2,3,4,7,6,:  
 0,0,1,1,2,3,4,7,8,: 0,0,1,1,2,3,5,6,7,: 0,0,1,1,2,3,5,6,8,: 0,0,1,1,2,3,5,7,8,:  
 0,0,1,1,2,3,6,7,8,: 0,0,1,1,2,4,5,6,7,: 0,0,1,1,2,4,5,6,8,: 0,0,1,1,2,4,5,7,8,:  
 0,0,1,1,2,4,6,7,8,: 0,0,1,1,2,5,6,7,8,: 0,0,1,2,3,4,5,6,7,: 0,0,1,2,3,4,5,6,8,:  
 0,0,1,2,3,4,5,7,8,: 0,0,1,2,3,4,6,7,8,: 0,0,1,2,3,5,6,7,8,: 0,0,1,2,4,5,6,7,8,:  
 0,0,1,3,4,5,6,7,8,: 0,1,2,3,4,5,6,7,8,:  
 LEN=10) 0,0,1,1,2,2,3,3,4,4,: 0,0,1,1,2,2,3,3,4,5,: 0,0,1,1,2,2,3,3,4,6,:  
 0,0,1,1,2,2,3,3,4,7,: 0,0,1,1,2,2,3,3,4,8,: 0,0,1,1,2,2,3,3,4,9,:  
 0,0,1,1,2,2,3,4,5,6,: 0,0,1,1,2,2,3,4,5,7,: 0,0,1,1,2,2,3,4,5,8,:  
 0,0,1,1,2,2,3,4,5,9,: 0,0,1,1,2,2,3,4,6,7,: 0,0,1,1,2,2,3,4,6,8,:  
 0,0,1,1,2,2,3,4,6,9,: 0,0,1,1,2,2,3,4,7,6,: 0,0,1,1,2,2,3,4,7,8,:  
 0,0,1,1,2,2,3,4,7,9,: 0,0,1,1,2,2,3,4,8,7,: 0,0,1,1,2,2,3,4,8,9,:  
 0,0,1,1,2,2,3,5,6,7,: 0,0,1,1,2,2,3,5,6,8,: 0,0,1,1,2,2,3,5,6,9,:  
 0,0,1,1,2,2,3,5,7,8,: 0,0,1,1,2,2,3,5,7,9,: 0,0,1,1,2,2,3,5,8,7,:  
 0,0,1,1,2,2,3,5,8,9,: 0,0,1,1,2,2,3,6,7,8,: 0,0,1,1,2,2,3,6,7,9,:  
 0,0,1,1,2,2,3,6,8,9,: 0,0,1,1,2,2,3,7,8,9,: 0,0,1,1,2,3,4,5,6,7,:  
 0,0,1,1,2,3,4,5,6,8,: 0,0,1,1,2,3,4,5,6,9,: 0,0,1,1,2,3,4,5,7,8,:  
 0,0,1,1,2,3,4,5,7,9,: 0,0,1,1,2,3,4,5,8,7,: 0,0,1,1,2,3,4,5,8,9,:  
 0,0,1,1,2,3,4,6,7,8,: 0,0,1,1,2,3,4,6,7,9,: 0,0,1,1,2,3,4,6,8,9,:  
 0,0,1,1,2,3,4,7,8,9,: 0,0,1,1,2,3,5,6,7,8,: 0,0,1,1,2,3,5,6,7,9,:  
 0,0,1,1,2,3,5,6,8,9,: 0,0,1,1,2,3,5,7,8,9,: 0,0,1,1,2,3,6,7,8,9,:  
 0,0,1,1,2,4,5,6,7,8,: 0,0,1,1,2,4,5,6,7,9,: 0,0,1,1,2,4,5,6,8,9,:  
 0,0,1,1,2,4,5,7,8,9,: 0,0,1,1,2,4,6,7,8,9,: 0,0,1,1,2,5,6,7,8,9,:  
 0,0,1,2,3,4,5,6,7,8,: 0,0,1,2,3,4,5,6,7,9,: 0,0,1,2,3,4,5,6,8,9,:  
 0,0,1,2,3,4,5,7,8,9,: 0,0,1,2,3,4,6,7,8,9,: 0,0,1,2,3,5,6,7,8,9,:  
 0,0,1,2,4,5,6,7,8,9,: 0,0,1,3,4,5,6,7,8,9,: 0,1,2,3,4,5,6,7,8,9,:  
 Number new nodes in level n is given by : 1,2,2,4,5,9,14,23,37,60,

-----Class

467-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][100][101][110][210]]$

-----

--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,1,--$

R2)  $0,0,-->0,0,1,--0,1,--$

R3) 0,1,-->0,0,--0,0,--0,1,2,--  
R4) 0,0,1,-->0,0,1,1,--0,0,1,2,--0,0,1,3,--  
R5) 0,1,2,-->0,0,--0,0,--0,0,--0,1,2,3,--  
R6) 0,0,1,1,-->0,0,1,1,2,--0,0,1,2,--0,0,1,3,--  
R7) 0,0,1,2,-->0,0,1,1,--0,0,1,1,--0,0,1,2,3,--0,0,1,2,4,--  
R8) 0,0,1,3,-->0,0,1,--0,0,--0,0,--0,0,1,3,4,--  
R9) 0,1,2,3,-->0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,--  
R10) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--  
R11) 0,0,1,2,3,-->0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,2,3,4,--0,0,1,2,3,5,--  
R12) 0,0,1,2,4,-->0,0,1,--0,0,1,--0,0,--0,0,--0,0,1,2,4,5,--  
R13) 0,0,1,3,4,-->0,0,1,--0,0,--0,0,--0,0,--0,0,1,3,4,5,--  
R14) 0,1,2,3,4,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,--  
R15) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--  
R16)  
0,0,1,1,2,3,-->0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,3,4,--0,0,1,1,2,3,5,--0,0,1,1,  
2,3,6,--  
R17)  
0,0,1,1,2,4,-->0,0,1,1,2,--0,0,1,1,--0,0,1,1,--0,0,1,1,2,4,5,--0,0,1,1,2,4,6,--  
R18) 0,0,1,1,2,5,-->0,0,1,1,2,5,2,--0,0,1,--0,0,--0,0,--0,0,1,1,2,5,6,--  
R19)  
0,0,1,2,3,4,-->0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,2,3,4,5,--0,0,1,2,3,4,  
6,--  
R20) 0,0,1,2,3,5,-->0,0,1,--0,0,1,--0,0,1,--0,0,--0,0,--0,0,1,2,3,5,6,--  
R21) 0,0,1,2,4,5,-->0,0,1,--0,0,1,--0,0,--0,0,--0,0,--0,0,1,2,4,5,6,--  
R22) 0,0,1,3,4,5,-->0,0,1,--0,0,--0,0,--0,0,--0,0,--0,0,1,3,4,5,6,--  
R23) 0,1,2,3,4,5,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,--  
R24)  
0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,  
3,6,--0,0,1,1,2,2,3,7,--  
R25)  
0,0,1,1,2,3,4,-->0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,3,4,5,--0,0,1,  
1,2,3,4,6,--0,0,1,1,2,3,4,7,--  
R26)  
0,0,1,1,2,3,5,-->0,0,1,1,2,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,--0,0,1,1,2,3,5,6,--0,0,  
1,1,2,3,5,7,--  
R27)  
0,0,1,1,2,3,6,-->0,0,1,1,2,5,2,--0,0,1,1,2,5,2,--0,0,1,--0,0,--0,0,--0,0,1,1,2,3,6,  
7,--  
R28)  
0,0,1,1,2,4,5,-->0,0,1,1,2,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,2,4,5,6,--0,0,1,  
1,2,4,5,7,--  
R29)  
0,0,1,1,2,4,6,-->0,0,1,1,2,5,2,--0,0,1,--0,0,1,--0,0,--0,0,--0,0,1,1,2,4,6,7,--  
R30) 0,0,1,1,2,5,2,-->0,0,1,1,2,--0,0,1,1,--0,0,1,1,2,4,--0,0,1,1,2,5,--  
R31) 0,0,1,1,2,5,6,-->0,0,1,1,2,5,2,--0,0,1,--0,0,--0,0,--0,0,--0,0,1,1,2,5,6,7,--  
R32)  
0,0,1,2,3,4,5,-->0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,2,3,4,5,6,  
--0,0,1,2,3,4,5,7,--  
R33)  
0,0,1,2,3,4,6,-->0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,--0,0,--0,0,1,2,3,4,6,7,--

R34) 0,0,1,2,3,5,6,-->0,0,1,--0,0,1,--0,0,1,--0,0,--0,0,--0,0,--0,0,1,2,3,5,6,7,--  
R35) 0,0,1,2,4,5,6,-->0,0,1,--0,0,1,--0,0,--0,0,--0,0,--0,0,--0,0,1,2,4,5,6,7,--  
R36) 0,0,1,3,4,5,6,-->0,0,1,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,1,3,4,5,6,7,--  
R37) 0,1,2,3,4,5,6,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,1,2,3,4,5,6,7,--  
R38)  
0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,  
2,2,3,6,--0,0,1,1,2,2,3,7,--  
R39)  
0,0,1,1,2,2,3,4,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,5,--0,0,1,1,  
2,2,3,4,6,--0,0,1,1,2,2,3,4,7,--0,0,1,1,2,2,3,4,8,--  
R40)  
0,0,1,1,2,2,3,5,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,3,5,6,--  
0,0,1,1,2,2,3,5,7,--0,0,1,1,2,2,3,5,8,--  
R41)  
0,0,1,1,2,2,3,6,-->0,0,1,1,2,2,3,6,3,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,--0,0,1,1,2,2,  
3,6,7,--0,0,1,1,2,2,3,6,8,--  
R42)  
0,0,1,1,2,2,3,7,-->0,0,1,1,2,2,3,7,3,--0,0,1,1,2,5,2,--0,0,1,--0,0,--0,0,--0,0,1,1,  
2,2,3,7,8,--  
R43)  
0,0,1,1,2,3,4,5,-->0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,  
2,3,4,5,6,--0,0,1,1,2,3,4,5,7,--0,0,1,1,2,3,4,5,8,--  
R44)  
0,0,1,1,2,3,4,6,-->0,0,1,1,2,--0,0,1,1,2,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,--0,0,1,1,  
2,3,4,6,7,--0,0,1,1,2,3,4,6,8,--  
R45)  
0,0,1,1,2,3,4,7,-->0,0,1,1,2,5,2,--0,0,1,1,2,5,2,--0,0,1,1,2,5,2,--0,0,1,--0,0,--0,  
0,--0,0,1,1,2,3,4,7,8,--  
R46)  
0,0,1,1,2,3,5,6,-->0,0,1,1,2,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,2,  
3,5,6,7,--0,0,1,1,2,3,5,6,8,--  
R47)  
0,0,1,1,2,3,5,7,-->0,0,1,1,2,5,2,--0,0,1,1,2,5,2,--0,0,1,--0,0,1,--0,0,--0,0,--0,0,  
1,1,2,3,5,7,8,--  
R48)  
0,0,1,1,2,3,6,7,-->0,0,1,1,2,5,2,--0,0,1,1,2,5,2,--0,0,1,--0,0,--0,0,--0,0,--0,0,1,  
1,2,3,6,7,8,--  
R49)  
0,0,1,1,2,4,5,6,-->0,0,1,1,2,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,2,4,  
5,6,7,--0,0,1,1,2,4,5,6,8,--  
R50)  
0,0,1,1,2,4,5,7,-->0,0,1,1,2,5,2,--0,0,1,--0,0,1,--0,0,1,--0,0,--0,0,--0,0,1,1,2,4,  
5,7,8,--  
R51)  
0,0,1,1,2,4,6,7,-->0,0,1,1,2,5,2,--0,0,1,--0,0,1,--0,0,--0,0,--0,0,--0,0,1,1,2,4,6,  
7,8,--  
R52)  
0,0,1,1,2,5,6,7,-->0,0,1,1,2,5,2,--0,0,1,--0,0,--0,0,--0,0,--0,0,--0,0,1,1,2,5,6,7,  
8,--  
R53)

0,0,1,2,3,4,5,6,-->0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,  
1,2,3,4,5,6,7,--0,0,1,2,3,4,5,6,8,--

R54)

0,0,1,2,3,4,5,7,-->0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,--0,0,--0,0,1,2,3,4,  
5,7,8,--

R55)

0,0,1,2,3,4,6,7,-->0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,--0,0,--0,0,--0,0,1,2,3,4,6,  
7,8,--

R56)

0,0,1,2,3,5,6,7,-->0,0,1,--0,0,1,--0,0,1,--0,0,--0,0,--0,0,--0,0,--0,0,1,2,3,5,6,7,  
8,--

R57)

0,0,1,2,4,5,6,7,-->0,0,1,--0,0,1,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,1,2,4,5,6,7,8,  
--

R58)

0,0,1,3,4,5,6,7,-->0,0,1,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,1,3,4,5,6,7,8,--

R59)

0,1,2,3,4,5,6,7,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,1,2,3,4,5,6,7,  
8,--

R60)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,--0,0,1,1,2,2,3,3,4,  
6,--0,0,1,1,2,2,3,3,4,7,--0,0,1,1,2,2,3,3,4,8,--0,0,1,1,2,2,3,3,4,9,--

R61)

0,0,1,1,2,2,3,4,5,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,--0,0,1,1,  
2,2,3,4,5,6,--0,0,1,1,2,2,3,4,5,7,--0,0,1,1,2,2,3,4,5,8,--0,0,1,1,2,2,3,4,5,9,--

R62)

0,0,1,1,2,2,3,4,6,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,  
0,1,1,2,2,3,4,6,7,--0,0,1,1,2,2,3,4,6,8,--0,0,1,1,2,2,3,4,6,9,--

R63)

0,0,1,1,2,2,3,4,7,-->0,0,1,1,2,2,3,6,3,--0,0,1,1,2,2,3,6,3,--0,0,1,1,2,--0,0,1,1,--  
0,0,1,1,--0,0,1,1,2,2,3,4,7,8,--0,0,1,1,2,2,3,4,7,9,--

R64)

0,0,1,1,2,2,3,4,8,-->0,0,1,1,2,2,3,7,3,--0,0,1,1,2,2,3,7,3,--0,0,1,1,2,5,2,--0,0,1,  
--0,0,--0,0,--0,0,1,1,2,2,3,4,8,9,--

R65)

0,0,1,1,2,2,3,5,6,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,  
1,1,2,2,3,5,6,7,--0,0,1,1,2,2,3,5,6,8,--0,0,1,1,2,2,3,5,6,9,--

R66)

0,0,1,1,2,2,3,5,7,-->0,0,1,1,2,2,3,6,3,--0,0,1,1,2,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,  
--0,0,1,1,2,2,3,5,7,8,--0,0,1,1,2,2,3,5,7,9,--

R67)

0,0,1,1,2,2,3,5,8,-->0,0,1,1,2,2,3,7,3,--0,0,1,1,2,5,2,--0,0,1,1,2,5,2,--0,0,1,--0,  
0,--0,0,--0,0,1,1,2,2,3,5,8,9,--

R68)

0,0,1,1,2,2,3,6,3,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,3,  
6,--0,0,1,1,2,2,3,7,--

R69)

0,0,1,1,2,2,3,6,7,-->0,0,1,1,2,2,3,6,3,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,--0,0,1,1,--  
0,0,1,1,2,2,3,6,7,8,--0,0,1,1,2,2,3,6,7,9,--

R70)

0,0,1,1,2,2,3,6,8,-->0,0,1,1,2,2,3,7,3,--0,0,1,1,2,5,2,--0,0,1,--0,0,1,--0,0,--0,0,  
--0,0,1,1,2,2,3,6,8,9,--

R71)

0,0,1,1,2,2,3,7,3,-->0,0,1,1,2,2,3,6,3,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,2,2,3,6,--0,  
0,1,1,2,2,3,7,--

R72)

0,0,1,1,2,2,3,7,8,-->0,0,1,1,2,2,3,7,3,--0,0,1,1,2,5,2,--0,0,1,--0,0,--0,0,--0,0,--  
0,0,1,1,2,2,3,7,8,9,--

R73)

0,0,1,1,2,3,4,5,6,-->0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,  
1,2,2,--0,0,1,1,2,3,4,5,6,7,--0,0,1,1,2,3,4,5,6,8,--0,0,1,1,2,3,4,5,6,9,--

R74)

0,0,1,1,2,3,4,5,7,-->0,0,1,1,2,--0,0,1,1,2,--0,0,1,1,2,--0,0,1,1,2,--0,0,1,1,--0,0,  
1,1,--0,0,1,1,2,3,4,5,7,8,--0,0,1,1,2,3,4,5,7,9,--

R75)

0,0,1,1,2,3,4,5,8,-->0,0,1,1,2,5,2,--0,0,1,1,2,5,2,--0,0,1,1,2,5,2,--0,0,1,1,2,5,2,  
--0,0,1,--0,0,--0,0,--0,0,1,1,2,3,4,5,8,9,--

R76)

0,0,1,1,2,3,4,6,7,-->0,0,1,1,2,--0,0,1,1,2,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,--0,0,1,  
1,--0,0,1,1,2,3,4,6,7,8,--0,0,1,1,2,3,4,6,7,9,--

R77)

0,0,1,1,2,3,4,6,8,-->0,0,1,1,2,5,2,--0,0,1,1,2,5,2,--0,0,1,1,2,5,2,--0,0,1,--0,0,1,  
--0,0,--0,0,--0,0,1,1,2,3,4,6,8,9,--

R78)

0,0,1,1,2,3,4,7,8,-->0,0,1,1,2,5,2,--0,0,1,1,2,5,2,--0,0,1,1,2,5,2,--0,0,1,--0,0,--  
0,0,--0,0,--0,0,1,1,2,3,4,7,8,9,--

R79)

0,0,1,1,2,3,5,6,7,-->0,0,1,1,2,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,  
--0,0,1,1,2,3,5,6,7,8,--0,0,1,1,2,3,5,6,7,9,--

R80)

0,0,1,1,2,3,5,6,8,-->0,0,1,1,2,5,2,--0,0,1,1,2,5,2,--0,0,1,--0,0,1,--0,0,1,--0,0,--  
0,0,--0,0,1,1,2,3,5,6,8,9,--

R81)

0,0,1,1,2,3,5,7,8,-->0,0,1,1,2,5,2,--0,0,1,1,2,5,2,--0,0,1,--0,0,1,--0,0,--0,0,--0,  
0,--0,0,1,1,2,3,5,7,8,9,--

R82)

0,0,1,1,2,3,6,7,8,-->0,0,1,1,2,5,2,--0,0,1,1,2,5,2,--0,0,1,--0,0,--0,0,--0,0,--0,0,  
--0,0,1,1,2,3,6,7,8,9,--

R83)

0,0,1,1,2,4,5,6,7,-->0,0,1,1,2,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--  
0,0,1,1,2,4,5,6,7,8,--0,0,1,1,2,4,5,6,7,9,--

R84)

0,0,1,1,2,4,5,6,8,-->0,0,1,1,2,5,2,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,--0,0,--0,  
0,1,1,2,4,5,6,8,9,--

R85)

0,0,1,1,2,4,5,7,8,-->0,0,1,1,2,5,2,--0,0,1,--0,0,1,--0,0,1,--0,0,--0,0,--0,0,--0,0,  
1,1,2,4,5,7,8,9,--

R86)

0,0,1,1,2,4,6,7,8,-->0,0,1,1,2,5,2,--0,0,1,--0,0,1,--0,0,--0,0,--0,0,--0,0,--0,0,1,  
1,2,4,6,7,8,9,--

R87)

0,0,1,1,2,5,6,7,8,-->0,0,1,1,2,5,2,--0,0,1,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,1,1,  
2,5,6,7,8,9,--

R88)

0,0,1,2,3,4,5,6,7,-->0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,  
0,1,1,--0,0,1,2,3,4,5,6,7,8,--0,0,1,2,3,4,5,6,7,9,--

R89)

0,0,1,2,3,4,5,6,8,-->0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,--0,0,--0,  
0,1,2,3,4,5,6,8,9,--

R90)

0,0,1,2,3,4,5,7,8,-->0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,--0,0,--0,0,--0,0,  
1,2,3,4,5,7,8,9,--

R91)

0,0,1,2,3,4,6,7,8,-->0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,1,  
2,3,4,6,7,8,9,--

R92)

0,0,1,2,3,5,6,7,8,-->0,0,1,--0,0,1,--0,0,1,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,1,2,  
3,5,6,7,8,9,--

R93)

0,0,1,2,4,5,6,7,8,-->0,0,1,--0,0,1,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,1,2,4,  
5,6,7,8,9,--

R94)

0,0,1,3,4,5,6,7,8,-->0,0,1,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,1,3,4,5,  
6,7,8,9,--

R95)

0,1,2,3,4,5,6,7,8,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,1,2,3,  
4,5,6,7,8,9,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,1,: 0,1,2,:

LEN=4) 0,0,1,1,: 0,0,1,2,: 0,0,1,3,: 0,1,2,3,:

LEN=5) 0,0,1,1,2,: 0,0,1,2,3,: 0,0,1,2,4,: 0,0,1,3,4,: 0,1,2,3,4,:

LEN=6) 0,0,1,1,2,2,: 0,0,1,1,2,3,: 0,0,1,1,2,4,: 0,0,1,1,2,5,: 0,0,1,2,3,4,:

0,0,1,2,3,5,: 0,0,1,2,4,5,: 0,0,1,3,4,5,: 0,1,2,3,4,5,:

LEN=7) 0,0,1,1,2,2,3,: 0,0,1,1,2,3,4,: 0,0,1,1,2,3,5,: 0,0,1,1,2,3,6,:

0,0,1,1,2,4,5,: 0,0,1,1,2,4,6,: 0,0,1,1,2,5,2,: 0,0,1,1,2,5,6,: 0,0,1,2,3,4,5,:

0,0,1,2,3,4,6,: 0,0,1,2,3,5,6,: 0,0,1,2,4,5,6,: 0,0,1,3,4,5,6,: 0,1,2,3,4,5,6,:

LEN=8) 0,0,1,1,2,2,3,3,: 0,0,1,1,2,2,3,4,: 0,0,1,1,2,2,3,5,: 0,0,1,1,2,2,3,6,:

0,0,1,1,2,2,3,7,: 0,0,1,1,2,3,4,5,: 0,0,1,1,2,3,4,6,: 0,0,1,1,2,3,4,7,:

0,0,1,1,2,3,5,6,: 0,0,1,1,2,3,5,7,: 0,0,1,1,2,3,6,7,: 0,0,1,1,2,4,5,6,:

0,0,1,1,2,4,5,7,: 0,0,1,1,2,4,6,7,: 0,0,1,1,2,5,6,7,: 0,0,1,2,3,4,5,6,:

0,0,1,2,3,4,5,7,: 0,0,1,2,3,4,6,7,: 0,0,1,2,3,5,6,7,: 0,0,1,2,4,5,6,7,:

0,0,1,3,4,5,6,7,: 0,1,2,3,4,5,6,7,:

LEN=9) 0,0,1,1,2,2,3,3,4,: 0,0,1,1,2,2,3,4,5,: 0,0,1,1,2,2,3,4,6,:

0,0,1,1,2,2,3,4,7,: 0,0,1,1,2,2,3,4,8,: 0,0,1,1,2,2,3,5,6,: 0,0,1,1,2,2,3,5,7,:

0,0,1,1,2,2,3,5,8,: 0,0,1,1,2,2,3,6,3,: 0,0,1,1,2,2,3,6,7,: 0,0,1,1,2,2,3,6,8,:

0,0,1,1,2,2,3,7,3,: 0,0,1,1,2,2,3,7,8,: 0,0,1,1,2,3,4,5,6,: 0,0,1,1,2,3,4,5,7,:

0,0,1,1,2,3,4,5,8,: 0,0,1,1,2,3,4,6,7,: 0,0,1,1,2,3,4,6,8,: 0,0,1,1,2,3,4,7,8,:

0,0,1,1,2,3,5,6,7,: 0,0,1,1,2,3,5,6,8,: 0,0,1,1,2,3,5,7,8,: 0,0,1,1,2,3,6,7,8,:

0,0,1,1,2,4,5,6,7, : 0,0,1,1,2,4,5,6,8, : 0,0,1,1,2,4,5,7,8, : 0,0,1,1,2,4,6,7,8, :  
 0,0,1,1,2,5,6,7,8, : 0,0,1,2,3,4,5,6,7, : 0,0,1,2,3,4,5,6,8, : 0,0,1,2,3,4,5,7,8, :  
 0,0,1,2,3,4,6,7,8, : 0,0,1,2,3,5,6,7,8, : 0,0,1,2,4,5,6,7,8, : 0,0,1,3,4,5,6,7,8, :  
 0,1,2,3,4,5,6,7,8, :  
 LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,4,5, : 0,0,1,1,2,2,3,3,4,6, :  
 0,0,1,1,2,2,3,3,4,7, : 0,0,1,1,2,2,3,3,4,8, : 0,0,1,1,2,2,3,3,4,9, :  
 0,0,1,1,2,2,3,4,5,6, : 0,0,1,1,2,2,3,4,5,7, : 0,0,1,1,2,2,3,4,5,8, :  
 0,0,1,1,2,2,3,4,5,9, : 0,0,1,1,2,2,3,4,6,7, : 0,0,1,1,2,2,3,4,6,8, :  
 0,0,1,1,2,2,3,4,6,9, : 0,0,1,1,2,2,3,4,7,8, : 0,0,1,1,2,2,3,4,7,9, :  
 0,0,1,1,2,2,3,4,8,9, : 0,0,1,1,2,2,3,5,6,7, : 0,0,1,1,2,2,3,5,6,8, :  
 0,0,1,1,2,2,3,5,6,9, : 0,0,1,1,2,2,3,5,7,8, : 0,0,1,1,2,2,3,5,7,9, :  
 0,0,1,1,2,2,3,5,8,9, : 0,0,1,1,2,2,3,6,7,8, : 0,0,1,1,2,2,3,6,7,9, :  
 0,0,1,1,2,2,3,6,8,9, : 0,0,1,1,2,2,3,7,8,9, : 0,0,1,1,2,3,4,5,6,7, :  
 0,0,1,1,2,3,4,5,6,8, : 0,0,1,1,2,3,4,5,6,9, : 0,0,1,1,2,3,4,5,7,8, :  
 0,0,1,1,2,3,4,5,7,9, : 0,0,1,1,2,3,4,5,8,9, : 0,0,1,1,2,3,4,6,7,8, :  
 0,0,1,1,2,3,4,6,7,9, : 0,0,1,1,2,3,4,6,8,9, : 0,0,1,1,2,3,4,7,8,9, :  
 0,0,1,1,2,3,5,6,7,8, : 0,0,1,1,2,3,5,6,7,9, : 0,0,1,1,2,3,5,6,8,9, :  
 0,0,1,1,2,3,5,7,8,9, : 0,0,1,1,2,3,6,7,8,9, : 0,0,1,1,2,4,5,6,7,8, :  
 0,0,1,1,2,4,5,6,7,9, : 0,0,1,1,2,4,5,6,8,9, : 0,0,1,1,2,4,5,7,8,9, :  
 0,0,1,1,2,4,6,7,8,9, : 0,0,1,1,2,5,6,7,8,9, : 0,0,1,2,3,4,5,6,7,8, :  
 0,0,1,2,3,4,5,6,7,9, : 0,0,1,2,3,4,5,6,8,9, : 0,0,1,2,3,4,5,7,8,9, :  
 0,0,1,2,3,4,6,7,8,9, : 0,0,1,2,3,5,6,7,8,9, : 0,0,1,2,4,5,6,7,8,9, :  
 0,0,1,3,4,5,6,7,8,9, : 0,1,2,3,4,5,6,7,8,9, :

Number new nodes in level n is given by : 1,2,2,4,5,9,14,22,36,56,

-----Class

468-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][100][101][120][201]]$

-----

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,1,--
- R3) 0,1,-->0,0,--0,1,1,--0,1,--
- R4) 0,0,1,-->0,0,1,1,--0,0,1,2,--0,0,1,3,--
- R5) 0,1,1,-->0,0,1,1,--0,0,1,--0,1,--
- R6) 0,0,1,1,-->0,0,1,1,2,--0,0,1,2,--0,0,1,3,--
- R7) 0,0,1,2,-->0,0,1,1,--0,0,1,2,2,--0,0,1,2,--0,0,1,3,--
- R8) 0,0,1,3,-->0,0,--0,1,1,--0,0,1,3,3,--0,1,--
- R9) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--
- R10) 0,0,1,2,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,2,--0,0,1,3,--
- R11) 0,0,1,3,3,-->0,0,1,1,--0,0,1,2,2,--0,0,1,--0,1,--
- R12) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--
- R13) 0,0,1,1,2,3,-->0,0,1,1,2,2,--0,0,1,1,2,3,3,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--
- R14) 0,0,1,1,2,4,-->0,0,1,1,--0,0,1,2,2,--0,0,1,1,2,4,4,--0,0,1,2,--0,0,1,3,--
- R15) 0,0,1,1,2,5,-->0,0,--0,1,1,--0,0,1,3,3,--0,0,1,1,2,5,5,--0,1,--
- R16) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,

3,6,--0,0,1,1,2,2,3,7,--  
 R17)  
 0,0,1,1,2,3,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,  
 1,1,2,5,--  
 R18)  
 0,0,1,1,2,4,4,-->0,0,1,1,2,2,--0,0,1,1,2,3,3,--0,0,1,1,2,--0,0,1,2,--0,0,1,3,--  
 R19) 0,0,1,1,2,5,5,-->0,0,1,1,--0,0,1,2,2,--0,0,1,1,2,4,4,--0,0,1,--0,1,--  
 R20)  
 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,  
 2,2,3,6,--0,0,1,1,2,2,3,7,--  
 R21)  
 0,0,1,1,2,2,3,4,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,4,--0,0,1,1,2,2,3,4,--0,0,1,1,  
 2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--  
 R22)  
 0,0,1,1,2,2,3,5,-->0,0,1,1,2,2,--0,0,1,1,2,3,3,--0,0,1,1,2,2,3,5,5,--0,0,1,1,2,3,--  
 0,0,1,1,2,4,--0,0,1,1,2,5,--  
 R23)  
 0,0,1,1,2,2,3,6,-->0,0,1,1,--0,0,1,2,2,--0,0,1,1,2,4,4,--0,0,1,1,2,2,3,6,6,--0,0,1,  
 2,--0,0,1,3,--  
 R24)  
 0,0,1,1,2,2,3,7,-->0,0,--0,1,1,--0,0,1,3,3,--0,0,1,1,2,5,5,--0,0,1,1,2,2,3,7,7,--0,  
 1,--  
 R25)  
 0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,--0,0,1,1,2,2,3,3,4,  
 6,--0,0,1,1,2,2,3,3,4,7,--0,0,1,1,2,2,3,3,4,8,--0,0,1,1,2,2,3,3,4,9,--  
 R26)  
 0,0,1,1,2,2,3,4,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,4,--0,  
 0,1,1,2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--  
 R27)  
 0,0,1,1,2,2,3,5,5,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,4,--0,0,1,1,2,2,3,--0,0,1,1,  
 2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--  
 R28)  
 0,0,1,1,2,2,3,6,6,-->0,0,1,1,2,2,--0,0,1,1,2,3,3,--0,0,1,1,2,2,3,5,5,--0,0,1,1,2,--  
 0,0,1,2,--0,0,1,3,--  
 R29)  
 0,0,1,1,2,2,3,7,7,-->0,0,1,1,--0,0,1,2,2,--0,0,1,1,2,4,4,--0,0,1,1,2,2,3,6,6,--0,0,  
 1,--0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,1, : 0,1,1, :  
 LEN=4) 0,0,1,1, : 0,0,1,2, : 0,0,1,3, :  
 LEN=5) 0,0,1,1,2, : 0,0,1,2,2, : 0,0,1,3,3, :  
 LEN=6) 0,0,1,1,2,2, : 0,0,1,1,2,3, : 0,0,1,1,2,4, : 0,0,1,1,2,5, :  
 LEN=7) 0,0,1,1,2,2,3, : 0,0,1,1,2,3,3, : 0,0,1,1,2,4,4, : 0,0,1,1,2,5,5, :  
 LEN=8) 0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,3,4, : 0,0,1,1,2,2,3,5, : 0,0,1,1,2,2,3,6, :  
 0,0,1,1,2,2,3,7, :  
 LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,4,4, : 0,0,1,1,2,2,3,5,5, :  
 0,0,1,1,2,2,3,6,6, : 0,0,1,1,2,2,3,7,7, :  
 LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,4,5, : 0,0,1,1,2,2,3,3,4,6, :



0,0,1,1,2,2,3,3,4,7,: 0,0,1,1,2,2,3,3,4,8,: 0,0,1,1,2,2,3,3,4,9,:  
Number new nodes in level n is given by : 1,2,2,3,3,4,4,5,5,6,

-----Class

469-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][100][101][120][210]]$

-----

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,1,--
- R3) 0,1,-->0,0,--0,1,1,--0,1,--
- R4) 0,0,1,-->0,0,1,1,--0,0,1,2,--0,0,1,3,--
- R5) 0,1,1,-->0,0,1,1,--0,0,1,--0,1,--
- R6) 0,0,1,1,-->0,0,1,1,2,--0,0,1,2,--0,0,1,3,--
- R7) 0,0,1,2,-->0,0,1,1,--0,0,1,2,2,--0,0,1,2,--0,0,1,3,--
- R8) 0,0,1,3,-->0,1,1,--0,0,--0,0,1,3,3,--0,1,--
- R9) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--
- R10) 0,0,1,2,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,2,--0,0,1,3,--
- R11) 0,0,1,3,3,-->0,0,1,2,2,--0,0,1,1,--0,0,1,--0,1,--
- R12) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--
- R13) 0,0,1,1,2,3,-->0,0,1,1,2,2,--0,0,1,1,2,3,3,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--
- R14) 0,0,1,1,2,4,-->0,0,1,2,2,--0,0,1,1,--0,0,1,1,2,4,4,--0,0,1,2,--0,0,1,3,--
- R15) 0,0,1,1,2,5,-->0,0,1,3,3,--0,1,1,--0,0,--0,0,1,1,2,5,5,--0,1,--
- R16) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--
- R17) 0,0,1,1,2,3,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--
- R18) 0,0,1,1,2,4,4,-->0,0,1,1,2,3,3,--0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,2,--0,0,1,3,--
- R19) 0,0,1,1,2,5,5,-->0,0,1,1,2,4,4,--0,0,1,2,2,--0,0,1,1,--0,0,1,--0,1,--
- R20) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--
- R21) 0,0,1,1,2,2,3,4,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,4,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--
- R22) 0,0,1,1,2,2,3,5,-->0,0,1,1,2,3,3,--0,0,1,1,2,2,--0,0,1,1,2,2,3,5,5,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--
- R23) 0,0,1,1,2,2,3,6,-->0,0,1,1,2,4,4,--0,0,1,2,2,--0,0,1,1,--0,0,1,1,2,2,3,6,6,--0,0,1,2,--0,0,1,3,--
- R24) 0,0,1,1,2,2,3,7,-->0,0,1,1,2,5,5,--0,0,1,3,3,--0,1,1,--0,0,--0,0,1,1,2,2,3,7,7,--0,1,--

R25)  
 $0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3,3,4,4, \rightarrow 0,0,1,1,2,2,3,3,4,5, \rightarrow 0,0,1,1,2,2,3,3,4,6, \rightarrow 0,0,1,1,2,2,3,3,4,7, \rightarrow 0,0,1,1,2,2,3,3,4,8, \rightarrow 0,0,1,1,2,2,3,3,4,9, \rightarrow$

R26)  
 $0,0,1,1,2,2,3,4,4, \rightarrow 0,0,1,1,2,2,3,3,4,4, \rightarrow 0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3,4, \rightarrow 0,0,1,1,2,2,3,5, \rightarrow 0,0,1,1,2,2,3,6, \rightarrow 0,0,1,1,2,2,3,7, \rightarrow$

R27)  
 $0,0,1,1,2,2,3,5,5, \rightarrow 0,0,1,1,2,2,3,4,4, \rightarrow 0,0,1,1,2,2,3,3, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2,3, \rightarrow 0,0,1,1,2,4, \rightarrow 0,0,1,1,2,5, \rightarrow$

R28)  
 $0,0,1,1,2,2,3,6,6, \rightarrow 0,0,1,1,2,2,3,5,5, \rightarrow 0,0,1,1,2,3,3, \rightarrow 0,0,1,1,2,2, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1,2, \rightarrow 0,0,1,3, \rightarrow$

R29)  
 $0,0,1,1,2,2,3,7,7, \rightarrow 0,0,1,1,2,2,3,6,6, \rightarrow 0,0,1,1,2,4,4, \rightarrow 0,0,1,2,2, \rightarrow 0,0,1,1, \rightarrow 0,0,1, \rightarrow 0,1, \rightarrow$

List of different nodes in  $T[L]$

LEN=1)  $0, :$   
 LEN=2)  $0,0, : 0,1, :$   
 LEN=3)  $0,0,1, : 0,1,1, :$   
 LEN=4)  $0,0,1,1, : 0,0,1,2, : 0,0,1,3, :$   
 LEN=5)  $0,0,1,1,2, : 0,0,1,2,2, : 0,0,1,3,3, :$   
 LEN=6)  $0,0,1,1,2,2, : 0,0,1,1,2,3, : 0,0,1,1,2,4, : 0,0,1,1,2,5, :$   
 LEN=7)  $0,0,1,1,2,2,3, : 0,0,1,1,2,3,3, : 0,0,1,1,2,4,4, : 0,0,1,1,2,5,5, :$   
 LEN=8)  $0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,3,4, : 0,0,1,1,2,2,3,5, : 0,0,1,1,2,2,3,6, : 0,0,1,1,2,2,3,7, :$   
 LEN=9)  $0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,4,4, : 0,0,1,1,2,2,3,5,5, : 0,0,1,1,2,2,3,6,6, : 0,0,1,1,2,2,3,7,7, :$   
 LEN=10)  $0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,4,5, : 0,0,1,1,2,2,3,3,4,6, : 0,0,1,1,2,2,3,3,4,7, : 0,0,1,1,2,2,3,3,4,8, : 0,0,1,1,2,2,3,3,4,9, :$   
 Number new nodes in level n is given by :  $1,2,2,3,3,4,4,5,5,6,$

-----Class

470-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][100][101][201][210]]$

-----

--

Rules of  $T[L]$ :

R1)  $0, \rightarrow 0,0, \rightarrow 0,1, \rightarrow$   
 R2)  $0,0, \rightarrow 0,0,1, \rightarrow 0,1, \rightarrow$   
 R3)  $0,1, \rightarrow 0,0, \rightarrow 0,0,1, \rightarrow 0,1,2, \rightarrow$   
 R4)  $0,0,1, \rightarrow 0,0,1,1, \rightarrow 0,0,1,2, \rightarrow 0,1,2, \rightarrow$   
 R5)  $0,1,2, \rightarrow 0,0, \rightarrow 0,0, \rightarrow 0,1,2,2, \rightarrow 0,1,2,3, \rightarrow$   
 R6)  $0,0,1,1, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1,2, \rightarrow 0,1,2, \rightarrow$   
 R7)  $0,0,1,2, \rightarrow 0,0,1,1, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1,2,3, \rightarrow 0,1,2,3, \rightarrow$   
 R8)  $0,1,2,2, \rightarrow 0,0,1,1, \rightarrow 0,0,1,1, \rightarrow 0,0,1,2,3, \rightarrow 0,1,2,3, \rightarrow$   
 R9)  $0,1,2,3, \rightarrow 0,0, \rightarrow 0,0, \rightarrow 0,0, \rightarrow 0,1,2,3,3, \rightarrow 0,1,2,3,4, \rightarrow$   
 R10)  $0,0,1,1,2, \rightarrow 0,0,1,1,2,2, \rightarrow 0,0,1,1,2,3, \rightarrow 0,0,1,2,3, \rightarrow 0,1,2,3, \rightarrow$   
 R11)  $0,0,1,2,3, \rightarrow 0,0,1,1, \rightarrow 0,0,1,1, \rightarrow 0,0,1,2,3,3, \rightarrow 0,0,1,2,3,4, \rightarrow 0,1,2,3,4, \rightarrow$   
 R12)  $0,1,2,3,3, \rightarrow 0,0,1,1, \rightarrow 0,0,1,1, \rightarrow 0,0,1,1, \rightarrow 0,0,1,2,3,4, \rightarrow 0,1,2,3,4, \rightarrow$   
 R13)  $0,1,2,3,4, \rightarrow 0,0, \rightarrow 0,0, \rightarrow 0,0, \rightarrow 0,0, \rightarrow 0,1,2,3,4,4, \rightarrow 0,1,2,3,4,5, \rightarrow$

R14) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,3,--0,0,1,2,3,--0,1,2,3,--  
R15)  
0,0,1,1,2,3,-->0,0,1,1,2,2,--0,0,1,1,2,2,3,--0,0,1,1,2,3,4,--0,0,1,2,3,4,--0,1,2,3,4,--  
R16)  
0,0,1,2,3,3,-->0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,3,4,--0,0,1,2,3,4,--0,1,2,3,4,--  
R17)  
0,0,1,2,3,4,-->0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,2,3,4,4,--0,0,1,2,3,4,5,--0,1,2,3,4,5,--  
R18)  
0,1,2,3,4,4,-->0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,2,3,4,5,--0,1,2,3,4,5,--  
R19) 0,1,2,3,4,5,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,5,--0,1,2,3,4,5,6,--  
R20)  
0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,1,1,2,3,4,--0,0,1,2,3,4,--  
R21)  
0,0,1,1,2,3,4,-->0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,3,4,4,--0,0,1,1,2,3,4,5,--0,1,2,3,4,5,--  
R22)  
0,0,1,2,3,4,4,-->0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,3,4,5,--0,0,1,2,3,4,5,--  
R23)  
0,0,1,2,3,4,5,-->0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,2,3,4,5,5,--0,0,1,2,3,4,5,6,--  
R24)  
0,1,2,3,4,5,5,-->0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,2,3,4,5,6,--0,1,2,3,4,5,6,--  
R25)  
0,1,2,3,4,5,6,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,6,--0,1,2,3,4,5,6,7,--  
R26)  
0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,4,--0,0,1,1,2,3,4,--0,0,1,2,3,4,--  
R27)  
0,0,1,1,2,2,3,4,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,4,5,--0,0,1,1,2,3,4,5,--  
R28)  
0,0,1,1,2,3,4,4,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,5,--0,0,1,1,2,3,4,5,--  
R29)  
0,0,1,1,2,3,4,5,-->0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,3,4,5,5,--0,1,1,2,3,4,5,6,--  
R30)  
0,0,1,2,3,4,5,5,-->0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,3,4,5,6,--  
R31)  
0,0,1,2,3,4,5,6,-->0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,2,3,4,5,6,6,--0,0,1,2,3,4,5,6,7,--

R32)

0,1,2,3,4,5,6,6,-->0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,  
1,2,3,4,5,6,7,--0,1,2,3,4,5,6,7,--

R33)

0,1,2,3,4,5,6,7,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,7,7,--0,  
1,2,3,4,5,6,7,8,--

R34)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,--0,0,1,1,2,2,3,4,5,  
--0,0,1,1,2,3,4,5,--0,0,1,2,3,4,5,--0,1,2,3,4,5,--

R35)

0,0,1,1,2,2,3,4,5,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,5,5,--0,0,  
1,1,2,2,3,4,5,6,--0,0,1,1,2,3,4,5,6,--0,0,1,2,3,4,5,6,--0,1,2,3,4,5,6,--

R36)

0,0,1,1,2,3,4,5,5,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,--0,0,1,1,  
2,2,3,4,5,6,--0,0,1,1,2,3,4,5,6,--0,0,1,2,3,4,5,6,--0,1,2,3,4,5,6,--

R37)

0,0,1,1,2,3,4,5,6,-->0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,  
1,2,3,4,5,6,6,--0,0,1,1,2,3,4,5,6,7,--0,0,1,2,3,4,5,6,7,--0,1,2,3,4,5,6,7,--

R38)

0,0,1,2,3,4,5,6,6,-->0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,  
1,2,2,--0,0,1,1,2,3,4,5,6,7,--0,0,1,2,3,4,5,6,7,--0,1,2,3,4,5,6,7,--

R39)

0,0,1,2,3,4,5,6,7,-->0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,  
0,1,2,3,4,5,6,7,7,--0,0,1,2,3,4,5,6,7,8,--0,1,2,3,4,5,6,7,8,--

R40)

0,1,2,3,4,5,6,7,7,-->0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,  
0,1,1,--0,0,1,2,3,4,5,6,7,8,--0,1,2,3,4,5,6,7,8,--

R41)

0,1,2,3,4,5,6,7,8,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,  
7,8,8,--0,1,2,3,4,5,6,7,8,9,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,1, : 0,1,2, :

LEN=4) 0,0,1,1, : 0,0,1,2, : 0,1,2,2, : 0,1,2,3, :

LEN=5) 0,0,1,1,2, : 0,0,1,2,3, : 0,1,2,3,3, : 0,1,2,3,4, :

LEN=6) 0,0,1,1,2,2, : 0,0,1,1,2,3, : 0,0,1,2,3,3, : 0,0,1,2,3,4, : 0,1,2,3,4,4, :

0,1,2,3,4,5, :

LEN=7) 0,0,1,1,2,2,3, : 0,0,1,1,2,3,4, : 0,0,1,2,3,4,4, : 0,0,1,2,3,4,5, :

0,1,2,3,4,5,5, : 0,1,2,3,4,5,6, :

LEN=8) 0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,3,4, : 0,0,1,1,2,3,4,4, : 0,0,1,1,2,3,4,5, :

0,0,1,2,3,4,5,5, : 0,0,1,2,3,4,5,6, : 0,1,2,3,4,5,6,6, : 0,1,2,3,4,5,6,7, :

LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,4,5, : 0,0,1,1,2,3,4,5,5, :

0,0,1,1,2,3,4,5,6, : 0,0,1,2,3,4,5,6,6, : 0,0,1,2,3,4,5,6,7, : 0,1,2,3,4,5,6,7,7, :

0,1,2,3,4,5,6,7,8, :

LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,4,5, : 0,0,1,1,2,2,3,4,5,5, :

0,0,1,1,2,2,3,4,5,6, : 0,0,1,1,2,3,4,5,6,6, : 0,0,1,1,2,3,4,5,6,7, :

0,0,1,2,3,4,5,6,7,7, : 0,0,1,2,3,4,5,6,7,8, : 0,1,2,3,4,5,6,7,8,8, :

0,1,2,3,4,5,6,7,8,9, :

Number new nodes in level n is given by : 1,2,2,4,4,6,6,8,8,10,

-----Class

471-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][100][102][110][120]]$

-----

--

Rules of  $T[L]$ :

- R1)  $0, -->0,0, --0,1, --$
- R2)  $0,0, -->0,0,1, --0,1, --$
- R3)  $0,1, -->0,1,0, --0,0, --0,1, --$
- R4)  $0,0,1, -->0,0,1,1, --0,0,1,2, --0,0,1,3, --$
- R5)  $0,1,0, -->0,1,0,1, --$
- R6)  $0,0,1,1, -->0,0,1,1,2, --0,0,1,2, --0,0,1,3, --$
- R7)  $0,0,1,2, -->0,1,0, --0,0,1,1, --0,0,1,2, --0,0,1,3, --$
- R8)  $0,0,1,3, -->0,0,1,3,1, --0,0,1,3,2, --0,0, --0,1, --$
- R9)  $0,1,0,1, -->$
- R10)  $0,0,1,1,2, -->0,0,1,1,2,2, --0,0,1,1,2,3, --0,0,1,1,2,4, --0,0,1,1,2,5, --$
- R11)  $0,0,1,3,1, -->0,1,0, --0,1,0,1, --$
- R12)  $0,0,1,3,2, -->0,1,0,1, --0,1,0,1, --$
- R13)  $0,0,1,1,2,2, -->0,0,1,1,2,2,3, --0,0,1,1,2,3, --0,0,1,1,2,4, --0,0,1,1,2,5, --$
- R14)  $0,0,1,1,2,3, -->0,1,0, --0,0,1,1,2,2, --0,0,1,1,2,3, --0,0,1,1,2,4, --0,0,1,1,2,5, --$
- R15)  $0,0,1,1,2,4, -->0,0,1,3,1, --0,0,1,3,2, --0,0,1,1, --0,0,1,2, --0,0,1,3, --$
- R16)  $0,0,1,1,2,5, -->0,0,1,1,2,5,2, --0,0,1,1,2,5,3, --0,0,1,1,2,5,4, --0,0, --0,1, --$
- R17)  $0,0,1,1,2,2,3, -->0,0,1,1,2,2,3,3, --0,0,1,1,2,2,3,4, --0,0,1,1,2,2,3,5, --0,0,1,1,2,2,3,6, --0,0,1,1,2,2,3,7, --$
- R18)  $0,0,1,1,2,5,2, -->0,0,1,3,1, --0,0,1,3,2, --0,1,0,1, --$
- R19)  $0,0,1,1,2,5,3, -->0,1,0,1, --0,1,0, --0,1,0,1, --$
- R20)  $0,0,1,1,2,5,4, -->0,1,0, --0,1,0, --0,1,0,1, --$
- R21)  $0,0,1,1,2,2,3,3, -->0,0,1,1,2,2,3,3,4, --0,0,1,1,2,2,3,4, --0,0,1,1,2,2,3,5, --0,0,1,1,2,2,3,6, --0,0,1,1,2,2,3,7, --$
- R22)  $0,0,1,1,2,2,3,4, -->0,1,0, --0,0,1,1,2,2,3,3, --0,0,1,1,2,2,3,4, --0,0,1,1,2,2,3,5, --0,0,1,1,2,2,3,6, --0,0,1,1,2,2,3,7, --$
- R23)  $0,0,1,1,2,2,3,5, -->0,0,1,3,1, --0,0,1,3,2, --0,0,1,1,2,2, --0,0,1,1,2,3, --0,0,1,1,2,4, --0,0,1,1,2,5, --$
- R24)  $0,0,1,1,2,2,3,6, -->0,0,1,1,2,5,2, --0,0,1,1,2,5,3, --0,0,1,1,2,5,4, --0,0,1,1, --0,0,1,2, --0,0,1,3, --$
- R25)  $0,0,1,1,2,2,3,7, -->0,0,1,1,2,2,3,7,3, --0,0,1,1,2,2,3,7,4, --0,0,1,1,2,2,3,7,5, --0,0,1,1,2,2,3,7,6, --0,0, --0,1, --$
- R26)  $0,0,1,1,2,2,3,3,4, -->0,0,1,1,2,2,3,3,4,4, --0,0,1,1,2,2,3,3,4,5, --0,0,1,1,2,2,3,3,4,6, --0,0,1,1,2,2,3,3,4,7, --0,0,1,1,2,2,3,3,4,8, --0,0,1,1,2,2,3,3,4,9, --$
- R27)  $0,0,1,1,2,2,3,7,3, -->0,0,1,1,2,5,2, --0,0,1,1,2,5,3, --0,0,1,1,2,5,4, --0,1,0,1, --$

R28) 0,0,1,1,2,2,3,7,4,-->0,1,0,1,--0,0,1,3,1,--0,0,1,3,2,--0,1,0,1,--  
R29) 0,0,1,1,2,2,3,7,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,1,--  
R30)  
0,0,1,1,2,2,3,7,6,-->0,0,1,1,2,2,3,7,6,3,--0,0,1,3,2,--0,0,1,1,2,2,3,7,6,3,--0,1,0,  
1,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,1, : 0,1,0, :  
LEN=4) 0,0,1,1, : 0,0,1,2, : 0,0,1,3, : 0,1,0,1, :  
LEN=5) 0,0,1,1,2, : 0,0,1,3,1, : 0,0,1,3,2, :  
LEN=6) 0,0,1,1,2,2, : 0,0,1,1,2,3, : 0,0,1,1,2,4, : 0,0,1,1,2,5, :  
LEN=7) 0,0,1,1,2,2,3, : 0,0,1,1,2,5,2, : 0,0,1,1,2,5,3, : 0,0,1,1,2,5,4, :  
LEN=8) 0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,3,4, : 0,0,1,1,2,2,3,5, : 0,0,1,1,2,2,3,6, :  
0,0,1,1,2,2,3,7, :  
LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,7,3, : 0,0,1,1,2,2,3,7,4, :  
0,0,1,1,2,2,3,7,5, : 0,0,1,1,2,2,3,7,6, :  
LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,4,5, : 0,0,1,1,2,2,3,3,4,6, :  
0,0,1,1,2,2,3,3,4,7, : 0,0,1,1,2,2,3,3,4,8, : 0,0,1,1,2,2,3,3,4,9, :  
0,0,1,1,2,2,3,7,6,3, :

Number new nodes in level n is given by : 1,2,2,4,3,4,4,5,5,7,

-----Class

472-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][100][102][110][201]]$

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,1,--0,1,--  
R3) 0,1,-->0,1,0,--0,0,--0,1,2,--  
R4) 0,0,1,-->0,0,1,1,--0,0,1,2,--0,0,1,3,--  
R5) 0,1,0,-->0,1,0,1,--  
R6) 0,1,2,-->0,1,0,1,--0,1,0,--0,0,--0,1,2,3,--  
R7) 0,0,1,1,-->0,0,1,1,2,--0,0,1,2,--0,0,1,3,--  
R8) 0,0,1,2,-->0,1,0,--0,0,1,1,--0,0,1,2,3,--0,0,1,2,4,--  
R9) 0,0,1,3,-->0,1,0,--0,0,1,3,2,--0,0,--0,0,1,3,4,--  
R10) 0,1,0,1,-->  
R11) 0,1,2,3,-->0,1,0,1,--0,1,0,1,--0,1,0,--0,0,--0,1,2,3,4,--  
R12) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--  
R13) 0,0,1,2,3,-->0,1,0,1,--0,1,0,--0,0,1,1,--0,0,1,2,3,4,--0,0,1,2,3,5,--  
R14) 0,0,1,2,4,-->0,1,0,1,--0,1,0,--0,0,1,2,4,3,--0,0,--0,0,1,2,4,5,--  
R15) 0,0,1,3,2,-->0,1,0,1,--0,1,0,1,--  
R16) 0,0,1,3,4,-->0,1,0,1,--0,1,0,--0,1,0,--0,0,--0,0,1,3,4,5,--  
R17) 0,1,2,3,4,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,--0,1,2,3,4,5,--  
R18) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--  
R19)  
0,0,1,1,2,3,-->0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,3,4,--0,0,1,1,2,3,5,--0,0,1,1,2,3,6,  
--  
R20) 0,0,1,1,2,4,-->0,1,0,--0,0,1,3,2,--0,0,1,1,--0,0,1,1,2,4,5,--0,0,1,1,2,4,6,--

R21) 0,0,1,1,2,5,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--0,0,--0,0,1,1,2,5,6,--  
R22)  
0,0,1,2,3,4,-->0,1,0,1,--0,1,0,1,--0,1,0,--0,0,1,1,--0,0,1,2,3,4,5,--0,0,1,2,3,4,6,  
--  
R23)  
0,0,1,2,3,5,-->0,1,0,1,--0,1,0,1,--0,1,0,--0,0,1,2,3,5,4,--0,0,--0,0,1,2,3,5,6,--  
R24) 0,0,1,2,4,3,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--  
R25) 0,0,1,2,4,5,-->0,1,0,1,--0,1,0,1,--0,0,1,3,2,--0,1,0,--0,0,--0,0,1,2,4,5,6,--  
R26) 0,0,1,3,4,5,-->0,1,0,1,--0,1,0,--0,1,0,1,--0,1,0,--0,0,--0,0,1,3,4,5,6,--  
R27)  
0,1,2,3,4,5,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,--0,1,2,3,4,5,6,  
--  
R28)  
0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,  
3,6,--0,0,1,1,2,2,3,7,--  
R29)  
0,0,1,1,2,3,4,-->0,1,0,1,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,3,4,5,--0,0,1,1,2,3,4,6,  
--0,0,1,1,2,3,4,7,--  
R30)  
0,0,1,1,2,3,5,-->0,1,0,1,--0,1,0,--0,0,1,2,4,3,--0,0,1,1,--0,0,1,1,2,3,5,6,--0,0,1,  
1,2,3,5,7,--  
R31)  
0,0,1,1,2,3,6,-->0,1,0,1,--0,1,0,--0,0,1,2,4,3,--0,0,1,1,2,3,6,5,--0,0,--0,0,1,1,2,  
3,6,7,--  
R32)  
0,0,1,1,2,4,5,-->0,1,0,1,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,1,2,4,5,6,--0,0,1,1,2,4,  
5,7,--  
R33)  
0,0,1,1,2,4,6,-->0,1,0,1,--0,1,0,--0,1,0,--0,0,1,1,2,4,6,5,--0,0,--0,0,1,1,2,4,6,7,  
--  
R34) 0,0,1,1,2,5,4,-->0,1,0,1,--0,1,0,--0,1,0,1,--  
R35)  
0,0,1,1,2,5,6,-->0,1,0,1,--0,1,0,--0,0,1,1,2,5,6,4,--0,1,0,--0,0,--0,0,1,1,2,5,6,7,  
--  
R36)  
0,0,1,2,3,4,5,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,1,1,--0,0,1,2,3,4,5,6,--  
0,0,1,2,3,4,5,7,--  
R37)  
0,0,1,2,3,4,6,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,1,2,3,4,6,5,--0,0,--0,0,  
1,2,3,4,6,7,--  
R38) 0,0,1,2,3,5,4,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--  
R39)  
0,0,1,2,3,5,6,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,0,1,2,4,3,--0,1,0,--0,0,--0,0,1,2,  
3,5,6,7,--  
R40)  
0,0,1,2,4,5,6,-->0,1,0,1,--0,1,0,1,--0,0,1,3,2,--0,1,0,1,--0,1,0,--0,0,--0,0,1,2,4,  
5,6,7,--  
R41)  
0,0,1,3,4,5,6,-->0,1,0,1,--0,1,0,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,--0,0,1,3,4,5,6,  
7,--

R42)

0,1,2,3,4,5,6,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,0,--0,1,2,3,4,5,6,7,--

R43)

0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--

R44)

0,0,1,1,2,2,3,4,-->0,1,0,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,5,--0,0,1,1,2,2,3,4,6,--0,0,1,1,2,2,3,4,7,--0,0,1,1,2,2,3,4,8,--

R45)

0,0,1,1,2,2,3,5,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,2,--0,0,1,1,2,2,3,5,6,--0,0,1,1,2,2,3,5,7,--0,0,1,1,2,2,3,5,8,--

R46)

0,0,1,1,2,2,3,6,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--0,0,1,1,--0,0,1,1,2,2,3,6,7,--0,0,1,1,2,2,3,6,8,--

R47)

0,0,1,1,2,2,3,7,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--0,0,1,1,2,2,3,7,6,--0,0,--0,0,1,1,2,2,3,7,8,--

R48)

0,0,1,1,2,3,4,5,-->0,1,0,1,--0,1,0,1,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,3,4,5,6,--0,0,1,1,2,3,4,5,7,--0,0,1,1,2,3,4,5,8,--

R49)

0,0,1,1,2,3,4,6,-->0,1,0,1,--0,1,0,1,--0,1,0,--0,0,1,2,3,5,4,--0,0,1,1,--0,0,1,1,2,3,4,6,7,--0,0,1,1,2,3,4,6,8,--

R50)

0,0,1,1,2,3,4,7,-->0,1,0,1,--0,1,0,1,--0,1,0,--0,0,1,2,3,5,4,--0,0,1,1,2,3,4,7,6,--0,0,--0,0,1,1,2,3,4,7,8,--

R51)

0,0,1,1,2,3,5,6,-->0,1,0,1,--0,1,0,1,--0,0,1,3,2,--0,1,0,--0,0,1,1,--0,0,1,1,2,3,5,6,7,--0,0,1,1,2,3,5,6,8,--

R52)

0,0,1,1,2,3,5,7,-->0,1,0,1,--0,1,0,1,--0,0,1,3,2,--0,1,0,--0,0,1,1,2,3,5,7,6,--0,0,--0,0,1,1,2,3,5,7,8,--

R53) 0,0,1,1,2,3,6,5,-->0,1,0,1,--0,1,0,1,--0,0,1,3,2,--0,1,0,1,--

R54)

0,0,1,1,2,3,6,7,-->0,1,0,1,--0,1,0,1,--0,0,1,3,2,--0,0,1,1,2,3,6,7,5,--0,1,0,--0,0,--0,0,1,1,2,3,6,7,8,--

R55)

0,0,1,1,2,4,5,6,-->0,1,0,1,--0,1,0,--0,1,0,1,--0,1,0,--0,0,1,1,--0,0,1,1,2,4,5,6,7,--0,0,1,1,2,4,5,6,8,--

R56)

0,0,1,1,2,4,5,7,-->0,1,0,1,--0,1,0,--0,1,0,1,--0,1,0,--0,0,1,1,2,4,5,7,6,--0,0,--0,0,1,1,2,4,5,7,8,--

R57) 0,0,1,1,2,4,6,5,-->0,1,0,1,--0,1,0,--0,1,0,1,--0,1,0,1,--

R58)

0,0,1,1,2,4,6,7,-->0,1,0,1,--0,1,0,--0,1,0,1,--0,0,1,1,2,5,4,--0,1,0,--0,0,--0,0,1,1,2,4,6,7,8,--

R59) 0,0,1,1,2,5,6,4,-->0,1,0,1,--0,1,0,--

R60)

0,0,1,1,2,5,6,7,-->0,1,0,1,--0,1,0,--0,0,1,1,2,5,6,4,--0,1,0,1,--0,1,0,--0,0,--0,0,--0,0,



1,1,2,5,6,7,8,--

R61)

0,0,1,2,3,4,5,6,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,1,1,--0,0,1,  
2,3,4,5,6,7,--0,0,1,2,3,4,5,6,8,--

R62)

0,0,1,2,3,4,5,7,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,1,2,3,4,5,7,  
6,--0,0,--0,0,1,2,3,4,5,7,8,--

R63) 0,0,1,2,3,4,6,5,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--

R64)

0,0,1,2,3,4,6,7,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,0,1,2,3,5,4,--0,1,0,--  
0,0,--0,0,1,2,3,4,6,7,8,--

R65)

0,0,1,2,3,5,6,7,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,0,1,2,4,3,--0,1,0,1,--0,1,0,--0,  
0,--0,0,1,2,3,5,6,7,8,--

R66)

0,0,1,2,4,5,6,7,-->0,1,0,1,--0,1,0,1,--0,0,1,3,2,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,  
--0,0,1,2,4,5,6,7,8,--

R67)

0,0,1,3,4,5,6,7,-->0,1,0,1,--0,1,0,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,--0,  
0,1,3,4,5,6,7,8,--

R68)

0,1,2,3,4,5,6,7,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,  
0,--0,0,--0,1,2,3,4,5,6,7,8,--

R69)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,--0,0,1,1,2,2,3,3,4,  
6,--0,0,1,1,2,2,3,3,4,7,--0,0,1,1,2,2,3,3,4,8,--0,0,1,1,2,2,3,3,4,9,--

R70)

0,0,1,1,2,2,3,4,5,-->0,1,0,1,--0,1,0,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,5,6,--0,0,  
1,1,2,2,3,4,5,7,--0,0,1,1,2,2,3,4,5,8,--0,0,1,1,2,2,3,4,5,9,--

R71)

0,0,1,1,2,2,3,4,6,-->0,1,0,1,--0,1,0,--0,0,1,2,4,3,--0,0,1,1,2,2,--0,0,1,1,2,2,3,4,  
6,7,--0,0,1,1,2,2,3,4,6,8,--0,0,1,1,2,2,3,4,6,9,--

R72)

0,0,1,1,2,2,3,4,7,-->0,1,0,1,--0,1,0,--0,0,1,2,4,3,--0,0,1,1,2,3,6,5,--0,0,1,1,--0,  
0,1,1,2,2,3,4,7,8,--0,0,1,1,2,2,3,4,7,9,--

R73)

0,0,1,1,2,2,3,4,8,-->0,1,0,1,--0,1,0,--0,0,1,2,4,3,--0,0,1,1,2,3,6,5,--0,0,1,1,2,2,  
3,4,8,7,--0,0,--0,0,1,1,2,2,3,4,8,9,--

R74)

0,0,1,1,2,2,3,5,6,-->0,1,0,1,--0,1,0,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,2,3,5,6,7,--  
0,0,1,1,2,2,3,5,6,8,--0,0,1,1,2,2,3,5,6,9,--

R75)

0,0,1,1,2,2,3,5,7,-->0,1,0,1,--0,1,0,--0,1,0,--0,0,1,1,2,4,6,5,--0,0,1,1,--0,0,1,1,  
2,2,3,5,7,8,--0,0,1,1,2,2,3,5,7,9,--

R76)

0,0,1,1,2,2,3,5,8,-->0,1,0,1,--0,1,0,--0,1,0,--0,0,1,1,2,4,6,5,--0,0,1,1,2,2,3,5,8,  
7,--0,0,--0,0,1,1,2,2,3,5,8,9,--

R77)

0,0,1,1,2,2,3,6,7,-->0,1,0,1,--0,1,0,--0,0,1,1,2,5,6,4,--0,1,0,--0,0,1,1,--0,0,1,1,  
2,2,3,6,7,8,--0,0,1,1,2,2,3,6,7,9,--

R78)

0,0,1,1,2,2,3,6,8,-->0,1,0,1,--0,1,0,--0,0,1,1,2,5,6,4,--0,1,0,--0,0,1,1,2,2,3,6,8,  
7,--0,0,--0,0,1,1,2,2,3,6,8,9,--

R79) 0,0,1,1,2,2,3,7,6,-->0,1,0,1,--0,1,0,--0,0,1,1,2,5,6,4,--0,1,0,1,--

R80)

0,0,1,1,2,2,3,7,8,-->0,1,0,1,--0,1,0,--0,0,1,1,2,5,6,4,--0,0,1,1,2,2,3,7,8,6,--0,1,  
0,--0,0,--0,0,1,1,2,2,3,7,8,9,--

R81)

0,0,1,1,2,3,4,5,6,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,  
3,4,5,6,7,--0,0,1,1,2,3,4,5,6,8,--0,0,1,1,2,3,4,5,6,9,--

R82)

0,0,1,1,2,3,4,5,7,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,1,2,3,4,6,5,--0,0,1,  
1,--0,0,1,1,2,3,4,5,7,8,--0,0,1,1,2,3,4,5,7,9,--

R83)

0,0,1,1,2,3,4,5,8,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,1,2,3,4,6,5,--0,0,1,  
1,2,3,4,5,8,7,--0,0,--0,0,1,1,2,3,4,5,8,9,--

R84)

0,0,1,1,2,3,4,6,7,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,0,1,2,4,3,--0,1,0,--0,0,1,1,1,--  
0,0,1,1,2,3,4,6,7,8,--0,0,1,1,2,3,4,6,7,9,--

R85)

0,0,1,1,2,3,4,6,8,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,0,1,2,4,3,--0,1,0,--0,0,1,1,2,  
3,4,6,8,7,--0,0,--0,0,1,1,2,3,4,6,8,9,--

R86) 0,0,1,1,2,3,4,7,6,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,0,1,2,4,3,--0,1,0,1,--

R87)

0,0,1,1,2,3,4,7,8,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,0,1,2,4,3,--0,0,1,1,2,3,4,7,8,  
6,--0,1,0,--0,0,--0,0,1,1,2,3,4,7,8,9,--

R88)

0,0,1,1,2,3,5,6,7,-->0,1,0,1,--0,1,0,1,--0,0,1,3,2,--0,1,0,1,--0,1,0,--0,0,1,1,1,--0,  
0,1,1,2,3,5,6,7,8,--0,0,1,1,2,3,5,6,7,9,--

R89)

0,0,1,1,2,3,5,6,8,-->0,1,0,1,--0,1,0,1,--0,0,1,3,2,--0,1,0,1,--0,1,0,--0,0,1,1,2,3,  
5,6,8,7,--0,0,--0,0,1,1,2,3,5,6,8,9,--

R90) 0,0,1,1,2,3,5,7,6,-->0,1,0,1,--0,1,0,1,--0,0,1,3,2,--0,1,0,1,--0,1,0,1,--

R91)

0,0,1,1,2,3,5,7,8,-->0,1,0,1,--0,1,0,1,--0,0,1,3,2,--0,1,0,1,--0,0,1,1,2,3,6,5,--0,  
1,0,--0,0,--0,0,1,1,2,3,5,7,8,9,--

R92) 0,0,1,1,2,3,6,7,5,-->0,1,0,1,--0,1,0,1,--0,0,1,3,2,--

R93)

0,0,1,1,2,3,6,7,8,-->0,1,0,1,--0,1,0,1,--0,0,1,3,2,--0,0,1,1,2,3,6,7,5,--0,1,0,1,--  
0,1,0,--0,0,--0,0,1,1,2,3,6,7,8,9,--

R94)

0,0,1,1,2,4,5,6,7,-->0,1,0,1,--0,1,0,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,1,1,1,--0,0,1,  
1,2,4,5,6,7,8,--0,0,1,1,2,4,5,6,7,9,--

R95)

0,0,1,1,2,4,5,6,8,-->0,1,0,1,--0,1,0,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,1,1,2,4,5,6,  
8,7,--0,0,--0,0,1,1,2,4,5,6,8,9,--

R96) 0,0,1,1,2,4,5,7,6,-->0,1,0,1,--0,1,0,--0,1,0,1,--0,1,0,1,--0,1,0,1,--

R97)

0,0,1,1,2,4,5,7,8,-->0,1,0,1,--0,1,0,--0,1,0,1,--0,1,0,1,--0,0,1,1,2,4,6,5,--0,1,0,  
--0,0,--0,0,1,1,2,4,5,7,8,9,--

R98)

0,0,1,1,2,4,6,7,8,-->0,1,0,1,--0,1,0,--0,1,0,1,--0,0,1,1,2,5,4,--0,1,0,1,--0,1,0,--  
0,0,--0,0,1,1,2,4,6,7,8,9,--

R99)

0,0,1,1,2,5,6,7,8,-->0,1,0,1,--0,1,0,--0,0,1,1,2,5,6,4,--0,1,0,1,--0,1,0,1,--0,1,0,  
--0,0,--0,0,1,1,2,5,6,7,8,9,--

R100)

0,0,1,2,3,4,5,6,7,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,  
1,1,--0,0,1,2,3,4,5,6,7,8,--0,0,1,2,3,4,5,6,7,9,--

R101)

0,0,1,2,3,4,5,6,8,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,  
1,2,3,4,5,6,8,7,--0,0,--0,0,1,2,3,4,5,6,8,9,--

R102)

0,0,1,2,3,4,5,7,6,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--

R103)

0,0,1,2,3,4,5,7,8,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,0,1,2,3,4,  
6,5,--0,1,0,--0,0,--0,0,1,2,3,4,5,7,8,9,--

R104)

0,0,1,2,3,4,6,7,8,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,0,1,2,3,5,4,--0,1,0,  
1,--0,1,0,--0,0,--0,0,1,2,3,4,6,7,8,9,--

R105)

0,0,1,2,3,5,6,7,8,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,0,1,2,4,3,--0,1,0,1,--0,1,0,1,  
--0,1,0,--0,0,--0,0,1,2,3,5,6,7,8,9,--

R106)

0,0,1,2,4,5,6,7,8,-->0,1,0,1,--0,1,0,1,--0,0,1,3,2,--0,1,0,1,--0,1,0,1,--0,1,0,1,--  
0,1,0,--0,0,--0,0,1,2,4,5,6,7,8,9,--

R107)

0,0,1,3,4,5,6,7,8,-->0,1,0,1,--0,1,0,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,  
0,--0,0,--0,0,1,3,4,5,6,7,8,9,--

R108)

0,1,2,3,4,5,6,7,8,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,  
1,0,1,--0,1,0,--0,0,--0,1,2,3,4,5,6,7,8,9,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,1,: 0,1,0,: 0,1,2,:

LEN=4) 0,0,1,1,: 0,0,1,2,: 0,0,1,3,: 0,1,0,1,: 0,1,2,3,:

LEN=5) 0,0,1,1,2,: 0,0,1,2,3,: 0,0,1,2,4,: 0,0,1,3,2,: 0,0,1,3,4,: 0,1,2,3,4,:

LEN=6) 0,0,1,1,2,2,: 0,0,1,1,2,3,: 0,0,1,1,2,4,: 0,0,1,1,2,5,: 0,0,1,2,3,4,:

0,0,1,2,3,5,: 0,0,1,2,4,3,: 0,0,1,2,4,5,: 0,0,1,3,4,5,: 0,1,2,3,4,5,:

LEN=7) 0,0,1,1,2,2,3,: 0,0,1,1,2,3,4,: 0,0,1,1,2,3,5,: 0,0,1,1,2,3,6,:

0,0,1,1,2,4,5,: 0,0,1,1,2,4,6,: 0,0,1,1,2,5,4,: 0,0,1,1,2,5,6,: 0,0,1,2,3,4,5,:

0,0,1,2,3,4,6,: 0,0,1,2,3,5,4,: 0,0,1,2,3,5,6,: 0,0,1,2,4,5,6,: 0,0,1,3,4,5,6,:

0,1,2,3,4,5,6,:

LEN=8) 0,0,1,1,2,2,3,3,: 0,0,1,1,2,2,3,4,: 0,0,1,1,2,2,3,5,: 0,0,1,1,2,2,3,6,:

0,0,1,1,2,2,3,7,: 0,0,1,1,2,3,4,5,: 0,0,1,1,2,3,4,6,: 0,0,1,1,2,3,4,7,:

0,0,1,1,2,3,5,6,: 0,0,1,1,2,3,5,7,: 0,0,1,1,2,3,6,5,: 0,0,1,1,2,3,6,7,:

0,0,1,1,2,4,5,6,: 0,0,1,1,2,4,5,7,: 0,0,1,1,2,4,6,5,: 0,0,1,1,2,4,6,7,:

0,0,1,1,2,5,6,4,: 0,0,1,1,2,5,6,7,: 0,0,1,2,3,4,5,6,: 0,0,1,2,3,4,5,7,:

0,0,1,2,3,4,6,5,: 0,0,1,2,3,4,6,7,: 0,0,1,2,3,5,6,7,: 0,0,1,2,4,5,6,7,:

0,0,1,3,4,5,6,7, : 0,1,2,3,4,5,6,7, :  
 LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,4,5, : 0,0,1,1,2,2,3,4,6, :  
 0,0,1,1,2,2,3,4,7, : 0,0,1,1,2,2,3,4,8, : 0,0,1,1,2,2,3,5,6, : 0,0,1,1,2,2,3,5,7, :  
 0,0,1,1,2,2,3,5,8, : 0,0,1,1,2,2,3,6,7, : 0,0,1,1,2,2,3,6,8, : 0,0,1,1,2,2,3,7,6, :  
 0,0,1,1,2,2,3,7,8, : 0,0,1,1,2,3,4,5,6, : 0,0,1,1,2,3,4,5,7, : 0,0,1,1,2,3,4,5,8, :  
 0,0,1,1,2,3,4,6,7, : 0,0,1,1,2,3,4,6,8, : 0,0,1,1,2,3,4,7,6, : 0,0,1,1,2,3,4,7,8, :  
 0,0,1,1,2,3,5,6,7, : 0,0,1,1,2,3,5,6,8, : 0,0,1,1,2,3,5,7,6, : 0,0,1,1,2,3,5,7,8, :  
 0,0,1,1,2,3,6,7,5, : 0,0,1,1,2,3,6,7,8, : 0,0,1,1,2,4,5,6,7, : 0,0,1,1,2,4,5,6,8, :  
 0,0,1,1,2,4,5,7,6, : 0,0,1,1,2,4,5,7,8, : 0,0,1,1,2,4,6,7,8, : 0,0,1,1,2,5,6,7,8, :  
 0,0,1,2,3,4,5,6,7, : 0,0,1,2,3,4,5,6,8, : 0,0,1,2,3,4,5,7,6, : 0,0,1,2,3,4,5,7,8, :  
 0,0,1,2,3,4,6,7,8, : 0,0,1,2,3,5,6,7,8, : 0,0,1,2,4,5,6,7,8, : 0,0,1,3,4,5,6,7,8, :  
 0,1,2,3,4,5,6,7,8, :  
 LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,4,5, : 0,0,1,1,2,2,3,3,4,6, :  
 0,0,1,1,2,2,3,3,4,7, : 0,0,1,1,2,2,3,3,4,8, : 0,0,1,1,2,2,3,3,4,9, :  
 0,0,1,1,2,2,3,4,5,6, : 0,0,1,1,2,2,3,4,5,7, : 0,0,1,1,2,2,3,4,5,8, :  
 0,0,1,1,2,2,3,4,5,9, : 0,0,1,1,2,2,3,4,6,7, : 0,0,1,1,2,2,3,4,6,8, :  
 0,0,1,1,2,2,3,4,6,9, : 0,0,1,1,2,2,3,4,7,8, : 0,0,1,1,2,2,3,4,7,9, :  
 0,0,1,1,2,2,3,4,8,7, : 0,0,1,1,2,2,3,4,8,9, : 0,0,1,1,2,2,3,5,6,7, :  
 0,0,1,1,2,2,3,5,6,8, : 0,0,1,1,2,2,3,5,6,9, : 0,0,1,1,2,2,3,5,7,8, :  
 0,0,1,1,2,2,3,5,7,9, : 0,0,1,1,2,2,3,5,8,7, : 0,0,1,1,2,2,3,5,8,9, :  
 0,0,1,1,2,2,3,6,7,8, : 0,0,1,1,2,2,3,6,7,9, : 0,0,1,1,2,2,3,6,8,7, :  
 0,0,1,1,2,2,3,6,8,9, : 0,0,1,1,2,2,3,7,8,6, : 0,0,1,1,2,2,3,7,8,9, :  
 0,0,1,1,2,3,4,5,6,7, : 0,0,1,1,2,3,4,5,6,8, : 0,0,1,1,2,3,4,5,6,9, :  
 0,0,1,1,2,3,4,5,7,8, : 0,0,1,1,2,3,4,5,7,9, : 0,0,1,1,2,3,4,5,8,7, :  
 0,0,1,1,2,3,4,5,8,9, : 0,0,1,1,2,3,4,6,7,8, : 0,0,1,1,2,3,4,6,7,9, :  
 0,0,1,1,2,3,4,6,8,7, : 0,0,1,1,2,3,4,6,8,9, : 0,0,1,1,2,3,4,7,8,6, :  
 0,0,1,1,2,3,4,7,8,9, : 0,0,1,1,2,3,5,6,7,8, : 0,0,1,1,2,3,5,6,7,9, :  
 0,0,1,1,2,3,5,6,8,7, : 0,0,1,1,2,3,5,6,8,9, : 0,0,1,1,2,3,5,7,8,9, :  
 0,0,1,1,2,3,6,7,8,9, : 0,0,1,1,2,4,5,6,7,8, : 0,0,1,1,2,4,5,6,7,9, :  
 0,0,1,1,2,4,5,6,8,7, : 0,0,1,1,2,4,5,6,8,9, : 0,0,1,1,2,4,5,7,8,9, :  
 0,0,1,1,2,4,6,7,8,9, : 0,0,1,1,2,5,6,7,8,9, : 0,0,1,2,3,4,5,6,7,8, :  
 0,0,1,2,3,4,5,6,7,9, : 0,0,1,2,3,4,5,6,8,7, : 0,0,1,2,3,4,5,6,8,9, :  
 0,0,1,2,3,4,5,7,8,9, : 0,0,1,2,3,4,6,7,8,9, : 0,0,1,2,3,5,6,7,8,9, :  
 0,0,1,2,4,5,6,7,8,9, : 0,0,1,3,4,5,6,7,8,9, : 0,1,2,3,4,5,6,7,8,9, :  
 Number new nodes in level n is given by : 1,2,3,5,6,10,15,26,40,66,

-----Class

473-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][100][102][110][210]]$

-----

--

Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,1, --0,1, --
- R3) 0,1, -->0,1,0, --0,0, --0,1,2, --
- R4) 0,0,1, -->0,0,1,1, --0,0,1,2, --0,0,1,3, --
- R5) 0,1,0, -->0,1,0,1, --
- R6) 0,1,2, -->0,1,0, --0,1,0, --0,0, --0,1,2,3, --
- R7) 0,0,1,1, -->0,0,1,1,2, --0,0,1,2, --0,0,1,3, --
- R8) 0,0,1,2, -->0,1,0, --0,0,1,1, --0,0,1,2,3, --0,0,1,2,4, --

R9) 0,0,1,3,-->0,0,1,3,1,--0,1,0,--0,0,--0,0,1,3,4,--  
R10) 0,1,0,1,-->  
R11) 0,1,2,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,--  
R12) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--  
R13) 0,0,1,2,3,-->0,1,0,--0,1,0,--0,0,1,1,--0,0,1,2,3,4,--0,0,1,2,3,5,--  
R14) 0,0,1,2,4,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,0,--0,0,1,2,4,5,--  
R15) 0,0,1,3,1,-->0,1,0,--0,1,0,1,--  
R16) 0,0,1,3,4,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,0,--0,0,1,3,4,5,--  
R17) 0,1,2,3,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,--  
R18) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--  
R19)  
0,0,1,1,2,3,-->0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,3,4,--0,0,1,1,2,3,5,--0,0,1,1,2,3,6,--  
--  
R20) 0,0,1,1,2,4,-->0,0,1,3,1,--0,1,0,--0,0,1,1,--0,0,1,1,2,4,5,--0,0,1,1,2,4,6,--  
R21) 0,0,1,1,2,5,-->0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,0,--0,0,1,1,2,5,6,--  
R22)  
0,0,1,2,3,4,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,2,3,4,5,--0,0,1,2,3,4,6,--  
R23) 0,0,1,2,3,5,-->0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,--0,0,1,2,3,5,6,--  
R24) 0,0,1,2,4,5,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,--0,0,1,2,4,5,6,--  
R25) 0,0,1,3,4,5,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,1,3,4,5,6,--  
R26) 0,1,2,3,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,6,--  
R27)  
0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--  
R28)  
0,0,1,1,2,3,4,-->0,1,0,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,3,4,5,--0,0,1,1,2,3,4,6,--0,0,1,1,2,3,4,7,--  
R29)  
0,0,1,1,2,3,5,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,1,--0,0,1,1,2,3,5,6,--0,0,1,1,2,3,5,7,--  
R30)  
0,0,1,1,2,3,6,-->0,1,0,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,0,--0,0,1,1,2,3,6,7,--  
--  
R31)  
0,0,1,1,2,4,5,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,1,2,4,5,6,--0,0,1,1,2,4,5,7,--  
R32)  
0,0,1,1,2,4,6,-->0,0,1,3,1,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,--0,0,1,1,2,4,6,7,--  
R33) 0,0,1,1,2,5,2,-->0,0,1,3,1,--0,1,0,--0,1,0,1,--  
R34)  
0,0,1,1,2,5,6,-->0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,--0,0,1,1,2,5,6,7,--  
--  
R35)  
0,0,1,2,3,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,2,3,4,5,6,--0,0,1,2,3,4,5,7,--  
R36)  
0,0,1,2,3,4,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,--0,0,1,2,3,4,6,7,--  
--  
R37)  
0,0,1,2,3,5,6,-->0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,--0,0,1,2,3,5,6,7,

--

R38)

0,0,1,2,4,5,6,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,1,2,4,5,6,7,

--

R39)

0,0,1,3,4,5,6,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,1,3,4,5,6,7,

--

R40)

0,1,2,3,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,6,7,--

R41)

0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--

R42)

0,0,1,1,2,2,3,4,-->0,1,0,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,5,--0,0,1,1,2,2,3,4,6,--0,0,1,1,2,2,3,4,7,--0,0,1,1,2,2,3,4,8,--

R43)

0,0,1,1,2,2,3,5,-->0,0,1,3,1,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,2,3,5,6,--0,0,1,1,2,2,3,5,7,--0,0,1,1,2,2,3,5,8,--

R44)

0,0,1,1,2,2,3,6,-->0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,0,1,1,--0,0,1,1,2,2,3,6,7,--0,0,1,1,2,2,3,6,8,--

R45)

0,0,1,1,2,2,3,7,-->0,0,1,1,2,2,3,7,3,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,0,--0,0,1,1,2,2,3,7,8,--

R46)

0,0,1,1,2,3,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,3,4,5,6,--0,0,1,1,2,3,4,5,7,--0,0,1,1,2,3,4,5,8,--

R47)

0,0,1,1,2,3,4,6,-->0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,1,--0,0,1,1,2,3,4,6,7,--0,0,1,1,2,3,4,6,8,--

R48)

0,0,1,1,2,3,4,7,-->0,1,0,--0,1,0,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,0,--0,0,1,1,2,3,4,7,8,--

R49)

0,0,1,1,2,3,5,6,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,1,2,3,5,6,7,--0,0,1,1,2,3,5,6,8,--

R50)

0,0,1,1,2,3,5,7,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,--0,0,1,1,2,3,5,7,8,--

R51)

0,0,1,1,2,3,6,7,-->0,1,0,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,--0,0,1,1,2,3,6,7,8,--

R52)

0,0,1,1,2,4,5,6,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,1,2,4,5,6,7,--0,0,1,1,2,4,5,6,8,--

R53)

0,0,1,1,2,4,5,7,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,--0,0,1,1,2,4,5,7,8,--

R54)

0,0,1,1,2,4,6,7,-->0,0,1,3,1,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,--0,0,1,1,2,4,6,7,8,--

R55)

0,0,1,1,2,5,6,7,-->0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,1,1,2,5,6,7,8,--

R56)

0,0,1,2,3,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,2,3,4,5,6,7,--0,0,1,2,3,4,5,6,8,--

R57)

0,0,1,2,3,4,5,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,--0,0,1,2,3,4,5,7,8,--

R58)

0,0,1,2,3,4,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,--0,0,1,2,3,4,6,7,8,--

R59)

0,0,1,2,3,5,6,7,-->0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,1,2,3,5,6,7,8,--

R60)

0,0,1,2,4,5,6,7,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,1,2,4,5,6,7,8,--

R61)

0,0,1,3,4,5,6,7,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,1,3,4,5,6,7,8,--

R62)

0,1,2,3,4,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,6,7,8,--

R63)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,--0,0,1,1,2,2,3,3,4,6,--0,0,1,1,2,2,3,3,4,7,--0,0,1,1,2,2,3,3,4,8,--0,0,1,1,2,2,3,3,4,9,--

R64)

0,0,1,1,2,2,3,4,5,-->0,1,0,--0,1,0,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,5,6,--0,0,1,1,2,2,3,4,5,7,--0,0,1,1,2,2,3,4,5,8,--0,0,1,1,2,2,3,4,5,9,--

R65)

0,0,1,1,2,2,3,4,6,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,2,3,4,6,7,--0,0,1,1,2,2,3,4,6,8,--0,0,1,1,2,2,3,4,6,9,--

R66)

0,0,1,1,2,2,3,4,7,-->0,1,0,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,0,1,1,--0,0,1,1,2,2,3,4,7,8,--0,0,1,1,2,2,3,4,7,9,--

R67)

0,0,1,1,2,2,3,4,8,-->0,1,0,--0,0,1,1,2,2,3,7,3,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,0,--0,0,1,1,2,2,3,4,8,9,--

R68)

0,0,1,1,2,2,3,5,6,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,2,3,5,6,7,--0,0,1,1,2,2,3,5,6,8,--0,0,1,1,2,2,3,5,6,9,--

R69)

0,0,1,1,2,2,3,5,7,-->0,0,1,3,1,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,1,--0,0,1,1,2,2,3,5,7,8,--0,0,1,1,2,2,3,5,7,9,--

R70)

0,0,1,1,2,2,3,5,8,-->0,0,1,3,1,--0,1,0,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,0,--0,0,1,1,2,2,3,5,8,9,--

R71)

0,0,1,1,2,2,3,6,7,-->0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,1,  
2,2,3,6,7,8,--0,0,1,1,2,2,3,6,7,9,--

R72)

0,0,1,1,2,2,3,6,8,-->0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,--  
0,0,1,1,2,2,3,6,8,9,--

R73) 0,0,1,1,2,2,3,7,3,-->0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,1,0,1,--

R74)

0,0,1,1,2,2,3,7,8,-->0,0,1,1,2,2,3,7,3,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,1,0,  
--0,0,--0,0,1,1,2,2,3,7,8,9,--

R75)

0,0,1,1,2,3,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,3,4,5,  
6,7,--0,0,1,1,2,3,4,5,6,8,--0,0,1,1,2,3,4,5,6,9,--

R76)

0,0,1,1,2,3,4,5,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,1,--0,0,1,1,  
2,3,4,5,7,8,--0,0,1,1,2,3,4,5,7,9,--

R77)

0,0,1,1,2,3,4,5,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,  
0,--0,0,1,1,2,3,4,5,8,9,--

R78)

0,0,1,1,2,3,4,6,7,-->0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,1,  
2,3,4,6,7,8,--0,0,1,1,2,3,4,6,7,9,--

R79)

0,0,1,1,2,3,4,6,8,-->0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,--  
0,0,1,1,2,3,4,6,8,9,--

R80)

0,0,1,1,2,3,4,7,8,-->0,1,0,--0,1,0,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,1,0,--0,  
0,--0,0,1,1,2,3,4,7,8,9,--

R81)

0,0,1,1,2,3,5,6,7,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,1,  
2,3,5,6,7,8,--0,0,1,1,2,3,5,6,7,9,--

R82)

0,0,1,1,2,3,5,6,8,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,--  
0,0,1,1,2,3,5,6,8,9,--

R83)

0,0,1,1,2,3,5,7,8,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,--  
0,0,1,1,2,3,5,7,8,9,--

R84)

0,0,1,1,2,3,6,7,8,-->0,1,0,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,  
0,--0,0,1,1,2,3,6,7,8,9,--

R85)

0,0,1,1,2,4,5,6,7,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,1,  
2,4,5,6,7,8,--0,0,1,1,2,4,5,6,7,9,--

R86)

0,0,1,1,2,4,5,6,8,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,--  
0,0,1,1,2,4,5,6,8,9,--

R87)

0,0,1,1,2,4,5,7,8,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,--  
0,0,1,1,2,4,5,7,8,9,--

R88)



0,0,1,1,2,4,6,7,8,-->0,0,1,3,1,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,0,--  
0,0,1,1,2,4,6,7,8,9,--

R89)

0,0,1,1,2,5,6,7,8,-->0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,  
0,--0,0,1,1,2,5,6,7,8,9,--

R90)

0,0,1,2,3,4,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,--0,0,  
1,2,3,4,5,6,7,8,--0,0,1,2,3,4,5,6,7,9,--

R91)

0,0,1,2,3,4,5,6,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,  
0,--0,0,1,2,3,4,5,6,8,9,--

R92)

0,0,1,2,3,4,5,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,  
0,--0,0,1,2,3,4,5,7,8,9,--

R93)

0,0,1,2,3,4,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,  
0,--0,0,1,2,3,4,6,7,8,9,--

R94)

0,0,1,2,3,5,6,7,8,-->0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,  
0,--0,0,1,2,3,5,6,7,8,9,--

R95)

0,0,1,2,4,5,6,7,8,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,  
0,--0,0,1,2,4,5,6,7,8,9,--

R96)

0,0,1,3,4,5,6,7,8,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,  
0,--0,0,1,3,4,5,6,7,8,9,--

R97)

0,1,2,3,4,5,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,  
--0,0,--0,1,2,3,4,5,6,7,8,9,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,1,: 0,1,0,: 0,1,2,:

LEN=4) 0,0,1,1,: 0,0,1,2,: 0,0,1,3,: 0,1,0,1,: 0,1,2,3,:

LEN=5) 0,0,1,1,2,: 0,0,1,2,3,: 0,0,1,2,4,: 0,0,1,3,1,: 0,0,1,3,4,: 0,1,2,3,4,:

LEN=6) 0,0,1,1,2,2,: 0,0,1,1,2,3,: 0,0,1,1,2,4,: 0,0,1,1,2,5,: 0,0,1,2,3,4,:

0,0,1,2,3,5,: 0,0,1,2,4,5,: 0,0,1,3,4,5,: 0,1,2,3,4,5,:

LEN=7) 0,0,1,1,2,2,3,: 0,0,1,1,2,3,4,: 0,0,1,1,2,3,5,: 0,0,1,1,2,3,6,:

0,0,1,1,2,4,5,: 0,0,1,1,2,4,6,: 0,0,1,1,2,5,2,: 0,0,1,1,2,5,6,: 0,0,1,2,3,4,5,:

0,0,1,2,3,4,6,: 0,0,1,2,3,5,6,: 0,0,1,2,4,5,6,: 0,0,1,3,4,5,6,: 0,1,2,3,4,5,6,:

LEN=8) 0,0,1,1,2,2,3,3,: 0,0,1,1,2,2,3,4,: 0,0,1,1,2,2,3,5,: 0,0,1,1,2,2,3,6,:

0,0,1,1,2,2,3,7,: 0,0,1,1,2,3,4,5,: 0,0,1,1,2,3,4,6,: 0,0,1,1,2,3,4,7,:

0,0,1,1,2,3,5,6,: 0,0,1,1,2,3,5,7,: 0,0,1,1,2,3,6,7,: 0,0,1,1,2,4,5,6,:

0,0,1,1,2,4,5,7,: 0,0,1,1,2,4,6,7,: 0,0,1,1,2,5,6,7,: 0,0,1,2,3,4,5,6,:

0,0,1,2,3,4,5,7,: 0,0,1,2,3,4,6,7,: 0,0,1,2,3,5,6,7,: 0,0,1,2,4,5,6,7,:

0,0,1,3,4,5,6,7,: 0,1,2,3,4,5,6,7,:

LEN=9) 0,0,1,1,2,2,3,3,4,: 0,0,1,1,2,2,3,4,5,: 0,0,1,1,2,2,3,4,6,:

0,0,1,1,2,2,3,4,7,: 0,0,1,1,2,2,3,4,8,: 0,0,1,1,2,2,3,5,6,: 0,0,1,1,2,2,3,5,7,:

0,0,1,1,2,2,3,5,8,: 0,0,1,1,2,2,3,6,7,: 0,0,1,1,2,2,3,6,8,: 0,0,1,1,2,2,3,7,3,:

0,0,1,1,2,2,3,7,8,: 0,0,1,1,2,3,4,5,6,6,: 0,0,1,1,2,3,4,5,7,7,: 0,0,1,1,2,3,4,5,8,:

0,0,1,1,2,3,4,6,7, : 0,0,1,1,2,3,4,6,8, : 0,0,1,1,2,3,4,7,8, : 0,0,1,1,2,3,5,6,7, :  
 0,0,1,1,2,3,5,6,8, : 0,0,1,1,2,3,5,7,8, : 0,0,1,1,2,3,6,7,8, : 0,0,1,1,2,4,5,6,7, :  
 0,0,1,1,2,4,5,6,8, : 0,0,1,1,2,4,5,7,8, : 0,0,1,1,2,4,6,7,8, : 0,0,1,1,2,5,6,7,8, :  
 0,0,1,2,3,4,5,6,7, : 0,0,1,2,3,4,5,6,8, : 0,0,1,2,3,4,5,7,8, : 0,0,1,2,3,4,6,7,8, :  
 0,0,1,2,3,5,6,7,8, : 0,0,1,2,4,5,6,7,8, : 0,0,1,3,4,5,6,7,8, : 0,1,2,3,4,5,6,7,8, :  
 LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,4,5, : 0,0,1,1,2,2,3,3,4,6, :  
 0,0,1,1,2,2,3,3,4,7, : 0,0,1,1,2,2,3,3,4,8, : 0,0,1,1,2,2,3,3,4,9, :  
 0,0,1,1,2,2,3,4,5,6, : 0,0,1,1,2,2,3,4,5,7, : 0,0,1,1,2,2,3,4,5,8, :  
 0,0,1,1,2,2,3,4,5,9, : 0,0,1,1,2,2,3,4,6,7, : 0,0,1,1,2,2,3,4,6,8, :  
 0,0,1,1,2,2,3,4,6,9, : 0,0,1,1,2,2,3,4,7,8, : 0,0,1,1,2,2,3,4,7,9, :  
 0,0,1,1,2,2,3,4,8,9, : 0,0,1,1,2,2,3,5,6,7, : 0,0,1,1,2,2,3,5,6,8, :  
 0,0,1,1,2,2,3,5,6,9, : 0,0,1,1,2,2,3,5,7,8, : 0,0,1,1,2,2,3,5,7,9, :  
 0,0,1,1,2,2,3,5,8,9, : 0,0,1,1,2,2,3,6,7,8, : 0,0,1,1,2,2,3,6,7,9, :  
 0,0,1,1,2,2,3,6,8,9, : 0,0,1,1,2,2,3,7,8,9, : 0,0,1,1,2,3,4,5,6,7, :  
 0,0,1,1,2,3,4,5,6,8, : 0,0,1,1,2,3,4,5,6,9, : 0,0,1,1,2,3,4,5,7,8, :  
 0,0,1,1,2,3,4,5,7,9, : 0,0,1,1,2,3,4,5,8,9, : 0,0,1,1,2,3,4,6,7,8, :  
 0,0,1,1,2,3,4,6,7,9, : 0,0,1,1,2,3,4,6,8,9, : 0,0,1,1,2,3,4,7,8,9, :  
 0,0,1,1,2,3,5,6,7,8, : 0,0,1,1,2,3,5,6,7,9, : 0,0,1,1,2,3,5,6,8,9, :  
 0,0,1,1,2,3,5,7,8,9, : 0,0,1,1,2,3,6,7,8,9, : 0,0,1,1,2,4,5,6,7,8, :  
 0,0,1,1,2,4,5,6,7,9, : 0,0,1,1,2,4,5,6,8,9, : 0,0,1,1,2,4,5,7,8,9, :  
 0,0,1,1,2,4,6,7,8,9, : 0,0,1,1,2,5,6,7,8,9, : 0,0,1,2,3,4,5,6,7,8, :  
 0,0,1,2,3,4,5,6,7,9, : 0,0,1,2,3,4,5,6,8,9, : 0,0,1,2,3,4,5,7,8,9, :  
 0,0,1,2,3,4,6,7,8,9, : 0,0,1,2,3,5,6,7,8,9, : 0,0,1,2,4,5,6,7,8,9, :  
 0,0,1,3,4,5,6,7,8,9, : 0,1,2,3,4,5,6,7,8,9, :  
 Number new nodes in level n is given by : 1,2,3,5,6,9,14,22,35,56,

-----Class

474-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][100][102][120][201]]$

-----

--

Rules of  $T[L]$ :

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,1, --0,1, --
- R3) 0,1, -->0,1,0, --0,1,1, --0,1, --
- R4) 0,0,1, -->0,0,1,1, --0,0,1,2, --0,0,1,3, --
- R5) 0,1,0, -->0,1,0,1, --
- R6) 0,1,1, -->0,1,0,1, --0,0,1, --0,1, --
- R7) 0,0,1,1, -->0,0,1,1,2, --0,0,1,2, --0,0,1,3, --
- R8) 0,0,1,2, -->0,1,0, --0,0,1,2,2, --0,0,1,2, --0,0,1,3, --
- R9) 0,0,1,3, -->0,1,0, --0,0,1,3,2, --0,0,1,3,3, --0,1, --
- R10) 0,1,0,1, -->
- R11) 0,0,1,1,2, -->0,0,1,1,2,2, --0,0,1,1,2,3, --0,0,1,1,2,4, --0,0,1,1,2,5, --
- R12) 0,0,1,2,2, -->0,1,0,1, --0,0,1,1,2, --0,0,1,2, --0,0,1,3, --
- R13) 0,0,1,3,2, -->0,1,0,1, --0,1,0,1, --
- R14) 0,0,1,3,3, -->0,1,0,1, --0,1,0, --0,0,1, --0,1, --
- R15) 0,0,1,1,2,2, -->0,0,1,1,2,2,3, --0,0,1,1,2,3, --0,0,1,1,2,4, --0,0,1,1,2,5, --
- R16)
- 0,0,1,1,2,3, -->0,1,0, --0,0,1,1,2,3,3, --0,0,1,1,2,3, --0,0,1,1,2,4, --0,0,1,1,2,5, --
- R17) 0,0,1,1,2,4, -->0,1,0, --0,0,1,3,2, --0,0,1,1,2,4,4, --0,0,1,2, --0,0,1,3, --

R18) 0,0,1,1,2,5,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--0,0,1,1,2,5,5,--0,1,--  
R19)  
0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,  
3,6,--0,0,1,1,2,2,3,7,--  
R20)  
0,0,1,1,2,3,3,-->0,1,0,1,--0,0,1,1,2,2,3,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,  
--  
R21) 0,0,1,1,2,4,4,-->0,1,0,1,--0,1,0,--0,0,1,1,2,--0,0,1,2,--0,0,1,3,--  
R22) 0,0,1,1,2,5,4,-->0,1,0,1,--0,1,0,--0,1,0,1,--  
R23) 0,0,1,1,2,5,5,-->0,1,0,1,--0,1,0,--0,0,1,1,2,5,5,4,--0,0,1,--0,1,--  
R24)  
0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,  
2,2,3,6,--0,0,1,1,2,2,3,7,--  
R25)  
0,0,1,1,2,2,3,4,-->0,1,0,--0,0,1,1,2,2,3,4,4,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--  
0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--  
R26)  
0,0,1,1,2,2,3,5,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,2,3,5,5,--0,0,1,1,2,3,--0,0,1,1,2,  
4,--0,0,1,1,2,5,--  
R27)  
0,0,1,1,2,2,3,6,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--0,0,1,1,2,2,3,6,6,--0,0,1,2,  
--0,0,1,3,--  
R28)  
0,0,1,1,2,2,3,7,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--0,0,1,1,2,2,3,7,6,--0,0,1,1,  
2,2,3,7,7,--0,1,--  
R29) 0,0,1,1,2,5,5,4,-->0,1,0,1,--0,1,0,--  
R30)  
0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,--0,0,1,1,2,2,3,3,4,  
6,--0,0,1,1,2,2,3,3,4,7,--0,0,1,1,2,2,3,3,4,8,--0,0,1,1,2,2,3,3,4,9,--  
R31)  
0,0,1,1,2,2,3,4,4,-->0,1,0,1,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,  
5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--  
R32)  
0,0,1,1,2,2,3,5,5,-->0,1,0,1,--0,1,0,--0,0,1,1,2,2,3,--0,0,1,1,2,3,--0,0,1,1,2,4,--  
0,0,1,1,2,5,--  
R33)  
0,0,1,1,2,2,3,6,6,-->0,1,0,1,--0,1,0,--0,0,1,1,2,5,5,4,--0,0,1,1,2,--0,0,1,2,--0,0,  
1,3,--  
R34) 0,0,1,1,2,2,3,7,6,-->0,1,0,1,--0,1,0,--0,0,1,1,2,5,5,4,--0,1,0,1,--  
R35)  
0,0,1,1,2,2,3,7,7,-->0,1,0,1,--0,1,0,--0,0,1,1,2,5,5,4,--0,0,1,1,2,2,3,7,7,6,--0,0,  
1,--0,1,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,1, : 0,1,0, : 0,1,1, :

LEN=4) 0,0,1,1, : 0,0,1,2, : 0,0,1,3, : 0,1,0,1, :

LEN=5) 0,0,1,1,2, : 0,0,1,2,2, : 0,0,1,3,2, : 0,0,1,3,3, :

LEN=6) 0,0,1,1,2,2, : 0,0,1,1,2,3, : 0,0,1,1,2,4, : 0,0,1,1,2,5, :

LEN=7) 0,0,1,1,2,2,3, : 0,0,1,1,2,3,3, : 0,0,1,1,2,4,4, : 0,0,1,1,2,5,4, :

0,0,1,1,2,5,5,:  
 LEN=8) 0,0,1,1,2,2,3,3,: 0,0,1,1,2,2,3,4,: 0,0,1,1,2,2,3,5,: 0,0,1,1,2,2,3,6,:  
 0,0,1,1,2,2,3,7,: 0,0,1,1,2,5,5,4,:  
 LEN=9) 0,0,1,1,2,2,3,3,4,: 0,0,1,1,2,2,3,4,4,: 0,0,1,1,2,2,3,5,5,:  
 0,0,1,1,2,2,3,6,6,: 0,0,1,1,2,2,3,7,6,: 0,0,1,1,2,2,3,7,7,:  
 LEN=10) 0,0,1,1,2,2,3,3,4,4,: 0,0,1,1,2,2,3,3,4,5,: 0,0,1,1,2,2,3,3,4,6,:  
 0,0,1,1,2,2,3,3,4,7,: 0,0,1,1,2,2,3,3,4,8,: 0,0,1,1,2,2,3,3,4,9,:  
 0,0,1,1,2,2,3,7,7,6,:  
 Number new nodes in level n is given by : 1,2,3,4,4,4,5,6,6,7,

-----Class

475-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][100][102][120][210]]$

-----

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,1,--
- R3) 0,1,-->0,1,0,--0,1,1,--0,1,--
- R4) 0,0,1,-->0,0,1,1,--0,0,1,2,--0,0,1,3,--
- R5) 0,1,0,-->0,1,0,1,--
- R6) 0,1,1,-->0,1,0,1,--0,0,1,--0,1,--
- R7) 0,0,1,1,-->0,0,1,1,2,--0,0,1,2,--0,0,1,3,--
- R8) 0,0,1,2,-->0,1,0,--0,0,1,2,2,--0,0,1,2,--0,0,1,3,--
- R9) 0,0,1,3,-->0,0,1,3,1,--0,1,0,--0,0,1,3,3,--0,1,--
- R10) 0,1,0,1,-->
- R11) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--
- R12) 0,0,1,2,2,-->0,1,0,1,--0,0,1,1,2,--0,0,1,2,--0,0,1,3,--
- R13) 0,0,1,3,1,-->0,1,0,--0,1,0,--
- R14) 0,0,1,3,3,-->0,1,0,--0,1,0,1,--0,0,1,--0,1,--
- R15) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--
- R16) 0,0,1,1,2,3,-->0,1,0,--0,0,1,1,2,3,3,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--
- R17) 0,0,1,1,2,4,-->0,0,1,3,1,--0,1,0,--0,0,1,1,2,4,4,--0,0,1,2,--0,0,1,3,--
- R18) 0,0,1,1,2,5,-->0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,5,5,--0,1,--
- R19) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--
- R20) 0,0,1,1,2,3,3,-->0,1,0,1,--0,0,1,1,2,2,3,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--
- 
- R21) 0,0,1,1,2,4,4,-->0,1,0,--0,1,0,1,--0,0,1,1,2,--0,0,1,2,--0,0,1,3,--
- R22) 0,0,1,1,2,5,2,-->0,0,1,3,1,--0,1,0,--0,0,1,1,2,5,2,5,--
- R23) 0,0,1,1,2,5,5,-->0,0,1,1,2,5,2,5,--0,1,0,--0,1,0,1,--0,0,1,--0,1,--
- R24) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--
- R25) 0,0,1,1,2,2,3,4,-->0,1,0,--0,0,1,1,2,2,3,4,4,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--

R26)  
0,0,1,1,2,2,3,5,-->0,0,1,3,1,--0,1,0,--0,0,1,1,2,2,3,5,5,--0,0,1,1,2,3,--0,0,1,1,2,  
4,--0,0,1,1,2,5,--

R27)  
0,0,1,1,2,2,3,6,-->0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,2,3,6,6,--0,0,1,2,  
--0,0,1,3,--

R28)  
0,0,1,1,2,2,3,7,-->0,0,1,1,2,2,3,7,3,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,0,1,1,  
2,2,3,7,7,--0,1,--

R29) 0,0,1,1,2,5,2,5,-->0,1,0,--0,1,0,1,--

R30)  
0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,--0,0,1,1,2,2,3,3,4,  
6,--0,0,1,1,2,2,3,3,4,7,--0,0,1,1,2,2,3,3,4,8,--0,0,1,1,2,2,3,3,4,9,--

R31)  
0,0,1,1,2,2,3,4,4,-->0,1,0,1,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,  
5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--

R32)  
0,0,1,1,2,2,3,5,5,-->0,1,0,--0,1,0,1,--0,0,1,1,2,2,3,--0,0,1,1,2,3,--0,0,1,1,2,4,--  
0,0,1,1,2,5,--

R33)  
0,0,1,1,2,2,3,6,6,-->0,0,1,1,2,5,2,5,--0,1,0,--0,1,0,1,--0,0,1,1,2,--0,0,1,2,--0,0,  
1,3,--

R34)  
0,0,1,1,2,2,3,7,3,-->0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,2,3,7,3,7,--

R35)  
0,0,1,1,2,2,3,7,7,-->0,0,1,1,2,2,3,7,3,7,--0,0,1,1,2,5,2,5,--0,1,0,--0,1,0,1,--0,0,  
1,--0,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,1,: 0,1,0,: 0,1,1,:

LEN=4) 0,0,1,1,: 0,0,1,2,: 0,0,1,3,: 0,1,0,1,:

LEN=5) 0,0,1,1,2,: 0,0,1,2,2,: 0,0,1,3,1,: 0,0,1,3,3,:

LEN=6) 0,0,1,1,2,2,: 0,0,1,1,2,3,: 0,0,1,1,2,4,: 0,0,1,1,2,5,:

LEN=7) 0,0,1,1,2,2,3,: 0,0,1,1,2,3,3,: 0,0,1,1,2,4,4,: 0,0,1,1,2,5,2,:

0,0,1,1,2,5,5,:

LEN=8) 0,0,1,1,2,2,3,3,: 0,0,1,1,2,2,3,4,: 0,0,1,1,2,2,3,5,: 0,0,1,1,2,2,3,6,:

0,0,1,1,2,2,3,7,: 0,0,1,1,2,5,2,5,:

LEN=9) 0,0,1,1,2,2,3,3,4,: 0,0,1,1,2,2,3,4,4,: 0,0,1,1,2,2,3,5,5,:

0,0,1,1,2,2,3,6,6,: 0,0,1,1,2,2,3,7,3,: 0,0,1,1,2,2,3,7,7,:

LEN=10) 0,0,1,1,2,2,3,3,4,4,: 0,0,1,1,2,2,3,3,4,5,: 0,0,1,1,2,2,3,3,4,6,:

0,0,1,1,2,2,3,3,4,7,: 0,0,1,1,2,2,3,3,4,8,: 0,0,1,1,2,2,3,3,4,9,:

0,0,1,1,2,2,3,7,3,7,:

Number new nodes in level n is given by : 1,2,3,4,4,4,5,6,6,7,

-----Class

476-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][100][102][201][210]]$

-----

--

Rules of T[L]:

- R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$
- R2)  $0, 0, \rightarrow 0, 0, 1, \rightarrow 0, 1, \rightarrow$
- R3)  $0, 1, \rightarrow 0, 1, 0, \rightarrow 0, 1, 1, \rightarrow 0, 1, 2, \rightarrow$
- R4)  $0, 0, 1, \rightarrow 0, 0, 1, 1, \rightarrow 0, 0, 1, 2, \rightarrow 0, 0, 1, 3, \rightarrow$
- R5)  $0, 1, 0, \rightarrow 0, 1, 0, 1, \rightarrow$
- R6)  $0, 1, 1, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 1, 2, \rightarrow 0, 1, 2, \rightarrow$
- R7)  $0, 1, 2, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 0, \rightarrow 0, 1, 2, 2, \rightarrow 0, 1, 2, 3, \rightarrow$
- R8)  $0, 0, 1, 1, \rightarrow 0, 0, 1, 1, 2, \rightarrow 0, 0, 1, 2, \rightarrow 0, 0, 1, 3, \rightarrow$
- R9)  $0, 0, 1, 2, \rightarrow 0, 1, 0, \rightarrow 0, 0, 1, 2, 2, \rightarrow 0, 0, 1, 2, 3, \rightarrow 0, 0, 1, 2, 4, \rightarrow$
- R10)  $0, 0, 1, 3, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 2, 2, \rightarrow 0, 1, 2, 3, \rightarrow$
- R11)  $0, 1, 0, 1, \rightarrow$
- R12)  $0, 1, 1, 2, \rightarrow 0, 1, 0, 1, \rightarrow 0, 0, 1, 2, 2, \rightarrow 0, 0, 1, 2, 3, \rightarrow 0, 0, 1, 2, 4, \rightarrow$
- R13)  $0, 1, 2, 2, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 2, 2, 3, \rightarrow 0, 1, 2, 3, \rightarrow$
- R14)  $0, 1, 2, 3, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 0, \rightarrow 0, 1, 2, 3, 3, \rightarrow 0, 1, 2, 3, 4, \rightarrow$
- R15)  $0, 0, 1, 1, 2, \rightarrow 0, 0, 1, 1, 2, 2, \rightarrow 0, 0, 1, 1, 2, 3, \rightarrow 0, 0, 1, 1, 2, 4, \rightarrow 0, 0, 1, 1, 2, 5, \rightarrow$
- R16)  $0, 0, 1, 2, 2, \rightarrow 0, 1, 0, 1, \rightarrow 0, 0, 1, 2, 2, 3, \rightarrow 0, 0, 1, 2, 3, \rightarrow 0, 0, 1, 2, 4, \rightarrow$
- R17)  $0, 0, 1, 2, 3, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 0, \rightarrow 0, 0, 1, 2, 3, 3, \rightarrow 0, 0, 1, 2, 3, 4, \rightarrow 0, 0, 1, 2, 3, 5, \rightarrow$
- R18)  $0, 0, 1, 2, 4, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 2, 3, 3, \rightarrow 0, 1, 2, 3, 4, \rightarrow$
- R19)  $0, 1, 2, 2, 3, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 0, 1, \rightarrow 0, 0, 1, 2, 3, 3, \rightarrow 0, 0, 1, 2, 3, 4, \rightarrow 0, 0, 1, 2, 3, 5, \rightarrow$
- R20)  $0, 1, 2, 3, 3, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 2, 3, 3, 4, \rightarrow 0, 1, 2, 3, 4, \rightarrow$
- R21)  $0, 1, 2, 3, 4, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 0, \rightarrow 0, 1, 2, 3, 4, 4, \rightarrow 0, 1, 2, 3, 4, 5, \rightarrow$
- R22)  $0, 0, 1, 1, 2, 2, \rightarrow 0, 0, 1, 1, 2, 2, 3, \rightarrow 0, 0, 1, 1, 2, 3, \rightarrow 0, 0, 1, 1, 2, 4, \rightarrow 0, 0, 1, 1, 2, 5, \rightarrow$
- R23)  $0, 0, 1, 1, 2, 3, \rightarrow 0, 1, 0, \rightarrow 0, 0, 1, 1, 2, 3, 3, \rightarrow 0, 0, 1, 1, 2, 3, 4, \rightarrow 0, 0, 1, 1, 2, 3, 5, \rightarrow 0, 0, 1, 1, 2, 3, 6, \rightarrow$
- R24)  $0, 0, 1, 1, 2, 4, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 0, 1, 2, 3, 3, \rightarrow 0, 0, 1, 2, 3, 4, \rightarrow 0, 0, 1, 2, 3, 5, \rightarrow$
- R25)  $0, 0, 1, 1, 2, 5, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 2, 3, 3, \rightarrow 0, 1, 2, 3, 4, \rightarrow$
- R26)  $0, 0, 1, 2, 2, 3, \rightarrow 0, 1, 0, 1, \rightarrow 0, 0, 1, 1, 2, 3, 3, \rightarrow 0, 0, 1, 1, 2, 3, 4, \rightarrow 0, 0, 1, 1, 2, 3, 5, \rightarrow 0, 0, 1, 1, 2, 3, 6, \rightarrow$
- R27)  $0, 0, 1, 2, 3, 3, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 0, 1, \rightarrow 0, 0, 1, 2, 3, 3, 4, \rightarrow 0, 0, 1, 2, 3, 4, \rightarrow 0, 0, 1, 2, 3, 5, \rightarrow$
- R28)  $0, 0, 1, 2, 3, 4, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 0, \rightarrow 0, 0, 1, 2, 3, 4, 4, \rightarrow 0, 0, 1, 2, 3, 4, 5, \rightarrow 0, 0, 1, 2, 3, 4, 6, \rightarrow$
- R29)  $0, 0, 1, 2, 3, 5, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 2, 3, 4, 4, \rightarrow 0, 1, 2, 3, 4, 5, \rightarrow$
- R30)  $0, 1, 2, 3, 3, 4, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 0, 1, \rightarrow 0, 0, 1, 2, 3, 4, 4, \rightarrow 0, 0, 1, 2, 3, 4, 5, \rightarrow 0, 0, 1, 2, 3, 4, 6, \rightarrow$
- R31)  $0, 1, 2, 3, 4, 4, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 2, 3, 4, 4, 5, \rightarrow 0, 1, 2, 3, 4, 5, \rightarrow$
- R32)  $0, 1, 2, 3, 4, 5, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 0, 1, \rightarrow 0, 1, 0, \rightarrow 0, 1, 2, 3, 4, 5, 5, \rightarrow 0, 1, 2, 3, 4, 5, 6, \rightarrow$
- R33)  $0, 0, 1, 1, 2, 2, 3, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, \rightarrow 0, 0, 1, 1, 2, 2, 3, 4, \rightarrow 0, 0, 1, 1, 2, 2, 3, 5, \rightarrow 0, 0, 1, 1, 2, 2, 3, 6, \rightarrow$

3,6,--0,0,1,1,2,2,3,7,--

R34)

0,0,1,1,2,3,3,-->0,1,0,1,--0,0,1,1,2,3,3,4,--0,0,1,1,2,3,4,--0,0,1,1,2,3,5,--0,0,1,1,2,3,6,--

R35)

0,0,1,1,2,3,4,-->0,1,0,1,--0,1,0,--0,0,1,1,2,3,4,4,--0,0,1,1,2,3,4,5,--0,0,1,1,2,3,4,6,--0,0,1,1,2,3,4,7,--

R36)

0,0,1,1,2,3,5,-->0,1,0,1,--0,1,0,--0,1,0,--0,0,1,2,3,4,4,--0,0,1,2,3,4,5,--0,0,1,2,3,4,6,--

R37)

0,0,1,1,2,3,6,-->0,1,0,1,--0,1,0,--0,1,0,--0,1,0,--0,1,2,3,4,4,--0,1,2,3,4,5,--

R38)

0,0,1,2,3,3,4,-->0,1,0,1,--0,1,0,1,--0,0,1,1,2,3,4,4,--0,0,1,1,2,3,4,5,--0,0,1,1,2,3,4,6,--0,0,1,1,2,3,4,7,--

R39)

0,0,1,2,3,4,4,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,0,1,2,3,4,4,5,--0,0,1,2,3,4,5,--0,0,1,2,3,4,6,--

R40)

0,0,1,2,3,4,5,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,1,2,3,4,5,5,--0,0,1,2,3,4,5,6,--0,0,1,2,3,4,5,7,--

R41)

0,0,1,2,3,4,6,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,1,0,--0,1,2,3,4,5,5,--0,1,2,3,4,5,6,--

R42)

0,1,2,3,4,4,5,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,0,1,2,3,4,5,5,--0,0,1,2,3,4,5,6,--0,0,1,2,3,4,5,7,--

R43)

0,1,2,3,4,5,5,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,2,3,4,5,5,6,--0,1,2,3,4,5,6,--

R44)

0,1,2,3,4,5,6,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,1,2,3,4,5,6,6,--0,1,2,3,4,5,6,7,--

R45)

0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--

R46)

0,0,1,1,2,2,3,4,-->0,1,0,--0,0,1,1,2,2,3,4,4,--0,0,1,1,2,2,3,4,5,--0,0,1,1,2,2,3,4,6,--0,0,1,1,2,2,3,4,7,--0,0,1,1,2,2,3,4,8,--

R47)

0,0,1,1,2,2,3,5,-->0,1,0,--0,1,0,--0,0,1,1,2,3,4,4,--0,0,1,1,2,3,4,5,--0,0,1,1,2,3,4,6,--0,0,1,1,2,3,4,7,--

R48)

0,0,1,1,2,2,3,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,4,--0,0,1,2,3,4,5,--0,0,1,2,3,4,6,--

R49)

0,0,1,1,2,2,3,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,3,4,4,--0,1,2,3,4,5,--

R50)

0,0,1,1,2,3,3,4,-->0,1,0,1,--0,0,1,1,2,2,3,4,4,--0,0,1,1,2,2,3,4,5,--0,0,1,1,2,2,3,4,6,--0,0,1,1,2,2,3,4,7,--0,0,1,1,2,2,3,4,8,--

R51)

0,0,1,1,2,3,4,4,-->0,1,0,1,--0,1,0,1,--0,0,1,1,2,3,4,4,5,--0,0,1,1,2,3,4,5,--0,0,1,1,2,3,4,6,--0,0,1,1,2,3,4,7,--

R52)

0,0,1,1,2,3,4,5,-->0,1,0,1,--0,1,0,1,--0,1,0,--0,0,1,1,2,3,4,5,5,--0,0,1,1,2,3,4,5,6,--0,0,1,1,2,3,4,5,7,--0,0,1,1,2,3,4,5,8,--

R53)

0,0,1,1,2,3,4,6,-->0,1,0,1,--0,1,0,1,--0,1,0,--0,1,0,--0,0,1,2,3,4,5,5,--0,0,1,2,3,4,5,6,--0,0,1,2,3,4,5,7,--

R54)

0,0,1,1,2,3,4,7,-->0,1,0,1,--0,1,0,1,--0,1,0,--0,1,0,--0,1,0,--0,1,2,3,4,5,5,--0,1,2,3,4,5,6,--

R55)

0,0,1,2,3,4,4,5,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,0,1,1,2,3,4,5,5,--0,0,1,1,2,3,4,5,6,--0,0,1,1,2,3,4,5,7,--0,0,1,1,2,3,4,5,8,--

R56)

0,0,1,2,3,4,5,5,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,0,1,2,3,4,5,5,6,--0,0,1,2,3,4,5,6,--0,0,1,2,3,4,5,7,--

R57)

0,0,1,2,3,4,5,6,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,1,2,3,4,5,6,6,--0,0,1,2,3,4,5,6,7,--0,0,1,2,3,4,5,6,8,--

R58)

0,0,1,2,3,4,5,7,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,1,0,--0,1,0,--0,1,2,3,4,5,6,6,--0,1,2,3,4,5,6,7,--

R59)

0,1,2,3,4,5,5,6,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,0,1,2,3,4,5,6,6,--0,0,1,2,3,4,5,6,7,--0,0,1,2,3,4,5,6,8,--

R60)

0,1,2,3,4,5,6,6,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,2,3,4,5,6,6,7,--0,1,2,3,4,5,6,7,--

R61)

0,1,2,3,4,5,6,7,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,2,3,4,5,6,7,7,--0,1,2,3,4,5,6,7,8,--

R62)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,--0,0,1,1,2,2,3,3,4,6,--0,0,1,1,2,2,3,3,4,7,--0,0,1,1,2,2,3,3,4,8,--0,0,1,1,2,2,3,3,4,9,--

R63)

0,0,1,1,2,2,3,4,4,-->0,1,0,1,--0,0,1,1,2,2,3,4,4,5,--0,0,1,1,2,2,3,4,5,--0,0,1,1,2,2,3,4,6,--0,0,1,1,2,2,3,4,7,--0,0,1,1,2,2,3,4,8,--

R64)

0,0,1,1,2,2,3,4,5,-->0,1,0,1,--0,1,0,--0,0,1,1,2,2,3,4,5,5,--0,0,1,1,2,2,3,4,5,6,--0,0,1,1,2,2,3,4,5,7,--0,0,1,1,2,2,3,4,5,8,--0,0,1,1,2,2,3,4,5,9,--

R65)

0,0,1,1,2,2,3,4,6,-->0,1,0,1,--0,1,0,--0,1,0,--0,0,1,1,2,3,4,5,5,--0,0,1,1,2,3,4,5,6,--0,0,1,1,2,3,4,5,7,--0,0,1,1,2,3,4,5,8,--

R66)

0,0,1,1,2,2,3,4,7,-->0,1,0,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,5,5,--0,0,1,2,3,4,5,6,--0,0,1,2,3,4,5,7,--

R67)

0,0,1,1,2,2,3,4,8,-->0,1,0,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,3,4,5,5,--0,1,



2,3,4,5,6,--

R68)

0,0,1,1,2,3,4,4,5,-->0,1,0,1,--0,1,0,1,--0,0,1,1,2,2,3,4,5,5,--0,0,1,1,2,2,3,4,5,6,  
--0,0,1,1,2,2,3,4,5,7,--0,0,1,1,2,2,3,4,5,8,--0,0,1,1,2,2,3,4,5,9,--

R69)

0,0,1,1,2,3,4,5,5,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,0,1,1,2,3,4,5,5,6,--0,0,1,1,2,  
3,4,5,6,--0,0,1,1,2,3,4,5,7,--0,0,1,1,2,3,4,5,8,--

R70)

0,0,1,1,2,3,4,5,6,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,1,1,2,3,4,5,6,6,--0,  
0,1,1,2,3,4,5,6,7,--0,0,1,1,2,3,4,5,6,8,--0,0,1,1,2,3,4,5,6,9,--

R71)

0,0,1,1,2,3,4,5,7,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,1,0,--0,0,1,2,3,4,5,6,  
6,--0,0,1,2,3,4,5,6,7,--0,0,1,2,3,4,5,6,8,--

R72)

0,0,1,1,2,3,4,5,8,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,1,0,--0,1,0,--0,1,2,3,  
4,5,6,6,--0,1,2,3,4,5,6,7,--

R73)

0,0,1,2,3,4,5,5,6,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,0,1,1,2,3,4,5,6,6,--  
0,0,1,1,2,3,4,5,6,7,--0,0,1,1,2,3,4,5,6,8,--0,0,1,1,2,3,4,5,6,9,--

R74)

0,0,1,2,3,4,5,6,6,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,0,1,2,3,4,  
5,6,6,7,--0,0,1,2,3,4,5,6,7,--0,0,1,2,3,4,5,6,8,--

R75)

0,0,1,2,3,4,5,6,7,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,  
1,2,3,4,5,6,7,7,--0,0,1,2,3,4,5,6,7,8,--0,0,1,2,3,4,5,6,7,9,--

R76)

0,0,1,2,3,4,5,6,8,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,1,  
0,--0,1,2,3,4,5,6,7,7,--0,1,2,3,4,5,6,7,8,--

R77)

0,1,2,3,4,5,6,6,7,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,  
0,1,2,3,4,5,6,7,7,--0,0,1,2,3,4,5,6,7,8,--0,0,1,2,3,4,5,6,7,9,--

R78)

0,1,2,3,4,5,6,7,7,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,  
1,0,1,--0,1,2,3,4,5,6,7,7,8,--0,1,2,3,4,5,6,7,8,--

R79)

0,1,2,3,4,5,6,7,8,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,  
1,0,1,--0,1,0,--0,1,2,3,4,5,6,7,8,8,--0,1,2,3,4,5,6,7,8,9,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,1,: 0,1,0,: 0,1,1,: 0,1,2,:

LEN=4) 0,0,1,1,: 0,0,1,2,: 0,0,1,3,: 0,1,0,1,: 0,1,1,2,: 0,1,2,2,: 0,1,2,3,:

LEN=5) 0,0,1,1,2,: 0,0,1,2,2,: 0,0,1,2,3,: 0,0,1,2,4,: 0,1,2,2,3,: 0,1,2,3,3,:

0,1,2,3,4,:

LEN=6) 0,0,1,1,2,2,: 0,0,1,1,2,3,: 0,0,1,1,2,4,: 0,0,1,1,2,5,: 0,0,1,2,2,3,:

0,0,1,2,3,3,: 0,0,1,2,3,4,: 0,0,1,2,3,5,: 0,1,2,3,3,4,: 0,1,2,3,4,4,: 0,1,2,3,4,5,:

LEN=7) 0,0,1,1,2,2,3,: 0,0,1,1,2,3,3,: 0,0,1,1,2,3,4,: 0,0,1,1,2,3,5,:

0,0,1,1,2,3,6,: 0,0,1,2,3,3,4,: 0,0,1,2,3,4,4,: 0,0,1,2,3,4,5,: 0,0,1,2,3,4,6,:

0,1,2,3,4,4,5,: 0,1,2,3,4,5,5,: 0,1,2,3,4,5,6,:

LEN=8) 0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,3,4, : 0,0,1,1,2,2,3,5, : 0,0,1,1,2,2,3,6, :  
 0,0,1,1,2,2,3,7, : 0,0,1,1,2,3,3,4, : 0,0,1,1,2,3,4,4, : 0,0,1,1,2,3,4,5, :  
 0,0,1,1,2,3,4,6, : 0,0,1,1,2,3,4,7, : 0,0,1,2,3,4,4,5, : 0,0,1,2,3,4,5,5, :  
 0,0,1,2,3,4,5,6, : 0,0,1,2,3,4,5,7, : 0,1,2,3,4,5,5,6, : 0,1,2,3,4,5,6,6, :  
 0,1,2,3,4,5,6,7, :

LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,4,4, : 0,0,1,1,2,2,3,4,5, :  
 0,0,1,1,2,2,3,4,6, : 0,0,1,1,2,2,3,4,7, : 0,0,1,1,2,2,3,4,8, : 0,0,1,1,2,3,4,4,5, :  
 0,0,1,1,2,3,4,5,5, : 0,0,1,1,2,3,4,5,6, : 0,0,1,1,2,3,4,5,7, : 0,0,1,1,2,3,4,5,8, :  
 0,0,1,2,3,4,5,5,6, : 0,0,1,2,3,4,5,6,6, : 0,0,1,2,3,4,5,6,7, : 0,0,1,2,3,4,5,6,8, :  
 0,1,2,3,4,5,6,6,7, : 0,1,2,3,4,5,6,7,7, : 0,1,2,3,4,5,6,7,8, :

LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,4,5, : 0,0,1,1,2,2,3,3,4,6, :  
 0,0,1,1,2,2,3,3,4,7, : 0,0,1,1,2,2,3,3,4,8, : 0,0,1,1,2,2,3,3,4,9, :  
 0,0,1,1,2,2,3,4,4,5, : 0,0,1,1,2,2,3,4,5,5, : 0,0,1,1,2,2,3,4,5,6, :  
 0,0,1,1,2,2,3,4,5,7, : 0,0,1,1,2,2,3,4,5,8, : 0,0,1,1,2,2,3,4,5,9, :  
 0,0,1,1,2,3,4,5,5,6, : 0,0,1,1,2,3,4,5,6,6, : 0,0,1,1,2,3,4,5,6,7, :  
 0,0,1,1,2,3,4,5,6,8, : 0,0,1,1,2,3,4,5,6,9, : 0,0,1,2,3,4,5,6,6,7, :  
 0,0,1,2,3,4,5,6,7,7, : 0,0,1,2,3,4,5,6,7,8, : 0,0,1,2,3,4,5,6,7,9, :  
 0,1,2,3,4,5,6,7,7,8, : 0,1,2,3,4,5,6,7,8,8, : 0,1,2,3,4,5,6,7,8,9, :

Number new nodes in level n is given by : 1,2,4,7,7,11,12,17,18,24,

-----Class

477-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][100][110][120][201]]$

-----

--  
 Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,1,--
- R3) 0,1,-->0,0,1,--0,0,--0,1,--
- R4) 0,0,1,-->0,0,1,1,--0,0,1,2,--0,0,1,3,--
- R5) 0,0,1,1,-->0,0,1,1,2,--0,0,1,2,--0,0,1,3,--
- R6) 0,0,1,2,-->0,0,1,1,2,--0,0,1,1,--0,0,1,2,--0,0,1,3,--
- R7) 0,0,1,3,-->0,0,1,--0,0,1,2,--0,0,--0,1,--
- R8) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--
- R9) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--
- R10) 0,0,1,1,2,3,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--
- R11) 0,0,1,1,2,4,-->0,0,1,1,2,--0,0,1,1,2,3,--0,0,1,1,--0,0,1,2,--0,0,1,3,--
- R12) 0,0,1,1,2,5,-->0,0,1,--0,0,1,2,--0,0,1,1,2,4,--0,0,--0,1,--
- R13) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--
- R14) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--
- R15) 0,0,1,1,2,2,3,4,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--
- R16) 0,0,1,1,2,2,3,4,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--

0,0,1,1,2,2,3,5,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,--0,0,1,1,2,3,--0,  
0,1,1,2,4,--0,0,1,1,2,5,--

R17)

0,0,1,1,2,2,3,6,-->0,0,1,1,2,--0,0,1,1,2,3,--0,0,1,1,2,2,3,5,--0,0,1,1,--0,0,1,2,--  
0,0,1,3,--

R18)

0,0,1,1,2,2,3,7,-->0,0,1,--0,0,1,2,--0,0,1,1,2,4,--0,0,1,1,2,2,3,6,--0,0,--0,1,--

R19)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,--0,0,1,1,2,2,3,3,4,  
6,--0,0,1,1,2,2,3,3,4,7,--0,0,1,1,2,2,3,3,4,8,--0,0,1,1,2,2,3,3,4,9,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,1,:

LEN=4) 0,0,1,1,: 0,0,1,2,: 0,0,1,3,:

LEN=5) 0,0,1,1,2,:

LEN=6) 0,0,1,1,2,2,: 0,0,1,1,2,3,: 0,0,1,1,2,4,: 0,0,1,1,2,5,:

LEN=7) 0,0,1,1,2,2,3,:

LEN=8) 0,0,1,1,2,2,3,3,: 0,0,1,1,2,2,3,4,: 0,0,1,1,2,2,3,5,: 0,0,1,1,2,2,3,6,:

0,0,1,1,2,2,3,7,:

LEN=9) 0,0,1,1,2,2,3,3,4,:

LEN=10) 0,0,1,1,2,2,3,3,4,4,: 0,0,1,1,2,2,3,3,4,5,: 0,0,1,1,2,2,3,3,4,6,:

0,0,1,1,2,2,3,3,4,7,: 0,0,1,1,2,2,3,3,4,8,: 0,0,1,1,2,2,3,3,4,9,:

Number new nodes in level n is given by : 1,2,1,3,1,4,1,5,1,6,

-----Class

478-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][100][110][120][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,1,--0,1,--

R3) 0,1,-->0,0,1,--0,0,--0,1,--

R4) 0,0,1,-->0,0,1,1,--0,0,1,2,--0,0,1,3,--

R5) 0,0,1,1,-->0,0,1,1,2,--0,0,1,2,--0,0,1,3,--

R6) 0,0,1,2,-->0,0,1,1,2,--0,0,1,1,--0,0,1,2,--0,0,1,3,--

R7) 0,0,1,3,-->0,0,1,2,--0,0,1,--0,0,--0,1,--

R8) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--

R9) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--

R10)

0,0,1,1,2,3,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,  
5,--

R11) 0,0,1,1,2,4,-->0,0,1,1,2,3,--0,0,1,1,2,--0,0,1,1,--0,0,1,2,--0,0,1,3,--

R12) 0,0,1,1,2,5,-->0,0,1,1,2,4,--0,0,1,2,--0,0,1,--0,0,--0,1,--

R13)

0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,  
3,6,--0,0,1,1,2,2,3,7,--

R14)

0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,

2,2,3,6,--0,0,1,1,2,2,3,7,--  
R15)  
0,0,1,1,2,2,3,4,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,1,1,  
2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--  
R16)  
0,0,1,1,2,2,3,5,-->0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,--0,0,1,1,2,2,--0,0,1,1,2,3,--0,  
0,1,1,2,4,--0,0,1,1,2,5,--  
R17)  
0,0,1,1,2,2,3,6,-->0,0,1,1,2,2,3,5,--0,0,1,1,2,3,--0,0,1,1,2,--0,0,1,1,--0,0,1,2,--  
0,0,1,3,--  
R18)  
0,0,1,1,2,2,3,7,-->0,0,1,1,2,2,3,6,--0,0,1,1,2,4,--0,0,1,2,--0,0,1,--0,0,--0,1,--  
R19)  
0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,--0,0,1,1,2,2,3,3,4,  
6,--0,0,1,1,2,2,3,3,4,7,--0,0,1,1,2,2,3,3,4,8,--0,0,1,1,2,2,3,3,4,9,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,1, :  
LEN=4) 0,0,1,1, : 0,0,1,2, : 0,0,1,3, :  
LEN=5) 0,0,1,1,2, :  
LEN=6) 0,0,1,1,2,2, : 0,0,1,1,2,3, : 0,0,1,1,2,4, : 0,0,1,1,2,5, :  
LEN=7) 0,0,1,1,2,2,3, :  
LEN=8) 0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,3,4, : 0,0,1,1,2,2,3,5, : 0,0,1,1,2,2,3,6, :  
0,0,1,1,2,2,3,7, :  
LEN=9) 0,0,1,1,2,2,3,3,4, :  
LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,4,5, : 0,0,1,1,2,2,3,3,4,6, :  
0,0,1,1,2,2,3,3,4,7, : 0,0,1,1,2,2,3,3,4,8, : 0,0,1,1,2,2,3,3,4,9, :  
Number new nodes in level n is given by : 1,2,1,3,1,4,1,5,1,6,

-----Class

479-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][100][110][201][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,1,--0,1,--  
R3) 0,1,-->0,0,1,--0,0,--0,1,2,--  
R4) 0,0,1,-->0,0,1,1,--0,0,1,2,--0,1,2,--  
R5) 0,1,2,-->0,0,1,--0,0,1,--0,0,--0,1,2,3,--  
R6) 0,0,1,1,-->0,0,1,1,2,--0,0,1,2,--0,1,2,--  
R7) 0,0,1,2,-->0,0,1,1,2,--0,0,1,1,--0,0,1,2,3,--0,1,2,3,--  
R8) 0,1,2,3,-->0,0,1,--0,0,1,--0,0,1,--0,0,--0,1,2,3,4,--  
R9) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,2,3,--0,1,2,3,--  
R10) 0,0,1,2,3,-->0,0,1,1,2,--0,0,1,1,2,--0,0,1,1,--0,0,1,2,3,4,--0,1,2,3,4,--  
R11) 0,1,2,3,4,-->0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,--0,1,2,3,4,5,--  
R12) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,3,--0,0,1,2,3,--0,1,2,3,--  
R13)  
0,0,1,1,2,3,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,--0,0,1,1,2,3,4,--0,0,1,2,3,4,--0,1,2,3,

4, --  
R14)  
0,0,1,2,3,4, -->0,0,1,1,2, --0,0,1,1,2, --0,0,1,1,2, --0,0,1,1, --0,0,1,2,3,4,5, --0,1,2,3,4,5, --  
R15) 0,1,2,3,4,5, -->0,0,1, --0,0,1, --0,0,1, --0,0,1, --0,0,1, --0,0, --0,1,2,3,4,5,6, --  
R16)  
0,0,1,1,2,2,3, -->0,0,1,1,2,2,3,3, --0,0,1,1,2,2,3,4, --0,0,1,1,2,3,4, --0,0,1,2,3,4, --  
0,1,2,3,4, --  
R17)  
0,0,1,1,2,3,4, -->0,0,1,1,2,2,3, --0,0,1,1,2,2,3, --0,0,1,1,2,2, --0,0,1,1,2,3,4,5, --0,  
0,1,2,3,4,5, --0,1,2,3,4,5, --  
R18)  
0,0,1,2,3,4,5, -->0,0,1,1,2, --0,0,1,1,2, --0,0,1,1,2, --0,0,1,1,2, --0,0,1,1, --0,0,1,2,  
3,4,5,6, --0,1,2,3,4,5,6, --  
R19)  
0,1,2,3,4,5,6, -->0,0,1, --0,0,1, --0,0,1, --0,0,1, --0,0,1, --0,0,1, --0,0, --0,1,2,3,4,5,  
6,7, --  
R20)  
0,0,1,1,2,2,3,3, -->0,0,1,1,2,2,3,3,4, --0,0,1,1,2,2,3,4, --0,0,1,1,2,3,4, --0,0,1,2,3,  
4, --0,1,2,3,4, --  
R21)  
0,0,1,1,2,2,3,4, -->0,0,1,1,2,2,3,3,4, --0,0,1,1,2,2,3,3, --0,0,1,1,2,2,3,4,5, --0,0,1,  
1,2,3,4,5, --0,0,1,2,3,4,5, --0,1,2,3,4,5, --  
R22)  
0,0,1,1,2,3,4,5, -->0,0,1,1,2,2,3, --0,0,1,1,2,2,3, --0,0,1,1,2,2,3, --0,0,1,1,2,2, --0,  
0,1,1,2,3,4,5,6, --0,0,1,2,3,4,5,6, --0,1,2,3,4,5,6, --  
R23)  
0,0,1,2,3,4,5,6, -->0,0,1,1,2, --0,0,1,1,2, --0,0,1,1,2, --0,0,1,1,2, --0,0,1,1,2, --0,0,  
1,1, --0,0,1,2,3,4,5,6,7, --0,1,2,3,4,5,6,7, --  
R24)  
0,1,2,3,4,5,6,7, -->0,0,1, --0,0,1, --0,0,1, --0,0,1, --0,0,1, --0,0,1, --0,0,1, --0,0, --0,  
1,2,3,4,5,6,7,8, --  
R25)  
0,0,1,1,2,2,3,3,4, -->0,0,1,1,2,2,3,3,4,4, --0,0,1,1,2,2,3,3,4,5, --0,0,1,1,2,2,3,4,5,  
--0,0,1,1,2,3,4,5, --0,0,1,2,3,4,5, --0,1,2,3,4,5, --  
R26)  
0,0,1,1,2,2,3,4,5, -->0,0,1,1,2,2,3,3,4, --0,0,1,1,2,2,3,3,4, --0,0,1,1,2,2,3,3, --0,0,  
1,1,2,2,3,4,5,6, --0,0,1,1,2,3,4,5,6, --0,0,1,2,3,4,5,6, --0,1,2,3,4,5,6, --  
R27)  
0,0,1,1,2,3,4,5,6, -->0,0,1,1,2,2,3, --0,0,1,1,2,2,3, --0,0,1,1,2,2,3, --0,0,1,1,2,2,3,  
--0,0,1,1,2,2, --0,0,1,1,2,3,4,5,6,7, --0,0,1,2,3,4,5,6,7, --0,1,2,3,4,5,6,7, --  
R28)  
0,0,1,2,3,4,5,6,7, -->0,0,1,1,2, --0,0,1,1,2, --0,0,1,1,2, --0,0,1,1,2, --0,0,1,1,2, --0,  
0,1,1,2, --0,0,1,1, --0,0,1,2,3,4,5,6,7,8, --0,1,2,3,4,5,6,7,8, --  
R29)  
0,1,2,3,4,5,6,7,8, -->0,0,1, --0,0,1, --0,0,1, --0,0,1, --0,0,1, --0,0,1, --0,0,1, --0,0,1, --0,0,1,  
--0,0, --0,1,2,3,4,5,6,7,8,9, --  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,1,: 0,1,2,:  
 LEN=4) 0,0,1,1,: 0,0,1,2,: 0,1,2,3,:  
 LEN=5) 0,0,1,1,2,: 0,0,1,2,3,: 0,1,2,3,4,:  
 LEN=6) 0,0,1,1,2,2,: 0,0,1,1,2,3,: 0,0,1,2,3,4,: 0,1,2,3,4,5,:  
 LEN=7) 0,0,1,1,2,2,3,: 0,0,1,1,2,3,4,: 0,0,1,2,3,4,5,: 0,1,2,3,4,5,6,:  
 LEN=8) 0,0,1,1,2,2,3,3,: 0,0,1,1,2,2,3,4,: 0,0,1,1,2,3,4,5,: 0,0,1,2,3,4,5,6,:  
 0,1,2,3,4,5,6,7,:  
 LEN=9) 0,0,1,1,2,2,3,3,4,: 0,0,1,1,2,2,3,4,5,: 0,0,1,1,2,3,4,5,6,:  
 0,0,1,2,3,4,5,6,7,: 0,1,2,3,4,5,6,7,8,:  
 LEN=10) 0,0,1,1,2,2,3,3,4,4,: 0,0,1,1,2,2,3,3,4,5,: 0,0,1,1,2,2,3,4,5,6,:  
 0,0,1,1,2,3,4,5,6,7,: 0,0,1,2,3,4,5,6,7,8,: 0,1,2,3,4,5,6,7,8,9,:  
 Number new nodes in level n is given by : 1,2,2,3,3,4,4,5,5,6,

-----Class

480-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][100][120][201][210]]$

-----

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,1,--
- R3) 0,1,-->0,0,1,--0,1,1,--0,1,--
- R4) 0,0,1,-->0,0,1,1,--0,0,1,2,--0,0,1,3,--
- R5) 0,1,1,-->0,0,1,1,--0,0,1,--0,1,--
- R6) 0,0,1,1,-->0,0,1,1,2,--0,0,1,2,--0,0,1,3,--
- R7) 0,0,1,2,-->0,0,1,1,2,--0,0,1,2,2,--0,0,1,2,--0,0,1,3,--
- R8) 0,0,1,3,-->0,0,1,--0,0,1,--0,0,1,3,3,--0,1,--
- R9) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--
- R10) 0,0,1,2,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,2,--0,0,1,3,--
- R11) 0,0,1,3,3,-->0,0,1,1,--0,0,1,1,--0,0,1,--0,1,--
- R12) 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--
- R13) 0,0,1,1,2,3,-->0,0,1,1,2,2,3,--0,0,1,1,2,3,3,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--
- R14) 0,0,1,1,2,4,-->0,0,1,1,2,--0,0,1,1,2,--0,0,1,1,2,4,4,--0,0,1,2,--0,0,1,3,--
- R15) 0,0,1,1,2,5,-->0,0,1,--0,0,1,--0,0,1,--0,0,1,1,2,5,5,--0,1,--
- R16) 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--
- R17) 0,0,1,1,2,3,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--
- R18) 0,0,1,1,2,4,4,-->0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,2,--0,0,1,3,--
- R19) 0,0,1,1,2,5,5,-->0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,--0,1,--
- R20) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--
- R21) 0,0,1,1,2,2,3,4,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,4,4,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--

R22) 0,0,1,1,2,2,3,5,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,3,5,5,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--

R23) 0,0,1,1,2,2,3,6,-->0,0,1,1,2,--0,0,1,1,2,--0,0,1,1,2,--0,0,1,1,2,2,3,6,6,--0,0,1,2,--0,0,1,3,--

R24) 0,0,1,1,2,2,3,7,-->0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,1,2,2,3,7,7,--0,1,--

R25) 0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,--0,0,1,1,2,2,3,3,4,6,--0,0,1,1,2,2,3,3,4,7,--0,0,1,1,2,2,3,3,4,8,--0,0,1,1,2,2,3,3,4,9,--

R26) 0,0,1,1,2,2,3,4,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--

R27) 0,0,1,1,2,2,3,5,5,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--

R28) 0,0,1,1,2,2,3,6,6,-->0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,2,--0,0,1,3,--

R29) 0,0,1,1,2,2,3,7,7,-->0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,1,: 0,1,1,:

LEN=4) 0,0,1,1,: 0,0,1,2,: 0,0,1,3,:

LEN=5) 0,0,1,1,2,: 0,0,1,2,2,: 0,0,1,3,3,:

LEN=6) 0,0,1,1,2,2,: 0,0,1,1,2,3,: 0,0,1,1,2,4,: 0,0,1,1,2,5,:

LEN=7) 0,0,1,1,2,2,3,: 0,0,1,1,2,3,3,: 0,0,1,1,2,4,4,: 0,0,1,1,2,5,5,:

LEN=8) 0,0,1,1,2,2,3,3,: 0,0,1,1,2,2,3,4,: 0,0,1,1,2,2,3,5,: 0,0,1,1,2,2,3,6,:

0,0,1,1,2,2,3,7,:

LEN=9) 0,0,1,1,2,2,3,3,4,: 0,0,1,1,2,2,3,4,4,: 0,0,1,1,2,2,3,5,5,:

0,0,1,1,2,2,3,6,6,: 0,0,1,1,2,2,3,7,7,:

LEN=10) 0,0,1,1,2,2,3,3,4,4,: 0,0,1,1,2,2,3,3,4,5,: 0,0,1,1,2,2,3,3,4,6,:

0,0,1,1,2,2,3,3,4,7,: 0,0,1,1,2,2,3,3,4,8,: 0,0,1,1,2,2,3,3,4,9,:

Number new nodes in level n is given by : 1,2,2,3,3,4,4,5,5,6,

-----Class

481-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][101][102][110][120]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,0,2,--
- R3) 0,1,-->0,1,0,--0,0,--0,1,--
- R4) 0,0,1,-->0,0,1,1,--0,0,1,2,--0,0,1,3,--
- R5) 0,0,2,-->0,0,2,1,--0,0,--0,1,--
- R6) 0,1,0,-->
- R7) 0,0,1,1,-->0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--
- R8) 0,0,1,2,-->0,1,0,--0,0,1,1,--0,0,1,2,--0,0,1,3,--

R9) 0,0,1,3,-->0,0,1,3,1,--0,0,1,3,2,--0,0,--0,1,--  
R10) 0,0,2,1,-->0,1,0,--  
R11) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--  
R12) 0,0,1,1,3,-->0,0,2,1,--0,0,1,1,--0,0,1,2,--0,0,1,3,--  
R13) 0,0,1,1,4,-->0,0,1,1,4,2,--0,0,1,1,4,3,--0,0,--0,1,--  
R14) 0,0,1,3,1,-->0,0,2,1,--  
R15) 0,0,1,3,2,-->0,1,0,--0,1,0,--  
R16)  
0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--  
R17)  
0,0,1,1,2,3,-->0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--  
R18) 0,0,1,1,2,4,-->0,0,1,3,1,--0,0,1,3,2,--0,0,1,1,--0,0,1,2,--0,0,1,3,--  
R19) 0,0,1,1,2,5,-->0,0,1,1,2,5,2,--0,0,1,1,2,5,3,--0,0,1,1,2,5,4,--0,0,--0,1,--  
R20) 0,0,1,1,4,2,-->0,0,1,3,1,--0,0,1,3,2,--  
R21) 0,0,1,1,4,3,-->0,0,2,1,--0,1,0,--  
R22)  
0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,  
3,6,--0,0,1,1,2,2,3,7,--  
R23)  
0,0,1,1,2,2,4,-->0,0,2,1,--0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--  
R24) 0,0,1,1,2,2,5,-->0,0,1,1,4,2,--0,0,1,1,4,3,--0,0,1,1,--0,0,1,2,--0,0,1,3,--  
R25)  
0,0,1,1,2,2,6,-->0,0,1,1,2,2,6,3,--0,0,1,1,2,2,6,4,--0,0,1,1,2,2,6,5,--0,0,--0,1,--  
R26) 0,0,1,1,2,5,2,-->0,0,1,1,4,2,--0,0,1,1,4,3,--  
R27) 0,0,1,1,2,5,3,-->0,1,0,--0,0,1,3,1,--0,0,1,3,2,--  
R28) 0,0,1,1,2,5,4,-->0,0,1,3,1,--0,0,1,3,2,--0,1,0,--  
R29)  
0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,  
1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--  
R30)  
0,0,1,1,2,2,3,4,-->0,1,0,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,  
0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--  
R31)  
0,0,1,1,2,2,3,5,-->0,0,1,3,1,--0,0,1,3,2,--0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,  
--0,0,1,1,2,5,--  
R32)  
0,0,1,1,2,2,3,6,-->0,0,1,1,2,5,2,--0,0,1,1,2,5,3,--0,0,1,1,2,5,4,--0,0,1,1,--0,0,1,  
2,--0,0,1,3,--  
R33)  
0,0,1,1,2,2,3,7,-->0,0,1,1,2,2,3,7,3,--0,0,1,1,2,2,3,7,4,--0,0,1,1,2,2,3,7,5,--0,0,  
1,1,2,2,3,7,6,--0,0,--0,1,--  
R34) 0,0,1,1,2,2,6,3,-->0,0,1,1,2,5,2,--0,0,1,1,2,5,3,--0,0,1,1,2,5,4,--  
R35) 0,0,1,1,2,2,6,4,-->0,0,2,1,--0,0,1,3,1,--0,0,1,3,2,--  
R36) 0,0,1,1,2,2,6,5,-->0,0,1,1,4,2,--0,0,1,1,4,3,--0,1,0,--  
R37)  
0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,--0,0,1,1,2,2,3,3,4,  
6,--0,0,1,1,2,2,3,3,4,7,--0,0,1,1,2,2,3,3,4,8,--0,0,1,1,2,2,3,3,4,9,--  
R38)  
0,0,1,1,2,2,3,3,5,-->0,0,2,1,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,  
--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--



R39)

0,0,1,1,2,2,3,3,6,-->0,0,1,1,4,2,--0,0,1,1,4,3,--0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--

R40)

0,0,1,1,2,2,3,3,7,-->0,0,1,1,2,2,6,3,--0,0,1,1,2,2,6,4,--0,0,1,1,2,2,6,5,--0,0,1,1,--0,0,1,2,--0,0,1,3,--

R41)

0,0,1,1,2,2,3,3,8,-->0,0,1,1,2,2,3,3,8,4,--0,0,1,1,2,2,3,3,8,5,--0,0,1,1,2,2,3,3,8,6,--0,0,1,1,2,2,3,3,8,7,--0,0,--0,1,--

R42) 0,0,1,1,2,2,3,7,3,-->0,0,1,1,2,2,6,3,--0,0,1,1,2,2,6,4,--0,0,1,1,2,2,6,5,--

R43) 0,0,1,1,2,2,3,7,4,-->0,1,0,--0,0,1,1,2,5,2,--0,0,1,1,2,5,3,--0,0,1,1,2,5,4,--

R44) 0,0,1,1,2,2,3,7,5,-->0,0,1,3,1,--0,0,1,3,2,--0,0,1,3,1,--0,0,1,3,2,--

R45) 0,0,1,1,2,2,3,7,6,-->0,0,1,1,2,5,2,--0,0,1,1,2,5,3,--0,0,1,1,2,5,4,--0,1,0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,1,: 0,0,2,: 0,1,0,:

LEN=4) 0,0,1,1,: 0,0,1,2,: 0,0,1,3,: 0,0,2,1,:

LEN=5) 0,0,1,1,2,: 0,0,1,1,3,: 0,0,1,1,4,: 0,0,1,3,1,: 0,0,1,3,2,:

LEN=6) 0,0,1,1,2,2,: 0,0,1,1,2,3,: 0,0,1,1,2,4,: 0,0,1,1,2,5,: 0,0,1,1,4,2,:

0,0,1,1,4,3,:

LEN=7) 0,0,1,1,2,2,3,: 0,0,1,1,2,2,4,: 0,0,1,1,2,2,5,: 0,0,1,1,2,2,6,:

0,0,1,1,2,5,2,: 0,0,1,1,2,5,3,: 0,0,1,1,2,5,4,:

LEN=8) 0,0,1,1,2,2,3,3,: 0,0,1,1,2,2,3,4,: 0,0,1,1,2,2,3,5,: 0,0,1,1,2,2,3,6,:

0,0,1,1,2,2,3,7,: 0,0,1,1,2,2,6,3,: 0,0,1,1,2,2,6,4,: 0,0,1,1,2,2,6,5,:

LEN=9) 0,0,1,1,2,2,3,3,4,: 0,0,1,1,2,2,3,3,5,: 0,0,1,1,2,2,3,3,6,:

0,0,1,1,2,2,3,3,7,: 0,0,1,1,2,2,3,3,8,: 0,0,1,1,2,2,3,7,3,: 0,0,1,1,2,2,3,7,4,:

0,0,1,1,2,2,3,7,5,: 0,0,1,1,2,2,3,7,6,:

LEN=10) 0,0,1,1,2,2,3,3,4,4,: 0,0,1,1,2,2,3,3,4,5,: 0,0,1,1,2,2,3,3,4,6,:

0,0,1,1,2,2,3,3,4,7,: 0,0,1,1,2,2,3,3,4,8,: 0,0,1,1,2,2,3,3,4,9,:

0,0,1,1,2,2,3,3,8,4,: 0,0,1,1,2,2,3,3,8,5,: 0,0,1,1,2,2,3,3,8,6,:

0,0,1,1,2,2,3,3,8,7,:

Number new nodes in level n is given by : 1,2,3,4,5,6,7,8,9,10,

-----Class

482-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][101][102][110][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,1,--0,0,2,--

R3) 0,1,-->0,1,0,--0,0,--0,1,2,--

R4) 0,0,1,-->0,0,1,1,--0,0,1,2,--0,0,1,3,--

R5) 0,0,2,-->0,0,2,1,--0,0,--0,0,2,3,--

R6) 0,1,0,-->

R7) 0,1,2,-->0,1,0,--0,1,0,--0,0,--0,1,2,3,--

R8) 0,0,1,1,-->0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--

R9) 0,0,1,2,-->0,1,0,--0,0,1,1,--0,0,1,2,3,--0,0,1,2,4,--

R10) 0,0,1,3,-->0,1,0,--0,0,1,3,2,--0,0,--0,0,1,3,4,--

R11) 0,0,2,1,-->0,1,0,--  
R12) 0,0,2,3,-->0,0,2,1,--0,1,0,--0,0,--0,0,2,3,4,--  
R13) 0,1,2,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,--  
R14) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--  
R15) 0,0,1,1,3,-->0,0,2,1,--0,0,1,1,--0,0,1,1,3,4,--0,0,1,1,3,5,--  
R16) 0,0,1,1,4,-->0,0,2,1,--0,0,1,1,4,3,--0,0,--0,0,1,1,4,5,--  
R17) 0,0,1,2,3,-->0,1,0,--0,1,0,--0,0,1,1,--0,0,1,2,3,4,--0,0,1,2,3,5,--  
R18) 0,0,1,2,4,-->0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,--0,0,1,2,4,5,--  
R19) 0,0,1,3,2,-->0,1,0,--0,1,0,--  
R20) 0,0,1,3,4,-->0,1,0,--0,0,1,3,2,--0,1,0,--0,0,--0,0,1,3,4,5,--  
R21) 0,0,2,3,4,-->0,0,2,1,--0,1,0,--0,1,0,--0,0,--0,0,2,3,4,5,--  
R22) 0,1,2,3,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,--  
R23)  
0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--  
R24)  
0,0,1,1,2,3,-->0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,3,4,--0,0,1,1,2,3,5,--0,0,1,1,2,3,6,--  
--  
R25) 0,0,1,1,2,4,-->0,1,0,--0,0,1,3,2,--0,0,1,1,--0,0,1,1,2,4,5,--0,0,1,1,2,4,6,--  
R26) 0,0,1,1,2,5,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--0,0,--0,0,1,1,2,5,6,--  
R27) 0,0,1,1,3,4,-->0,0,2,1,--0,1,0,--0,0,1,1,--0,0,1,1,3,4,5,--0,0,1,1,3,4,6,--  
R28) 0,0,1,1,3,5,-->0,0,2,1,--0,1,0,--0,0,1,1,3,5,4,--0,0,--0,0,1,1,3,5,6,--  
R29) 0,0,1,1,4,3,-->0,0,2,1,--0,1,0,--  
R30) 0,0,1,1,4,5,-->0,0,2,1,--0,0,1,1,4,3,--0,1,0,--0,0,--0,0,1,1,4,5,6,--  
R31)  
0,0,1,2,3,4,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,2,3,4,5,--0,0,1,2,3,4,6,--  
R32) 0,0,1,2,3,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,0,--0,0,1,2,3,5,6,--  
R33) 0,0,1,2,4,3,-->0,1,0,--0,1,0,--0,1,0,--  
R34) 0,0,1,2,4,5,-->0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,0,--0,0,1,2,4,5,6,--  
R35) 0,0,1,3,4,5,-->0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,0,--0,0,1,3,4,5,6,--  
R36) 0,0,2,3,4,5,-->0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,2,3,4,5,6,--  
R37) 0,1,2,3,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,6,--  
R38)  
0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--  
R39)  
0,0,1,1,2,2,4,-->0,0,2,1,--0,0,1,1,2,2,--0,0,1,1,2,2,4,5,--0,0,1,1,2,2,4,6,--0,0,1,1,2,2,4,7,--  
R40)  
0,0,1,1,2,2,5,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,--0,0,1,1,2,2,5,6,--0,0,1,1,2,2,5,7,--  
R41)  
0,0,1,1,2,2,6,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,6,5,--0,0,--0,0,1,1,2,2,6,7,--  
R42)  
0,0,1,1,2,3,4,-->0,1,0,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,3,4,5,--0,0,1,1,2,3,4,6,--  
0,0,1,1,2,3,4,7,--  
R43)  
0,0,1,1,2,3,5,-->0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,1,1,--0,0,1,1,2,3,5,6,--0,0,1,1,2,3,5,7,--  
R44)  
0,0,1,1,2,3,6,-->0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,1,1,2,3,6,5,--0,0,--0,0,1,1,2,3,

6,7, --  
 R45)  
 0,0,1,1,2,4,5, -->0,1,0, --0,0,1,3,2, --0,1,0, --0,0,1,1, --0,0,1,1,2,4,5,6, --0,0,1,1,2,  
 4,5,7, --  
 R46)  
 0,0,1,1,2,4,6, -->0,1,0, --0,0,1,3,2, --0,1,0, --0,0,1,1,2,4,6,5, --0,0, --0,0,1,1,2,4,6,  
 7, --  
 R47) 0,0,1,1,2,5,4, -->0,1,0, --0,0,1,3,2, --0,1,0, --  
 R48)  
 0,0,1,1,2,5,6, -->0,1,0, --0,0,1,3,2, --0,0,1,1,2,5,4, --0,1,0, --0,0, --0,0,1,1,2,5,6,7,  
 --  
 R49)  
 0,0,1,1,3,4,5, -->0,0,2,1, --0,1,0, --0,1,0, --0,0,1,1, --0,0,1,1,3,4,5,6, --0,0,1,1,3,4,  
 5,7, --  
 R50)  
 0,0,1,1,3,4,6, -->0,0,2,1, --0,1,0, --0,1,0, --0,0,1,1,3,4,6,5, --0,0, --0,0,1,1,3,4,6,7,  
 --  
 R51) 0,0,1,1,3,5,4, -->0,0,2,1, --0,1,0, --0,1,0, --  
 R52)  
 0,0,1,1,3,5,6, -->0,0,2,1, --0,1,0, --0,0,1,1,3,5,4, --0,1,0, --0,0, --0,0,1,1,3,5,6,7, --  
 R53)  
 0,0,1,1,4,5,6, -->0,0,2,1, --0,0,1,1,4,3, --0,1,0, --0,1,0, --0,0, --0,0,1,1,4,5,6,7, --  
 R54)  
 0,0,1,2,3,4,5, -->0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,0,1,1, --0,0,1,2,3,4,5,6, --0,0,1,  
 2,3,4,5,7, --  
 R55)  
 0,0,1,2,3,4,6, -->0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,0,1,2,3,4,6,5, --0,0, --0,0,1,2,3,  
 4,6,7, --  
 R56) 0,0,1,2,3,5,4, -->0,1,0, --0,1,0, --0,1,0, --0,1,0, --  
 R57)  
 0,0,1,2,3,5,6, -->0,1,0, --0,1,0, --0,1,0, --0,0,1,2,3,5,4, --0,1,0, --0,0, --0,0,1,2,3,5,  
 6,7, --  
 R58)  
 0,0,1,2,4,5,6, -->0,1,0, --0,1,0, --0,0,1,2,4,3, --0,1,0, --0,1,0, --0,0, --0,0,1,2,4,5,6,  
 7, --  
 R59)  
 0,0,1,3,4,5,6, -->0,1,0, --0,0,1,3,2, --0,1,0, --0,1,0, --0,1,0, --0,0, --0,0,1,3,4,5,6,7,  
 --  
 R60)  
 0,0,2,3,4,5,6, -->0,0,2,1, --0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,0, --0,0,2,3,4,5,6,7, --  
 R61)  
 0,1,2,3,4,5,6, -->0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,0, --0,1,2,3,4,5,  
 6,7, --  
 R62)  
 0,0,1,1,2,2,3,3, -->0,0,1,1,2,2,3,3,4, --0,0,1,1,2,2,3,3,5, --0,0,1,1,2,2,3,3,6, --0,0,  
 1,1,2,2,3,3,7, --0,0,1,1,2,2,3,3,8, --  
 R63)  
 0,0,1,1,2,2,3,4, -->0,1,0, --0,0,1,1,2,2,3,3, --0,0,1,1,2,2,3,4,5, --0,0,1,1,2,2,3,4,6,  
 --0,0,1,1,2,2,3,4,7, --0,0,1,1,2,2,3,4,8, --  
 R64)

0,0,1,1,2,2,3,5,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,2,--0,0,1,1,2,2,3,5,6,--0,0,1,1,2,2,3,5,7,--0,0,1,1,2,2,3,5,8,--

R65)

0,0,1,1,2,2,3,6,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--0,0,1,1,--0,0,1,1,2,2,3,6,7,--0,0,1,1,2,2,3,6,8,--

R66)

0,0,1,1,2,2,3,7,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--0,0,1,1,2,2,3,7,6,--0,0,--0,0,1,1,2,2,3,7,8,--

R67)

0,0,1,1,2,2,4,5,-->0,0,2,1,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,2,4,5,6,--0,0,1,1,2,2,4,5,7,--0,0,1,1,2,2,4,5,8,--

R68)

0,0,1,1,2,2,4,6,-->0,0,2,1,--0,1,0,--0,0,1,1,3,5,4,--0,0,1,1,--0,0,1,1,2,2,4,6,7,--0,0,1,1,2,2,4,6,8,--

R69)

0,0,1,1,2,2,4,7,-->0,0,2,1,--0,1,0,--0,0,1,1,3,5,4,--0,0,1,1,2,2,4,7,6,--0,0,--0,0,1,1,2,2,4,7,8,--

R70)

0,0,1,1,2,2,5,6,-->0,0,2,1,--0,0,1,1,4,3,--0,1,0,--0,0,1,1,--0,0,1,1,2,2,5,6,7,--0,0,1,1,2,2,5,6,8,--

R71)

0,0,1,1,2,2,5,7,-->0,0,2,1,--0,0,1,1,4,3,--0,1,0,--0,0,1,1,2,2,5,7,6,--0,0,--0,0,1,1,2,2,5,7,8,--

R72) 0,0,1,1,2,2,6,5,-->0,0,2,1,--0,0,1,1,4,3,--0,1,0,--

R73)

0,0,1,1,2,2,6,7,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,6,5,--0,1,0,--0,0,--0,0,1,1,2,2,6,7,8,--

R74)

0,0,1,1,2,3,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,3,4,5,6,--0,0,1,1,2,3,4,5,7,--0,0,1,1,2,3,4,5,8,--

R75)

0,0,1,1,2,3,4,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,0,1,1,--0,0,1,1,2,3,4,6,7,--0,0,1,1,2,3,4,6,8,--

R76)

0,0,1,1,2,3,4,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,0,1,1,2,3,4,7,6,--0,0,--0,0,1,1,2,3,4,7,8,--

R77)

0,0,1,1,2,3,5,6,-->0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,0,1,1,--0,0,1,1,2,3,5,6,7,--0,0,1,1,2,3,5,6,8,--

R78)

0,0,1,1,2,3,5,7,-->0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,0,1,1,2,3,5,7,6,--0,0,--0,0,1,1,2,3,5,7,8,--

R79) 0,0,1,1,2,3,6,5,-->0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--

R80)

0,0,1,1,2,3,6,7,-->0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,1,1,2,3,6,5,--0,1,0,--0,0,--0,0,1,1,2,3,6,7,8,--

R81)

0,0,1,1,2,4,5,6,-->0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,1,2,4,5,6,7,--0,0,1,1,2,4,5,6,8,--

R82)

0,0,1,1,2,4,5,7,-->0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,0,1,1,2,4,5,7,6,--0,0,--0,  
0,1,1,2,4,5,7,8,--

R83) 0,0,1,1,2,4,6,5,-->0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--  
R84)

0,0,1,1,2,4,6,7,-->0,1,0,--0,0,1,3,2,--0,1,0,--0,0,1,1,2,4,6,5,--0,1,0,--0,0,--0,0,  
1,1,2,4,6,7,8,--

R85)  
0,0,1,1,2,5,6,7,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--0,1,0,--0,1,0,--0,0,--0,0,1,  
1,2,5,6,7,8,--

R86)  
0,0,1,1,3,4,5,6,-->0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,1,3,4,5,6,7,--  
0,0,1,1,3,4,5,6,8,--

R87)  
0,0,1,1,3,4,5,7,-->0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,3,4,5,7,6,--0,0,--0,0,  
1,1,3,4,5,7,8,--

R88) 0,0,1,1,3,4,6,5,-->0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--  
R89)

0,0,1,1,3,4,6,7,-->0,0,2,1,--0,1,0,--0,1,0,--0,0,1,1,3,4,6,5,--0,1,0,--0,0,--0,0,1,  
1,3,4,6,7,8,--

R90)  
0,0,1,1,3,5,6,7,-->0,0,2,1,--0,1,0,--0,0,1,1,3,5,4,--0,1,0,--0,1,0,--0,0,--0,0,1,1,  
3,5,6,7,8,--

R91)  
0,0,1,1,4,5,6,7,-->0,0,2,1,--0,0,1,1,4,3,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,1,1,4,  
5,6,7,8,--

R92)  
0,0,1,2,3,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,2,3,4,5,  
6,7,--0,0,1,2,3,4,5,6,8,--

R93)  
0,0,1,2,3,4,5,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,5,7,6,--0,0,  
--0,0,1,2,3,4,5,7,8,--

R94) 0,0,1,2,3,4,6,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
R95)

0,0,1,2,3,4,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,6,5,--0,1,0,--0,0,--  
0,0,1,2,3,4,6,7,8,--

R96)  
0,0,1,2,3,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,1,0,--0,1,0,--0,0,--0,  
0,1,2,3,5,6,7,8,--

R97)  
0,0,1,2,4,5,6,7,-->0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,  
1,2,4,5,6,7,8,--

R98)  
0,0,1,3,4,5,6,7,-->0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,1,  
3,4,5,6,7,8,--

R99)  
0,0,2,3,4,5,6,7,-->0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,2,3,  
4,5,6,7,8,--

R100)  
0,1,2,3,4,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,  
1,2,3,4,5,6,7,8,--

R101)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,--0,0,1,1,2,2,3,3,4,6,--0,0,1,1,2,2,3,3,4,7,--0,0,1,1,2,2,3,3,4,8,--0,0,1,1,2,2,3,3,4,9,--

R102)

0,0,1,1,2,2,3,3,5,-->0,0,2,1,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,5,6,--0,0,1,1,2,2,3,3,5,7,--0,0,1,1,2,2,3,3,5,8,--0,0,1,1,2,2,3,3,5,9,--

R103)

0,0,1,1,2,2,3,3,6,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,--0,0,1,1,2,2,3,3,6,7,--0,0,1,1,2,2,3,3,6,8,--0,0,1,1,2,2,3,3,6,9,--

R104)

0,0,1,1,2,2,3,3,7,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,6,5,--0,0,1,1,--0,0,1,1,2,2,3,3,7,8,--0,0,1,1,2,2,3,3,7,9,--

R105)

0,0,1,1,2,2,3,3,8,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,6,5,--0,0,1,1,2,2,3,3,8,7,--0,0,--0,0,1,1,2,2,3,3,8,9,--

R106)

0,0,1,1,2,2,3,4,5,-->0,1,0,--0,1,0,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,5,6,--0,0,1,1,2,2,3,4,5,7,--0,0,1,1,2,2,3,4,5,8,--0,0,1,1,2,2,3,4,5,9,--

R107)

0,0,1,1,2,2,3,4,6,-->0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,1,1,2,2,--0,0,1,1,2,2,3,4,6,7,--0,0,1,1,2,2,3,4,6,8,--0,0,1,1,2,2,3,4,6,9,--

R108)

0,0,1,1,2,2,3,4,7,-->0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,1,1,2,3,6,5,--0,0,1,1,--0,0,1,1,2,2,3,4,7,8,--0,0,1,1,2,2,3,4,7,9,--

R109)

0,0,1,1,2,2,3,4,8,-->0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,1,1,2,3,6,5,--0,0,1,1,2,2,3,4,8,7,--0,0,--0,0,1,1,2,2,3,4,8,9,--

R110)

0,0,1,1,2,2,3,5,6,-->0,1,0,--0,0,1,3,2,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,2,3,5,6,7,--0,0,1,1,2,2,3,5,6,8,--0,0,1,1,2,2,3,5,6,9,--

R111)

0,0,1,1,2,2,3,5,7,-->0,1,0,--0,0,1,3,2,--0,1,0,--0,0,1,1,2,4,6,5,--0,0,1,1,--0,0,1,1,2,2,3,5,7,8,--0,0,1,1,2,2,3,5,7,9,--

R112)

0,0,1,1,2,2,3,5,8,-->0,1,0,--0,0,1,3,2,--0,1,0,--0,0,1,1,2,4,6,5,--0,0,1,1,2,2,3,5,8,7,--0,0,--0,0,1,1,2,2,3,5,8,9,--

R113)

0,0,1,1,2,2,3,6,7,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--0,1,0,--0,0,1,1,--0,0,1,1,2,2,3,6,7,8,--0,0,1,1,2,2,3,6,7,9,--

R114)

0,0,1,1,2,2,3,6,8,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--0,1,0,--0,0,1,1,2,2,3,6,8,7,--0,0,--0,0,1,1,2,2,3,6,8,9,--

R115) 0,0,1,1,2,2,3,7,6,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--0,1,0,--

R116)

0,0,1,1,2,2,3,7,8,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--0,0,1,1,2,2,3,7,6,--0,1,0,--0,0,--0,0,1,1,2,2,3,7,8,9,--

R117)

0,0,1,1,2,2,4,5,6,-->0,0,2,1,--0,1,0,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,2,4,5,6,7,--0,0,1,1,2,2,4,5,6,8,--0,0,1,1,2,2,4,5,6,9,--

R118)

0,0,1,1,2,2,4,5,7,-->0,0,2,1,--0,1,0,--0,1,0,--0,0,1,1,3,4,6,5,--0,0,1,1,--0,0,1,1,  
2,2,4,5,7,8,--0,0,1,1,2,2,4,5,7,9,--

R119)

0,0,1,1,2,2,4,5,8,-->0,0,2,1,--0,1,0,--0,1,0,--0,0,1,1,3,4,6,5,--0,0,1,1,2,2,4,5,8,  
7,--0,0,--0,0,1,1,2,2,4,5,8,9,--

R120)

0,0,1,1,2,2,4,6,7,-->0,0,2,1,--0,1,0,--0,0,1,1,3,5,4,--0,1,0,--0,0,1,1,--0,0,1,1,2,  
2,4,6,7,8,--0,0,1,1,2,2,4,6,7,9,--

R121)

0,0,1,1,2,2,4,6,8,-->0,0,2,1,--0,1,0,--0,0,1,1,3,5,4,--0,1,0,--0,0,1,1,2,2,4,6,8,7,  
--0,0,--0,0,1,1,2,2,4,6,8,9,--

R122) 0,0,1,1,2,2,4,7,6,-->0,0,2,1,--0,1,0,--0,0,1,1,3,5,4,--0,1,0,--

R123)

0,0,1,1,2,2,4,7,8,-->0,0,2,1,--0,1,0,--0,0,1,1,3,5,4,--0,0,1,1,2,2,4,7,6,--0,1,0,--  
0,0,--0,0,1,1,2,2,4,7,8,9,--

R124)

0,0,1,1,2,2,5,6,7,-->0,0,2,1,--0,0,1,1,4,3,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,1,2,2,  
5,6,7,8,--0,0,1,1,2,2,5,6,7,9,--

R125)

0,0,1,1,2,2,5,6,8,-->0,0,2,1,--0,0,1,1,4,3,--0,1,0,--0,1,0,--0,0,1,1,2,2,5,6,8,7,--  
0,0,--0,0,1,1,2,2,5,6,8,9,--

R126) 0,0,1,1,2,2,5,7,6,-->0,0,2,1,--0,0,1,1,4,3,--0,1,0,--0,1,0,--

R127)

0,0,1,1,2,2,5,7,8,-->0,0,2,1,--0,0,1,1,4,3,--0,1,0,--0,0,1,1,2,2,5,7,6,--0,1,0,--0,  
0,--0,0,1,1,2,2,5,7,8,9,--

R128)

0,0,1,1,2,2,6,7,8,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,6,5,--0,1,0,--0,1,0,--0,0,  
--0,0,1,1,2,2,6,7,8,9,--

R129)

0,0,1,1,2,3,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,3,4,5,  
6,7,--0,0,1,1,2,3,4,5,6,8,--0,0,1,1,2,3,4,5,6,9,--

R130)

0,0,1,1,2,3,4,5,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,6,5,--0,0,1,1,--0,  
0,1,1,2,3,4,5,7,8,--0,0,1,1,2,3,4,5,7,9,--

R131)

0,0,1,1,2,3,4,5,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,6,5,--0,0,1,1,2,3,  
4,5,8,7,--0,0,--0,0,1,1,2,3,4,5,8,9,--

R132)

0,0,1,1,2,3,4,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,1,0,--0,0,1,1,--0,0,  
1,1,2,3,4,6,7,8,--0,0,1,1,2,3,4,6,7,9,--

R133)

0,0,1,1,2,3,4,6,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,1,0,--0,0,1,1,2,3,4,  
6,8,7,--0,0,--0,0,1,1,2,3,4,6,8,9,--

R134) 0,0,1,1,2,3,4,7,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,1,0,--

R135)

0,0,1,1,2,3,4,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,0,1,1,2,3,4,7,6,--0,  
1,0,--0,0,--0,0,1,1,2,3,4,7,8,9,--

R136)

0,0,1,1,2,3,5,6,7,-->0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,  
1,2,3,5,6,7,8,--0,0,1,1,2,3,5,6,7,9,--

R137)

0,0,1,1,2,3,5,6,8,-->0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,1,0,--0,0,1,1,2,3,5,6,8,7,--0,0,--0,0,1,1,2,3,5,6,8,9,--

R138) 0,0,1,1,2,3,5,7,6,-->0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,1,0,--

R139)

0,0,1,1,2,3,5,7,8,-->0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,0,1,1,2,3,5,7,6,--0,1,0,--0,0,--0,0,1,1,2,3,5,7,8,9,--

R140)

0,0,1,1,2,3,6,7,8,-->0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,1,1,2,3,6,5,--0,1,0,--0,1,0,--0,0,--0,0,1,1,2,3,6,7,8,9,--

R141)

0,0,1,1,2,4,5,6,7,-->0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,1,2,4,5,6,7,8,--0,0,1,1,2,4,5,6,7,9,--

R142)

0,0,1,1,2,4,5,6,8,-->0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,4,5,6,8,7,--0,0,--0,0,1,1,2,4,5,6,8,9,--

R143) 0,0,1,1,2,4,5,7,6,-->0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,1,0,--

R144)

0,0,1,1,2,4,5,7,8,-->0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,0,1,1,2,4,5,7,6,--0,1,0,--0,0,--0,0,1,1,2,4,5,7,8,9,--

R145)

0,0,1,1,2,4,6,7,8,-->0,1,0,--0,0,1,3,2,--0,1,0,--0,0,1,1,2,4,6,5,--0,1,0,--0,1,0,--0,0,--0,0,1,1,2,4,6,7,8,9,--

R146)

0,0,1,1,2,5,6,7,8,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,1,1,2,5,6,7,8,9,--

R147)

0,0,1,1,3,4,5,6,7,-->0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,1,3,4,5,6,7,8,--0,0,1,1,3,4,5,6,7,9,--

R148)

0,0,1,1,3,4,5,6,8,-->0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,3,4,5,6,8,7,--0,0,--0,0,1,1,3,4,5,6,8,9,--

R149) 0,0,1,1,3,4,5,7,6,-->0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--

R150)

0,0,1,1,3,4,5,7,8,-->0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,3,4,5,7,6,--0,1,0,--0,0,--0,0,1,1,3,4,5,7,8,9,--

R151)

0,0,1,1,3,4,6,7,8,-->0,0,2,1,--0,1,0,--0,1,0,--0,0,1,1,3,4,6,5,--0,1,0,--0,1,0,--0,0,--0,0,1,1,3,4,6,7,8,9,--

R152)

0,0,1,1,3,5,6,7,8,-->0,0,2,1,--0,1,0,--0,0,1,1,3,5,4,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,1,1,3,5,6,7,8,9,--

R153)

0,0,1,1,4,5,6,7,8,-->0,0,2,1,--0,0,1,1,4,3,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,1,1,4,5,6,7,8,9,--

R154)

0,0,1,2,3,4,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,2,3,4,5,6,7,8,--0,0,1,2,3,4,5,6,7,9,--

R155)

0,0,1,2,3,4,5,6,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,5,



6,8,7,--0,0,--0,0,1,2,3,4,5,6,8,9,--  
 R156) 0,0,1,2,3,4,5,7,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
 R157)  
 0,0,1,2,3,4,5,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,5,7,6,--0,  
 1,0,--0,0,--0,0,1,2,3,4,5,7,8,9,--  
 R158)  
 0,0,1,2,3,4,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,6,5,--0,1,0,--0,1,  
 0,--0,0,--0,0,1,2,3,4,6,7,8,9,--  
 R159)  
 0,0,1,2,3,5,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,1,0,--0,1,0,--0,1,0,  
 --0,0,--0,0,1,2,3,5,6,7,8,9,--  
 R160)  
 0,0,1,2,4,5,6,7,8,-->0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
 0,0,--0,0,1,2,4,5,6,7,8,9,--  
 R161)  
 0,0,1,3,4,5,6,7,8,-->0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,  
 0,--0,0,1,3,4,5,6,7,8,9,--  
 R162)  
 0,0,2,3,4,5,6,7,8,-->0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,  
 --0,0,2,3,4,5,6,7,8,9,--  
 R163)  
 0,1,2,3,4,5,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,  
 --0,0,--0,1,2,3,4,5,6,7,8,9,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,1, : 0,0,2, : 0,1,0, : 0,1,2, :  
 LEN=4) 0,0,1,1, : 0,0,1,2, : 0,0,1,3, : 0,0,2,1, : 0,0,2,3, : 0,1,2,3, :  
 LEN=5) 0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, : 0,0,1,2,3, : 0,0,1,2,4, : 0,0,1,3,2, :  
 0,0,1,3,4, : 0,0,2,3,4, : 0,1,2,3,4, :  
 LEN=6) 0,0,1,1,2,2, : 0,0,1,1,2,3, : 0,0,1,1,2,4, : 0,0,1,1,2,5, : 0,0,1,1,3,4, :  
 0,0,1,1,3,5, : 0,0,1,1,4,3, : 0,0,1,1,4,5, : 0,0,1,2,3,4, : 0,0,1,2,3,5, : 0,0,1,2,4,3, :  
 0,0,1,2,4,5, : 0,0,1,3,4,5, : 0,0,2,3,4,5, : 0,1,2,3,4,5, :  
 LEN=7) 0,0,1,1,2,2,3, : 0,0,1,1,2,2,4, : 0,0,1,1,2,2,5, : 0,0,1,1,2,2,6, :  
 0,0,1,1,2,3,4, : 0,0,1,1,2,3,5, : 0,0,1,1,2,3,6, : 0,0,1,1,2,4,5, : 0,0,1,1,2,4,6, :  
 0,0,1,1,2,5,4, : 0,0,1,1,2,5,6, : 0,0,1,1,3,4,5, : 0,0,1,1,3,4,6, : 0,0,1,1,3,5,4, :  
 0,0,1,1,3,5,6, : 0,0,1,1,4,5,6, : 0,0,1,2,3,4,5, : 0,0,1,2,3,4,6, : 0,0,1,2,3,5,4, :  
 0,0,1,2,3,5,6, : 0,0,1,2,4,5,6, : 0,0,1,3,4,5,6, : 0,0,2,3,4,5,6, : 0,1,2,3,4,5,6, :  
 LEN=8) 0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,3,4, : 0,0,1,1,2,2,3,5, : 0,0,1,1,2,2,3,6, :  
 0,0,1,1,2,2,3,7, : 0,0,1,1,2,2,4,5, : 0,0,1,1,2,2,4,6, : 0,0,1,1,2,2,4,7, :  
 0,0,1,1,2,2,5,6, : 0,0,1,1,2,2,5,7, : 0,0,1,1,2,2,6,5, : 0,0,1,1,2,2,6,7, :  
 0,0,1,1,2,3,4,5, : 0,0,1,1,2,3,4,6, : 0,0,1,1,2,3,4,7, : 0,0,1,1,2,3,5,6, :  
 0,0,1,1,2,3,5,7, : 0,0,1,1,2,3,6,5, : 0,0,1,1,2,3,6,7, : 0,0,1,1,2,4,5,6, :  
 0,0,1,1,2,4,5,7, : 0,0,1,1,2,4,6,5, : 0,0,1,1,2,4,6,7, : 0,0,1,1,2,5,6,7, :  
 0,0,1,1,3,4,5,6, : 0,0,1,1,3,4,5,7, : 0,0,1,1,3,4,6,5, : 0,0,1,1,3,4,6,7, :  
 0,0,1,1,3,5,6,7, : 0,0,1,1,4,5,6,7, : 0,0,1,2,3,4,5,6, : 0,0,1,2,3,4,5,7, :  
 0,0,1,2,3,4,6,5, : 0,0,1,2,3,4,6,7, : 0,0,1,2,3,5,6,7, : 0,0,1,2,4,5,6,7, :  
 0,0,1,3,4,5,6,7, : 0,0,2,3,4,5,6,7, : 0,1,2,3,4,5,6,7, :  
 LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,3,5, : 0,0,1,1,2,2,3,3,6, :  
 0,0,1,1,2,2,3,3,7, : 0,0,1,1,2,2,3,3,8, : 0,0,1,1,2,2,3,4,5, : 0,0,1,1,2,2,3,4,6, :

0,0,1,1,2,2,3,4,7, : 0,0,1,1,2,2,3,4,8, : 0,0,1,1,2,2,3,5,6, : 0,0,1,1,2,2,3,5,7, :  
 0,0,1,1,2,2,3,5,8, : 0,0,1,1,2,2,3,6,7, : 0,0,1,1,2,2,3,6,8, : 0,0,1,1,2,2,3,7,6, :  
 0,0,1,1,2,2,3,7,8, : 0,0,1,1,2,2,4,5,6, : 0,0,1,1,2,2,4,5,7, : 0,0,1,1,2,2,4,5,8, :  
 0,0,1,1,2,2,4,6,7, : 0,0,1,1,2,2,4,6,8, : 0,0,1,1,2,2,4,7,6, : 0,0,1,1,2,2,4,7,8, :  
 0,0,1,1,2,2,5,6,7, : 0,0,1,1,2,2,5,6,8, : 0,0,1,1,2,2,5,7,6, : 0,0,1,1,2,2,5,7,8, :  
 0,0,1,1,2,2,6,7,8, : 0,0,1,1,2,3,4,5,6, : 0,0,1,1,2,3,4,5,7, : 0,0,1,1,2,3,4,5,8, :  
 0,0,1,1,2,3,4,6,7, : 0,0,1,1,2,3,4,6,8, : 0,0,1,1,2,3,4,7,6, : 0,0,1,1,2,3,4,7,8, :  
 0,0,1,1,2,3,5,6,7, : 0,0,1,1,2,3,5,6,8, : 0,0,1,1,2,3,5,7,6, : 0,0,1,1,2,3,5,7,8, :  
 0,0,1,1,2,3,6,7,8, : 0,0,1,1,2,4,5,6,7, : 0,0,1,1,2,4,5,6,8, : 0,0,1,1,2,4,5,7,6, :  
 0,0,1,1,2,4,5,7,8, : 0,0,1,1,2,4,6,7,8, : 0,0,1,1,2,5,6,7,8, : 0,0,1,1,3,4,5,6,7, :  
 0,0,1,1,3,4,5,6,8, : 0,0,1,1,3,4,5,7,6, : 0,0,1,1,3,4,5,7,8, : 0,0,1,1,3,4,6,7,8, :  
 0,0,1,1,3,5,6,7,8, : 0,0,1,1,4,5,6,7,8, : 0,0,1,2,3,4,5,6,7, : 0,0,1,2,3,4,5,6,8, :  
 0,0,1,2,3,4,5,7,6, : 0,0,1,2,3,4,5,7,8, : 0,0,1,2,3,4,6,7,8, : 0,0,1,2,3,5,6,7,8, :  
 0,0,1,2,4,5,6,7,8, : 0,0,1,3,4,5,6,7,8, : 0,0,2,3,4,5,6,7,8, : 0,1,2,3,4,5,6,7,8, :  
 LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,4,5, : 0,0,1,1,2,2,3,3,4,6, :  
 0,0,1,1,2,2,3,3,4,7, : 0,0,1,1,2,2,3,3,4,8, : 0,0,1,1,2,2,3,3,4,9, :  
 0,0,1,1,2,2,3,3,5,6, : 0,0,1,1,2,2,3,3,5,7, : 0,0,1,1,2,2,3,3,5,8, :  
 0,0,1,1,2,2,3,3,5,9, : 0,0,1,1,2,2,3,3,6,7, : 0,0,1,1,2,2,3,3,6,8, :  
 0,0,1,1,2,2,3,3,6,9, : 0,0,1,1,2,2,3,3,7,8, : 0,0,1,1,2,2,3,3,7,9, :  
 0,0,1,1,2,2,3,3,8,7, : 0,0,1,1,2,2,3,3,8,9, : 0,0,1,1,2,2,3,4,5,6, :  
 0,0,1,1,2,2,3,4,5,7, : 0,0,1,1,2,2,3,4,5,8, : 0,0,1,1,2,2,3,4,5,9, :  
 0,0,1,1,2,2,3,4,6,7, : 0,0,1,1,2,2,3,4,6,8, : 0,0,1,1,2,2,3,4,6,9, :  
 0,0,1,1,2,2,3,4,7,8, : 0,0,1,1,2,2,3,4,7,9, : 0,0,1,1,2,2,3,4,8,7, :  
 0,0,1,1,2,2,3,4,8,9, : 0,0,1,1,2,2,3,5,6,7, : 0,0,1,1,2,2,3,5,6,8, :  
 0,0,1,1,2,2,3,5,6,9, : 0,0,1,1,2,2,3,5,7,8, : 0,0,1,1,2,2,3,5,7,9, :  
 0,0,1,1,2,2,3,5,8,7, : 0,0,1,1,2,2,3,5,8,9, : 0,0,1,1,2,2,3,6,7,8, :  
 0,0,1,1,2,2,3,6,7,9, : 0,0,1,1,2,2,3,6,8,7, : 0,0,1,1,2,2,3,6,8,9, :  
 0,0,1,1,2,2,3,7,8,9, : 0,0,1,1,2,2,4,5,6,7, : 0,0,1,1,2,2,4,5,6,8, :  
 0,0,1,1,2,2,4,5,6,9, : 0,0,1,1,2,2,4,5,7,8, : 0,0,1,1,2,2,4,5,7,9, :  
 0,0,1,1,2,2,4,5,8,7, : 0,0,1,1,2,2,4,5,8,9, : 0,0,1,1,2,2,4,6,7,8, :  
 0,0,1,1,2,2,4,6,7,9, : 0,0,1,1,2,2,4,6,8,7, : 0,0,1,1,2,2,4,6,8,9, :  
 0,0,1,1,2,2,4,7,8,9, : 0,0,1,1,2,2,5,6,7,8, : 0,0,1,1,2,2,5,6,7,9, :  
 0,0,1,1,2,2,5,6,8,7, : 0,0,1,1,2,2,5,6,8,9, : 0,0,1,1,2,2,5,7,8,9, :  
 0,0,1,1,2,2,6,7,8,9, : 0,0,1,1,2,3,4,5,6,7, : 0,0,1,1,2,3,4,5,6,8, :  
 0,0,1,1,2,3,4,5,6,9, : 0,0,1,1,2,3,4,5,7,8, : 0,0,1,1,2,3,4,5,7,9, :  
 0,0,1,1,2,3,4,5,8,7, : 0,0,1,1,2,3,4,5,8,9, : 0,0,1,1,2,3,4,6,7,8, :  
 0,0,1,1,2,3,4,6,7,9, : 0,0,1,1,2,3,4,6,8,7, : 0,0,1,1,2,3,4,6,8,9, :  
 0,0,1,1,2,3,4,7,8,9, : 0,0,1,1,2,3,5,6,7,8, : 0,0,1,1,2,3,5,6,7,9, :  
 0,0,1,1,2,3,5,6,8,7, : 0,0,1,1,2,3,5,6,8,9, : 0,0,1,1,2,3,5,7,8,9, :  
 0,0,1,1,2,3,6,7,8,9, : 0,0,1,1,2,4,5,6,7,8, : 0,0,1,1,2,4,5,6,7,9, :  
 0,0,1,1,2,4,5,6,8,7, : 0,0,1,1,2,4,5,6,8,9, : 0,0,1,1,2,4,5,7,8,9, :  
 0,0,1,1,2,4,6,7,8,9, : 0,0,1,1,2,5,6,7,8,9, : 0,0,1,1,3,4,5,6,7,8, :  
 0,0,1,1,3,4,5,6,7,9, : 0,0,1,1,3,4,5,6,8,7, : 0,0,1,1,3,4,5,6,8,9, :  
 0,0,1,1,3,4,5,7,8,9, : 0,0,1,1,3,4,6,7,8,9, : 0,0,1,1,3,5,6,7,8,9, :  
 0,0,1,1,4,5,6,7,8,9, : 0,0,1,2,3,4,5,6,7,8, : 0,0,1,2,3,4,5,6,7,9, :  
 0,0,1,2,3,4,5,6,8,7, : 0,0,1,2,3,4,5,6,8,9, : 0,0,1,2,3,4,5,7,8,9, :  
 0,0,1,2,3,4,6,7,8,9, : 0,0,1,2,3,5,6,7,8,9, : 0,0,1,2,4,5,6,7,8,9, :  
 0,0,1,3,4,5,6,7,8,9, : 0,0,2,3,4,5,6,7,8,9, : 0,1,2,3,4,5,6,7,8,9, :

Number new nodes in level n is given by : 1,2,4,6,9,15,24,39,63,102,

-----Class

483-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][101][102][110][210]]$

-----  
--

Rules of  $T[L]$ :

- R1)  $0, -->0,0, --0,1, --$
- R2)  $0,0, -->0,0,1, --0,0,2, --$
- R3)  $0,1, -->0,1,0, --0,0, --0,1,2, --$
- R4)  $0,0,1, -->0,0,1,1, --0,0,1,2, --0,0,1,3, --$
- R5)  $0,0,2, -->0,0,2,1, --0,0, --0,0,2,3, --$
- R6)  $0,1,0, -->$
- R7)  $0,1,2, -->0,1,0, --0,1,0, --0,0, --0,1,2,3, --$
- R8)  $0,0,1,1, -->0,0,1,1,2, --0,0,1,1,3, --0,0,1,1,4, --$
- R9)  $0,0,1,2, -->0,1,0, --0,0,1,1, --0,0,1,2,3, --0,0,1,2,4, --$
- R10)  $0,0,1,3, -->0,0,1,3,1, --0,0,2,1, --0,0, --0,0,1,3,4, --$
- R11)  $0,0,2,1, -->0,1,0, --$
- R12)  $0,0,2,3, -->0,0,2,1, --0,1,0, --0,0, --0,0,2,3,4, --$
- R13)  $0,1,2,3, -->0,1,0, --0,1,0, --0,1,0, --0,0, --0,1,2,3,4, --$
- R14)  $0,0,1,1,2, -->0,0,1,1,2,2, --0,0,1,1,2,3, --0,0,1,1,2,4, --0,0,1,1,2,5, --$
- R15)  $0,0,1,1,3, -->0,0,2,1, --0,0,1,1, --0,0,1,1,3,4, --0,0,1,1,3,5, --$
- R16)  $0,0,1,1,4, -->0,0,1,1,4,2, --0,0,2,1, --0,0, --0,0,1,1,4,5, --$
- R17)  $0,0,1,2,3, -->0,1,0, --0,1,0, --0,0,1,1, --0,0,1,2,3,4, --0,0,1,2,3,5, --$
- R18)  $0,0,1,2,4, -->0,1,0, --0,0,1,3,1, --0,0,2,1, --0,0, --0,0,1,2,4,5, --$
- R19)  $0,0,1,3,1, -->0,0,2,1, --$
- R20)  $0,0,1,3,4, -->0,0,1,3,1, --0,0,2,1, --0,1,0, --0,0, --0,0,1,3,4,5, --$
- R21)  $0,0,2,3,4, -->0,0,2,1, --0,1,0, --0,1,0, --0,0, --0,0,2,3,4,5, --$
- R22)  $0,1,2,3,4, -->0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,0, --0,1,2,3,4,5, --$
- R23)  
 $0,0,1,1,2,2, -->0,0,1,1,2,2,3, --0,0,1,1,2,2,4, --0,0,1,1,2,2,5, --0,0,1,1,2,2,6, --$
- R24)  
 $0,0,1,1,2,3, -->0,1,0, --0,0,1,1,2,2, --0,0,1,1,2,3,4, --0,0,1,1,2,3,5, --0,0,1,1,2,3,6, --$
- 
- R25)  
 $0,0,1,1,2,4, -->0,0,1,3,1, --0,0,2,1, --0,0,1,1, --0,0,1,1,2,4,5, --0,0,1,1,2,4,6, --$
- R26)  $0,0,1,1,2,5, -->0,0,1,1,2,5,2, --0,0,1,1,4,2, --0,0,2,1, --0,0, --0,0,1,1,2,5,6, --$
- R27)  $0,0,1,1,3,4, -->0,0,2,1, --0,1,0, --0,0,1,1, --0,0,1,1,3,4,5, --0,0,1,1,3,4,6, --$
- R28)  $0,0,1,1,3,5, -->0,0,2,1, --0,0,1,3,1, --0,0,2,1, --0,0, --0,0,1,1,3,5,6, --$
- R29)  $0,0,1,1,4,2, -->0,0,1,3,1, --0,0,2,1, --$
- R30)  $0,0,1,1,4,5, -->0,0,1,1,4,2, --0,0,2,1, --0,1,0, --0,0, --0,0,1,1,4,5,6, --$
- R31)  
 $0,0,1,2,3,4, -->0,1,0, --0,1,0, --0,1,0, --0,0,1,1, --0,0,1,2,3,4,5, --0,0,1,2,3,4,6, --$
- R32)  $0,0,1,2,3,5, -->0,1,0, --0,1,0, --0,0,1,3,1, --0,0,2,1, --0,0, --0,0,1,2,3,5,6, --$
- R33)  $0,0,1,2,4,5, -->0,1,0, --0,0,1,3,1, --0,0,2,1, --0,1,0, --0,0, --0,0,1,2,4,5,6, --$
- R34)  $0,0,1,3,4,5, -->0,0,1,3,1, --0,0,2,1, --0,1,0, --0,1,0, --0,0, --0,0,1,3,4,5,6, --$
- R35)  $0,0,2,3,4,5, -->0,0,2,1, --0,1,0, --0,1,0, --0,1,0, --0,0, --0,0,2,3,4,5,6, --$
- R36)  $0,1,2,3,4,5, -->0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,0, --0,1,2,3,4,5,6, --$
- R37)  
 $0,0,1,1,2,2,3, -->0,0,1,1,2,2,3,3, --0,0,1,1,2,2,3,4, --0,0,1,1,2,2,3,5, --0,0,1,1,2,2,3,6, --0,0,1,1,2,2,3,7, --$

R38)

0,0,1,1,2,2,4,-->0,0,2,1,--0,0,1,1,2,2,--0,0,1,1,2,2,4,5,--0,0,1,1,2,2,4,6,--0,0,1,1,2,2,4,7,--

R39)

0,0,1,1,2,2,5,-->0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,--0,0,1,1,2,2,5,6,--0,0,1,1,2,2,5,7,--

R40)

0,0,1,1,2,2,6,-->0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,2,1,--0,0,--0,0,1,1,2,2,6,7,--

R41)

0,0,1,1,2,3,4,-->0,1,0,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,3,4,5,--0,0,1,1,2,3,4,6,--0,0,1,1,2,3,4,7,--

R42)

0,0,1,1,2,3,5,-->0,1,0,--0,0,1,3,1,--0,0,2,1,--0,0,1,1,--0,0,1,1,2,3,5,6,--0,0,1,1,2,3,5,7,--

R43)

0,0,1,1,2,3,6,-->0,1,0,--0,0,1,1,2,5,2,--0,0,1,1,4,2,--0,0,2,1,--0,0,--0,0,1,1,2,3,6,7,--

R44)

0,0,1,1,2,4,5,-->0,0,1,3,1,--0,0,2,1,--0,1,0,--0,0,1,1,--0,0,1,1,2,4,5,6,--0,0,1,1,2,4,5,7,--

R45)

0,0,1,1,2,4,6,-->0,0,1,3,1,--0,0,2,1,--0,0,1,3,1,--0,0,2,1,--0,0,--0,0,1,1,2,4,6,7,--

R46) 0,0,1,1,2,5,2,-->0,0,1,1,4,2,--0,0,2,1,--

R47)

0,0,1,1,2,5,6,-->0,0,1,1,2,5,2,--0,0,1,1,4,2,--0,0,2,1,--0,1,0,--0,0,--0,0,1,1,2,5,6,7,--

R48)

0,0,1,1,3,4,5,-->0,0,2,1,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,1,3,4,5,6,--0,0,1,1,3,4,5,7,--

R49)

0,0,1,1,3,4,6,-->0,0,2,1,--0,1,0,--0,0,1,3,1,--0,0,2,1,--0,0,--0,0,1,1,3,4,6,7,--

R50)

0,0,1,1,3,5,6,-->0,0,2,1,--0,0,1,3,1,--0,0,2,1,--0,1,0,--0,0,--0,0,1,1,3,5,6,7,--

R51)

0,0,1,1,4,5,6,-->0,0,1,1,4,2,--0,0,2,1,--0,1,0,--0,1,0,--0,0,--0,0,1,1,4,5,6,7,--

R52)

0,0,1,2,3,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,2,3,4,5,6,--0,0,1,2,3,4,5,7,--

R53)

0,0,1,2,3,4,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,0,2,1,--0,0,--0,0,1,2,3,4,6,7,--

R54)

0,0,1,2,3,5,6,-->0,1,0,--0,1,0,--0,0,1,3,1,--0,0,2,1,--0,1,0,--0,0,--0,0,1,2,3,5,6,7,--

R55)

0,0,1,2,4,5,6,-->0,1,0,--0,0,1,3,1,--0,0,2,1,--0,1,0,--0,1,0,--0,0,--0,0,1,2,4,5,6,7,--

R56)

0,0,1,3,4,5,6,-->0,0,1,3,1,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,1,3,4,5,6,

7, --

R57)

0,0,2,3,4,5,6, -->0,0,2,1, --0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,0, --0,0,2,3,4,5,6,7, --

R58)

0,1,2,3,4,5,6, -->0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,0, --0,1,2,3,4,5, 6,7, --

R59)

0,0,1,1,2,2,3,3, -->0,0,1,1,2,2,3,3,4, --0,0,1,1,2,2,3,3,5, --0,0,1,1,2,2,3,3,6, --0,0, 1,1,2,2,3,3,7, --0,0,1,1,2,2,3,3,8, --

R60)

0,0,1,1,2,2,3,4, -->0,1,0, --0,0,1,1,2,2,3,3, --0,0,1,1,2,2,3,4,5, --0,0,1,1,2,2,3,4,6, --0,0,1,1,2,2,3,4,7, --0,0,1,1,2,2,3,4,8, --

R61)

0,0,1,1,2,2,3,5, -->0,0,1,3,1, --0,0,2,1, --0,0,1,1,2,2, --0,0,1,1,2,2,3,5,6, --0,0,1,1, 2,2,3,5,7, --0,0,1,1,2,2,3,5,8, --

R62)

0,0,1,1,2,2,3,6, -->0,0,1,1,2,5,2, --0,0,1,1,4,2, --0,0,2,1, --0,0,1,1, --0,0,1,1,2,2,3, 6,7, --0,0,1,1,2,2,3,6,8, --

R63)

0,0,1,1,2,2,3,7, -->0,0,1,1,2,2,3,7,3, --0,0,1,1,2,2,6,3, --0,0,1,1,4,2, --0,0,2,1, --0, 0, --0,0,1,1,2,2,3,7,8, --

R64)

0,0,1,1,2,2,4,5, -->0,0,2,1, --0,1,0, --0,0,1,1,2,2, --0,0,1,1,2,2,4,5,6, --0,0,1,1,2,2, 4,5,7, --0,0,1,1,2,2,4,5,8, --

R65)

0,0,1,1,2,2,4,6, -->0,0,2,1, --0,0,1,3,1, --0,0,2,1, --0,0,1,1, --0,0,1,1,2,2,4,6,7, --0, 0,1,1,2,2,4,6,8, --

R66)

0,0,1,1,2,2,4,7, -->0,0,2,1, --0,0,1,1,2,5,2, --0,0,1,1,4,2, --0,0,2,1, --0,0, --0,0,1,1, 2,2,4,7,8, --

R67)

0,0,1,1,2,2,5,6, -->0,0,1,1,4,2, --0,0,2,1, --0,1,0, --0,0,1,1, --0,0,1,1,2,2,5,6,7, --0, 0,1,1,2,2,5,6,8, --

R68)

0,0,1,1,2,2,5,7, -->0,0,1,1,4,2, --0,0,2,1, --0,0,1,3,1, --0,0,2,1, --0,0, --0,0,1,1,2,2, 5,7,8, --

R69) 0,0,1,1,2,2,6,3, -->0,0,1,1,2,5,2, --0,0,1,1,4,2, --0,0,2,1, --

R70)

0,0,1,1,2,2,6,7, -->0,0,1,1,2,2,6,3, --0,0,1,1,4,2, --0,0,2,1, --0,1,0, --0,0, --0,0,1,1, 2,2,6,7,8, --

R71)

0,0,1,1,2,3,4,5, -->0,1,0, --0,1,0, --0,1,0, --0,0,1,1,2,2, --0,0,1,1,2,3,4,5,6, --0,0,1, 1,2,3,4,5,7, --0,0,1,1,2,3,4,5,8, --

R72)

0,0,1,1,2,3,4,6, -->0,1,0, --0,1,0, --0,0,1,3,1, --0,0,2,1, --0,0,1,1, --0,0,1,1,2,3,4,6, 7, --0,0,1,1,2,3,4,6,8, --

R73)

0,0,1,1,2,3,4,7, -->0,1,0, --0,1,0, --0,0,1,1,2,5,2, --0,0,1,1,4,2, --0,0,2,1, --0,0, --0, 0,1,1,2,3,4,7,8, --

R74)

0,0,1,1,2,3,5,6,-->0,1,0,--0,0,1,3,1,--0,0,2,1,--0,1,0,--0,0,1,1,--0,0,1,1,2,3,5,6,  
7,--0,0,1,1,2,3,5,6,8,--

R75)

0,0,1,1,2,3,5,7,-->0,1,0,--0,0,1,3,1,--0,0,2,1,--0,0,1,3,1,--0,0,2,1,--0,0,--0,0,1,  
1,2,3,5,7,8,--

R76)

0,0,1,1,2,3,6,7,-->0,1,0,--0,0,1,1,2,5,2,--0,0,1,1,4,2,--0,0,2,1,--0,1,0,--0,0,--0,  
0,1,1,2,3,6,7,8,--

R77)

0,0,1,1,2,4,5,6,-->0,0,1,3,1,--0,0,2,1,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,1,2,4,5,6,  
7,--0,0,1,1,2,4,5,6,8,--

R78)

0,0,1,1,2,4,5,7,-->0,0,1,3,1,--0,0,2,1,--0,1,0,--0,0,1,3,1,--0,0,2,1,--0,0,--0,0,1,  
1,2,4,5,7,8,--

R79)

0,0,1,1,2,4,6,7,-->0,0,1,3,1,--0,0,2,1,--0,0,1,3,1,--0,0,2,1,--0,1,0,--0,0,--0,0,1,  
1,2,4,6,7,8,--

R80)

0,0,1,1,2,5,6,7,-->0,0,1,1,2,5,2,--0,0,1,1,4,2,--0,0,2,1,--0,1,0,--0,1,0,--0,0,--0,  
0,1,1,2,5,6,7,8,--

R81)

0,0,1,1,3,4,5,6,-->0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,1,3,4,5,6,7,--  
0,0,1,1,3,4,5,6,8,--

R82)

0,0,1,1,3,4,5,7,-->0,0,2,1,--0,1,0,--0,1,0,--0,0,1,3,1,--0,0,2,1,--0,0,--0,0,1,1,3,  
4,5,7,8,--

R83)

0,0,1,1,3,4,6,7,-->0,0,2,1,--0,1,0,--0,0,1,3,1,--0,0,2,1,--0,1,0,--0,0,--0,0,1,1,3,  
4,6,7,8,--

R84)

0,0,1,1,3,5,6,7,-->0,0,2,1,--0,0,1,3,1,--0,0,2,1,--0,1,0,--0,1,0,--0,0,--0,0,1,1,3,  
5,6,7,8,--

R85)

0,0,1,1,4,5,6,7,-->0,0,1,1,4,2,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,1,1,4,  
5,6,7,8,--

R86)

0,0,1,2,3,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,2,3,4,5,  
6,7,--0,0,1,2,3,4,5,6,8,--

R87)

0,0,1,2,3,4,5,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,0,2,1,--0,0,--0,0,  
1,2,3,4,5,7,8,--

R88)

0,0,1,2,3,4,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,0,2,1,--0,1,0,--0,0,--0,0,  
1,2,3,4,6,7,8,--

R89)

0,0,1,2,3,5,6,7,-->0,1,0,--0,1,0,--0,0,1,3,1,--0,0,2,1,--0,1,0,--0,1,0,--0,0,--0,0,  
1,2,3,5,6,7,8,--

R90)

0,0,1,2,4,5,6,7,-->0,1,0,--0,0,1,3,1,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,  
1,2,4,5,6,7,8,--

R91)

0,0,1,3,4,5,6,7,-->0,0,1,3,1,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,  
1,3,4,5,6,7,8,--

R92)

0,0,2,3,4,5,6,7,-->0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,2,3,  
4,5,6,7,8,--

R93)

0,1,2,3,4,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,  
1,2,3,4,5,6,7,8,--

R94)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,--0,0,1,1,2,2,3,3,4,  
6,--0,0,1,1,2,2,3,3,4,7,--0,0,1,1,2,2,3,3,4,8,--0,0,1,1,2,2,3,3,4,9,--

R95)

0,0,1,1,2,2,3,3,5,-->0,0,2,1,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,5,6,--0,0,1,1,2,2,  
3,3,5,7,--0,0,1,1,2,2,3,3,5,8,--0,0,1,1,2,2,3,3,5,9,--

R96)

0,0,1,1,2,2,3,3,6,-->0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,--0,0,1,1,2,2,3,3,6,7,--0,  
0,1,1,2,2,3,3,6,8,--0,0,1,1,2,2,3,3,6,9,--

R97)

0,0,1,1,2,2,3,3,7,-->0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,--0,0,1,1,2,  
2,3,3,7,8,--0,0,1,1,2,2,3,3,7,9,--

R98)

0,0,1,1,2,2,3,3,8,-->0,0,1,1,2,2,3,3,8,4,--0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,2,1,  
--0,0,--0,0,1,1,2,2,3,3,8,9,--

R99)

0,0,1,1,2,2,3,4,5,-->0,1,0,--0,1,0,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,5,6,--0,0,1,  
1,2,2,3,4,5,7,--0,0,1,1,2,2,3,4,5,8,--0,0,1,1,2,2,3,4,5,9,--

R100)

0,0,1,1,2,2,3,4,6,-->0,1,0,--0,0,1,3,1,--0,0,2,1,--0,0,1,1,2,2,--0,0,1,1,2,2,3,4,6,  
7,--0,0,1,1,2,2,3,4,6,8,--0,0,1,1,2,2,3,4,6,9,--

R101)

0,0,1,1,2,2,3,4,7,-->0,1,0,--0,0,1,1,2,5,2,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,--0,0,  
1,1,2,2,3,4,7,8,--0,0,1,1,2,2,3,4,7,9,--

R102)

0,0,1,1,2,2,3,4,8,-->0,1,0,--0,0,1,1,2,2,3,7,3,--0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,  
0,2,1,--0,0,--0,0,1,1,2,2,3,4,8,9,--

R103)

0,0,1,1,2,2,3,5,6,-->0,0,1,3,1,--0,0,2,1,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,2,3,5,6,  
7,--0,0,1,1,2,2,3,5,6,8,--0,0,1,1,2,2,3,5,6,9,--

R104)

0,0,1,1,2,2,3,5,7,-->0,0,1,3,1,--0,0,2,1,--0,0,1,3,1,--0,0,2,1,--0,0,1,1,--0,0,1,1,  
2,2,3,5,7,8,--0,0,1,1,2,2,3,5,7,9,--

R105)

0,0,1,1,2,2,3,5,8,-->0,0,1,3,1,--0,0,2,1,--0,0,1,1,2,5,2,--0,0,1,1,4,2,--0,0,2,1,--  
0,0,--0,0,1,1,2,2,3,5,8,9,--

R106)

0,0,1,1,2,2,3,6,7,-->0,0,1,1,2,5,2,--0,0,1,1,4,2,--0,0,2,1,--0,1,0,--0,0,1,1,--0,0,  
1,1,2,2,3,6,7,8,--0,0,1,1,2,2,3,6,7,9,--

R107)

0,0,1,1,2,2,3,6,8,-->0,0,1,1,2,5,2,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,3,1,--0,0,2,1,--

0,0,--0,0,1,1,2,2,3,6,8,9,--  
 R108) 0,0,1,1,2,2,3,7,3,-->0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,2,1,--  
 R109)  
 0,0,1,1,2,2,3,7,8,-->0,0,1,1,2,2,3,7,3,--0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,2,1,--  
 0,1,0,--0,0,--0,0,1,1,2,2,3,7,8,9,--  
 R110)  
 0,0,1,1,2,2,4,5,6,-->0,0,2,1,--0,1,0,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,2,4,5,6,7,--  
 0,0,1,1,2,2,4,5,6,8,--0,0,1,1,2,2,4,5,6,9,--  
 R111)  
 0,0,1,1,2,2,4,5,7,-->0,0,2,1,--0,1,0,--0,0,1,3,1,--0,0,2,1,--0,0,1,1,--0,0,1,1,2,2,  
 4,5,7,8,--0,0,1,1,2,2,4,5,7,9,--  
 R112)  
 0,0,1,1,2,2,4,5,8,-->0,0,2,1,--0,1,0,--0,0,1,1,2,5,2,--0,0,1,1,4,2,--0,0,2,1,--0,0,  
 --0,0,1,1,2,2,4,5,8,9,--  
 R113)  
 0,0,1,1,2,2,4,6,7,-->0,0,2,1,--0,0,1,3,1,--0,0,2,1,--0,1,0,--0,0,1,1,--0,0,1,1,2,2,  
 4,6,7,8,--0,0,1,1,2,2,4,6,7,9,--  
 R114)  
 0,0,1,1,2,2,4,6,8,-->0,0,2,1,--0,0,1,3,1,--0,0,2,1,--0,0,1,3,1,--0,0,2,1,--0,0,--0,  
 0,1,1,2,2,4,6,8,9,--  
 R115)  
 0,0,1,1,2,2,4,7,8,-->0,0,2,1,--0,0,1,1,2,5,2,--0,0,1,1,4,2,--0,0,2,1,--0,1,0,--0,0,  
 --0,0,1,1,2,2,4,7,8,9,--  
 R116)  
 0,0,1,1,2,2,5,6,7,-->0,0,1,1,4,2,--0,0,2,1,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,1,2,2,  
 5,6,7,8,--0,0,1,1,2,2,5,6,7,9,--  
 R117)  
 0,0,1,1,2,2,5,6,8,-->0,0,1,1,4,2,--0,0,2,1,--0,1,0,--0,0,1,3,1,--0,0,2,1,--0,0,--0,  
 0,1,1,2,2,5,6,8,9,--  
 R118)  
 0,0,1,1,2,2,5,7,8,-->0,0,1,1,4,2,--0,0,2,1,--0,0,1,3,1,--0,0,2,1,--0,1,0,--0,0,--0,  
 0,1,1,2,2,5,7,8,9,--  
 R119)  
 0,0,1,1,2,2,6,7,8,-->0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,2,1,--0,1,0,--0,1,0,--0,0,  
 --0,0,1,1,2,2,6,7,8,9,--  
 R120)  
 0,0,1,1,2,3,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,3,4,5,  
 6,7,--0,0,1,1,2,3,4,5,6,8,--0,0,1,1,2,3,4,5,6,9,--  
 R121)  
 0,0,1,1,2,3,4,5,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,0,2,1,--0,0,1,1,--0,0,1,  
 1,2,3,4,5,7,8,--0,0,1,1,2,3,4,5,7,9,--  
 R122)  
 0,0,1,1,2,3,4,5,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,5,2,--0,0,1,1,4,2,--0,0,2,1,  
 --0,0,--0,0,1,1,2,3,4,5,8,9,--  
 R123)  
 0,0,1,1,2,3,4,6,7,-->0,1,0,--0,1,0,--0,0,1,3,1,--0,0,2,1,--0,1,0,--0,0,1,1,--0,0,1,  
 1,2,3,4,6,7,8,--0,0,1,1,2,3,4,6,7,9,--  
 R124)  
 0,0,1,1,2,3,4,6,8,-->0,1,0,--0,1,0,--0,0,1,3,1,--0,0,2,1,--0,0,1,3,1,--0,0,2,1,--0,  
 0,--0,0,1,1,2,3,4,6,8,9,--



R125)

0,0,1,1,2,3,4,7,8,-->0,1,0,--0,1,0,--0,0,1,1,2,5,2,--0,0,1,1,4,2,--0,0,2,1,--0,1,0,  
--0,0,--0,0,1,1,2,3,4,7,8,9,--

R126)

0,0,1,1,2,3,5,6,7,-->0,1,0,--0,0,1,3,1,--0,0,2,1,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,  
1,2,3,5,6,7,8,--0,0,1,1,2,3,5,6,7,9,--

R127)

0,0,1,1,2,3,5,6,8,-->0,1,0,--0,0,1,3,1,--0,0,2,1,--0,1,0,--0,0,1,3,1,--0,0,2,1,--0,  
0,--0,0,1,1,2,3,5,6,8,9,--

R128)

0,0,1,1,2,3,5,7,8,-->0,1,0,--0,0,1,3,1,--0,0,2,1,--0,0,1,3,1,--0,0,2,1,--0,1,0,--0,  
0,--0,0,1,1,2,3,5,7,8,9,--

R129)

0,0,1,1,2,3,6,7,8,-->0,1,0,--0,0,1,1,2,5,2,--0,0,1,1,4,2,--0,0,2,1,--0,1,0,--0,1,0,  
--0,0,--0,0,1,1,2,3,6,7,8,9,--

R130)

0,0,1,1,2,4,5,6,7,-->0,0,1,3,1,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,  
1,2,4,5,6,7,8,--0,0,1,1,2,4,5,6,7,9,--

R131)

0,0,1,1,2,4,5,6,8,-->0,0,1,3,1,--0,0,2,1,--0,1,0,--0,1,0,--0,0,1,3,1,--0,0,2,1,--0,  
0,--0,0,1,1,2,4,5,6,8,9,--

R132)

0,0,1,1,2,4,5,7,8,-->0,0,1,3,1,--0,0,2,1,--0,1,0,--0,0,1,3,1,--0,0,2,1,--0,1,0,--0,  
0,--0,0,1,1,2,4,5,7,8,9,--

R133)

0,0,1,1,2,4,6,7,8,-->0,0,1,3,1,--0,0,2,1,--0,0,1,3,1,--0,0,2,1,--0,1,0,--0,1,0,--0,  
0,--0,0,1,1,2,4,6,7,8,9,--

R134)

0,0,1,1,2,5,6,7,8,-->0,0,1,1,2,5,2,--0,0,1,1,4,2,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,  
--0,0,--0,0,1,1,2,5,6,7,8,9,--

R135)

0,0,1,1,3,4,5,6,7,-->0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,1,3,  
4,5,6,7,8,--0,0,1,1,3,4,5,6,7,9,--

R136)

0,0,1,1,3,4,5,6,8,-->0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,0,2,1,--0,0,--  
0,0,1,1,3,4,5,6,8,9,--

R137)

0,0,1,1,3,4,5,7,8,-->0,0,2,1,--0,1,0,--0,1,0,--0,0,1,3,1,--0,0,2,1,--0,1,0,--0,0,--  
0,0,1,1,3,4,5,7,8,9,--

R138)

0,0,1,1,3,4,6,7,8,-->0,0,2,1,--0,1,0,--0,0,1,3,1,--0,0,2,1,--0,1,0,--0,1,0,--0,0,--  
0,0,1,1,3,4,6,7,8,9,--

R139)

0,0,1,1,3,5,6,7,8,-->0,0,2,1,--0,0,1,3,1,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,--  
0,0,1,1,3,5,6,7,8,9,--

R140)

0,0,1,1,4,5,6,7,8,-->0,0,1,1,4,2,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--  
0,0,1,1,4,5,6,7,8,9,--

R141)

0,0,1,2,3,4,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,--0,0,

1,2,3,4,5,6,7,8,--0,0,1,2,3,4,5,6,7,9,--

R142)

0,0,1,2,3,4,5,6,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,0,2,1,--  
0,0,--0,0,1,2,3,4,5,6,8,9,--

R143)

0,0,1,2,3,4,5,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,0,2,1,--0,1,0,--  
0,0,--0,0,1,2,3,4,5,7,8,9,--

R144)

0,0,1,2,3,4,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,0,2,1,--0,1,0,--0,1,0,--  
0,0,--0,0,1,2,3,4,6,7,8,9,--

R145)

0,0,1,2,3,5,6,7,8,-->0,1,0,--0,1,0,--0,0,1,3,1,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--  
0,0,--0,0,1,2,3,5,6,7,8,9,--

R146)

0,0,1,2,4,5,6,7,8,-->0,1,0,--0,0,1,3,1,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
0,0,--0,0,1,2,4,5,6,7,8,9,--

R147)

0,0,1,3,4,5,6,7,8,-->0,0,1,3,1,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
0,0,--0,0,1,3,4,5,6,7,8,9,--

R148)

0,0,2,3,4,5,6,7,8,-->0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,  
--0,0,2,3,4,5,6,7,8,9,--

R149)

0,1,2,3,4,5,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,  
--0,0,--0,1,2,3,4,5,6,7,8,9,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,1,: 0,0,2,: 0,1,0,: 0,1,2,:

LEN=4) 0,0,1,1,: 0,0,1,2,: 0,0,1,3,: 0,0,2,1,: 0,0,2,3,: 0,1,2,3,:

LEN=5) 0,0,1,1,2,: 0,0,1,1,3,: 0,0,1,1,4,: 0,0,1,2,3,: 0,0,1,2,4,: 0,0,1,3,1,:

0,0,1,3,4,: 0,0,2,3,4,: 0,1,2,3,4,:

LEN=6) 0,0,1,1,2,2,: 0,0,1,1,2,3,: 0,0,1,1,2,4,: 0,0,1,1,2,5,: 0,0,1,1,3,4,:

0,0,1,1,3,5,: 0,0,1,1,4,2,: 0,0,1,1,4,5,: 0,0,1,2,3,4,: 0,0,1,2,3,5,: 0,0,1,2,4,5,:

0,0,1,3,4,5,: 0,0,2,3,4,5,: 0,1,2,3,4,5,:

LEN=7) 0,0,1,1,2,2,3,: 0,0,1,1,2,2,4,: 0,0,1,1,2,2,5,: 0,0,1,1,2,2,6,:

0,0,1,1,2,3,4,: 0,0,1,1,2,3,5,: 0,0,1,1,2,3,6,: 0,0,1,1,2,4,5,: 0,0,1,1,2,4,6,:

0,0,1,1,2,5,2,: 0,0,1,1,2,5,6,: 0,0,1,1,3,4,5,: 0,0,1,1,3,4,6,: 0,0,1,1,3,5,6,:

0,0,1,1,4,5,6,: 0,0,1,2,3,4,5,: 0,0,1,2,3,4,6,: 0,0,1,2,3,5,6,: 0,0,1,2,4,5,6,:

0,0,1,3,4,5,6,: 0,0,2,3,4,5,6,: 0,1,2,3,4,5,6,:

LEN=8) 0,0,1,1,2,2,3,3,: 0,0,1,1,2,2,3,4,: 0,0,1,1,2,2,3,5,: 0,0,1,1,2,2,3,6,:

0,0,1,1,2,2,3,7,: 0,0,1,1,2,2,4,5,: 0,0,1,1,2,2,4,6,: 0,0,1,1,2,2,4,7,:

0,0,1,1,2,2,5,6,: 0,0,1,1,2,2,5,7,: 0,0,1,1,2,2,6,3,: 0,0,1,1,2,2,6,7,:

0,0,1,1,2,3,4,5,: 0,0,1,1,2,3,4,6,: 0,0,1,1,2,3,4,7,: 0,0,1,1,2,3,5,6,:

0,0,1,1,2,3,5,7,: 0,0,1,1,2,3,6,7,: 0,0,1,1,2,4,5,6,: 0,0,1,1,2,4,5,7,:

0,0,1,1,2,4,6,7,: 0,0,1,1,2,5,6,7,: 0,0,1,1,3,4,5,6,: 0,0,1,1,3,4,5,7,:

0,0,1,1,3,4,6,7,: 0,0,1,1,3,5,6,7,: 0,0,1,1,4,5,6,7,: 0,0,1,2,3,4,5,6,:

0,0,1,2,3,4,5,7,: 0,0,1,2,3,4,6,7,: 0,0,1,2,3,5,6,7,: 0,0,1,2,4,5,6,7,:

0,0,1,3,4,5,6,7,: 0,0,2,3,4,5,6,7,: 0,1,2,3,4,5,6,7,:

LEN=9) 0,0,1,1,2,2,3,3,4,: 0,0,1,1,2,2,3,3,5,: 0,0,1,1,2,2,3,3,6,:

0,0,1,1,2,2,3,3,7, : 0,0,1,1,2,2,3,3,8, : 0,0,1,1,2,2,3,4,5, : 0,0,1,1,2,2,3,4,6, :  
 0,0,1,1,2,2,3,4,7, : 0,0,1,1,2,2,3,4,8, : 0,0,1,1,2,2,3,5,6, : 0,0,1,1,2,2,3,5,7, :  
 0,0,1,1,2,2,3,5,8, : 0,0,1,1,2,2,3,6,7, : 0,0,1,1,2,2,3,6,8, : 0,0,1,1,2,2,3,7,3, :  
 0,0,1,1,2,2,3,7,8, : 0,0,1,1,2,2,4,5,6, : 0,0,1,1,2,2,4,5,7, : 0,0,1,1,2,2,4,5,8, :  
 0,0,1,1,2,2,4,6,7, : 0,0,1,1,2,2,4,6,8, : 0,0,1,1,2,2,4,7,8, : 0,0,1,1,2,2,5,6,7, :  
 0,0,1,1,2,2,5,6,8, : 0,0,1,1,2,2,5,7,8, : 0,0,1,1,2,2,6,7,8, : 0,0,1,1,2,3,4,5,6, :  
 0,0,1,1,2,3,4,5,7, : 0,0,1,1,2,3,4,5,8, : 0,0,1,1,2,3,4,6,7, : 0,0,1,1,2,3,4,6,8, :  
 0,0,1,1,2,3,4,7,8, : 0,0,1,1,2,3,5,6,7, : 0,0,1,1,2,3,5,6,8, : 0,0,1,1,2,3,5,7,8, :  
 0,0,1,1,2,3,6,7,8, : 0,0,1,1,2,4,5,6,7, : 0,0,1,1,2,4,5,6,8, : 0,0,1,1,2,4,5,7,8, :  
 0,0,1,1,2,4,6,7,8, : 0,0,1,1,2,5,6,7,8, : 0,0,1,1,3,4,5,6,7, : 0,0,1,1,3,4,5,6,8, :  
 0,0,1,1,3,4,5,7,8, : 0,0,1,1,3,4,6,7,8, : 0,0,1,1,3,5,6,7,8, : 0,0,1,1,4,5,6,7,8, :  
 0,0,1,2,3,4,5,6,7, : 0,0,1,2,3,4,5,6,8, : 0,0,1,2,3,4,5,7,8, : 0,0,1,2,3,4,6,7,8, :  
 0,0,1,2,3,5,6,7,8, : 0,0,1,2,4,5,6,7,8, : 0,0,1,3,4,5,6,7,8, : 0,0,2,3,4,5,6,7,8, :  
 0,1,2,3,4,5,6,7,8, :

LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,4,5, : 0,0,1,1,2,2,3,3,4,6, :  
 0,0,1,1,2,2,3,3,4,7, : 0,0,1,1,2,2,3,3,4,8, : 0,0,1,1,2,2,3,3,4,9, :  
 0,0,1,1,2,2,3,3,5,6, : 0,0,1,1,2,2,3,3,5,7, : 0,0,1,1,2,2,3,3,5,8, :  
 0,0,1,1,2,2,3,3,5,9, : 0,0,1,1,2,2,3,3,6,7, : 0,0,1,1,2,2,3,3,6,8, :  
 0,0,1,1,2,2,3,3,6,9, : 0,0,1,1,2,2,3,3,7,8, : 0,0,1,1,2,2,3,3,7,9, :  
 0,0,1,1,2,2,3,3,8,4, : 0,0,1,1,2,2,3,3,8,9, : 0,0,1,1,2,2,3,4,5,6, :  
 0,0,1,1,2,2,3,4,5,7, : 0,0,1,1,2,2,3,4,5,8, : 0,0,1,1,2,2,3,4,5,9, :  
 0,0,1,1,2,2,3,4,6,7, : 0,0,1,1,2,2,3,4,6,8, : 0,0,1,1,2,2,3,4,6,9, :  
 0,0,1,1,2,2,3,4,7,8, : 0,0,1,1,2,2,3,4,7,9, : 0,0,1,1,2,2,3,4,8,9, :  
 0,0,1,1,2,2,3,5,6,7, : 0,0,1,1,2,2,3,5,6,8, : 0,0,1,1,2,2,3,5,6,9, :  
 0,0,1,1,2,2,3,5,7,8, : 0,0,1,1,2,2,3,5,7,9, : 0,0,1,1,2,2,3,5,8,9, :  
 0,0,1,1,2,2,3,6,7,8, : 0,0,1,1,2,2,3,6,7,9, : 0,0,1,1,2,2,3,6,8,9, :  
 0,0,1,1,2,2,3,7,8,9, : 0,0,1,1,2,2,4,5,6,7, : 0,0,1,1,2,2,4,5,6,8, :  
 0,0,1,1,2,2,4,5,6,9, : 0,0,1,1,2,2,4,5,7,8, : 0,0,1,1,2,2,4,5,7,9, :  
 0,0,1,1,2,2,4,5,8,9, : 0,0,1,1,2,2,4,6,7,8, : 0,0,1,1,2,2,4,6,7,9, :  
 0,0,1,1,2,2,4,6,8,9, : 0,0,1,1,2,2,4,7,8,9, : 0,0,1,1,2,2,5,6,7,8, :  
 0,0,1,1,2,2,5,6,7,9, : 0,0,1,1,2,2,5,6,8,9, : 0,0,1,1,2,2,5,7,8,9, :  
 0,0,1,1,2,2,6,7,8,9, : 0,0,1,1,2,3,4,5,6,7, : 0,0,1,1,2,3,4,5,6,8, :  
 0,0,1,1,2,3,4,5,6,9, : 0,0,1,1,2,3,4,5,7,8, : 0,0,1,1,2,3,4,5,7,9, :  
 0,0,1,1,2,3,4,5,8,9, : 0,0,1,1,2,3,4,6,7,8, : 0,0,1,1,2,3,4,6,7,9, :  
 0,0,1,1,2,3,4,6,8,9, : 0,0,1,1,2,3,4,7,8,9, : 0,0,1,1,2,3,5,6,7,8, :  
 0,0,1,1,2,3,5,6,7,9, : 0,0,1,1,2,3,5,6,8,9, : 0,0,1,1,2,3,5,7,8,9, :  
 0,0,1,1,2,3,6,7,8,9, : 0,0,1,1,2,4,5,6,7,8, : 0,0,1,1,2,4,5,6,7,9, :  
 0,0,1,1,2,4,5,6,8,9, : 0,0,1,1,2,4,5,7,8,9, : 0,0,1,1,2,4,6,7,8,9, :  
 0,0,1,1,2,5,6,7,8,9, : 0,0,1,1,3,4,5,6,7,8, : 0,0,1,1,3,4,5,6,7,9, :  
 0,0,1,1,3,4,5,6,8,9, : 0,0,1,1,3,4,5,7,8,9, : 0,0,1,1,3,4,6,7,8,9, :  
 0,0,1,1,3,5,6,7,8,9, : 0,0,1,1,4,5,6,7,8,9, : 0,0,1,2,3,4,5,6,7,8, :  
 0,0,1,2,3,4,5,6,7,9, : 0,0,1,2,3,4,5,6,8,9, : 0,0,1,2,3,4,5,7,8,9, :  
 0,0,1,2,3,4,6,7,8,9, : 0,0,1,2,3,5,6,7,8,9, : 0,0,1,2,4,5,6,7,8,9, :  
 0,0,1,3,4,5,6,7,8,9, : 0,0,2,3,4,5,6,7,8,9, : 0,1,2,3,4,5,6,7,8,9, :

Number new nodes in level n is given by : 1,2,4,6,9,14,22,35,56,90,

-----Class

484-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][101][102][120][201]]$

-----

--

Rules of  $T[L]$ :

R1)  $0, -- \rightarrow 0, 0, -- 0, 1, --$

R2)  $0, 0, -- \rightarrow 0, 0, 1, -- 0, 0, 2, --$

R3)  $0, 1, -- \rightarrow 0, 1, 0, -- 0, 1, 1, -- 0, 1, --$

R4)  $0, 0, 1, -- \rightarrow 0, 0, 1, 1, -- 0, 0, 1, 2, -- 0, 0, 1, 3, --$

R5)  $0, 0, 2, -- \rightarrow 0, 0, 2, 1, -- 0, 0, 2, 2, -- 0, 1, --$

R6)  $0, 1, 0, -- \rightarrow$

R7)  $0, 1, 1, -- \rightarrow 0, 1, 0, -- 0, 0, 1, -- 0, 0, 2, --$

R8)  $0, 0, 1, 1, -- \rightarrow 0, 0, 1, 1, 2, -- 0, 0, 1, 1, 3, -- 0, 0, 1, 1, 4, --$

R9)  $0, 0, 1, 2, -- \rightarrow 0, 1, 0, -- 0, 0, 1, 2, 2, -- 0, 0, 1, 2, -- 0, 0, 1, 3, --$

R10)  $0, 0, 1, 3, -- \rightarrow 0, 1, 0, -- 0, 0, 1, 3, 2, -- 0, 0, 1, 3, 3, -- 0, 1, --$

R11)  $0, 0, 2, 1, -- \rightarrow 0, 1, 0, --$

R12)  $0, 0, 2, 2, -- \rightarrow 0, 0, 2, 1, -- 0, 0, 1, -- 0, 0, 2, --$

R13)  $0, 0, 1, 1, 2, -- \rightarrow 0, 0, 1, 1, 2, 2, -- 0, 0, 1, 1, 2, 3, -- 0, 0, 1, 1, 2, 4, -- 0, 0, 1, 1, 2, 5, --$

R14)  $0, 0, 1, 1, 3, -- \rightarrow 0, 0, 2, 1, -- 0, 0, 1, 1, 3, 3, -- 0, 0, 1, 2, -- 0, 0, 1, 3, --$

R15)  $0, 0, 1, 1, 4, -- \rightarrow 0, 0, 2, 1, -- 0, 0, 1, 1, 4, 3, -- 0, 0, 1, 1, 4, 4, -- 0, 1, --$

R16)  $0, 0, 1, 2, 2, -- \rightarrow 0, 1, 0, -- 0, 0, 1, 1, 2, -- 0, 0, 1, 1, 3, -- 0, 0, 1, 1, 4, --$

R17)  $0, 0, 1, 3, 2, -- \rightarrow 0, 1, 0, -- 0, 0, 2, 1, --$

R18)  $0, 0, 1, 3, 3, -- \rightarrow 0, 1, 0, -- 0, 0, 1, 3, 2, -- 0, 0, 1, -- 0, 0, 2, --$

R19)

$0, 0, 1, 1, 2, 2, -- \rightarrow 0, 0, 1, 1, 2, 2, 3, -- 0, 0, 1, 1, 2, 2, 4, -- 0, 0, 1, 1, 2, 2, 5, -- 0, 0, 1, 1, 2, 2, 6, --$

R20)

$0, 0, 1, 1, 2, 3, -- \rightarrow 0, 1, 0, -- 0, 0, 1, 1, 2, 3, 3, -- 0, 0, 1, 1, 2, 3, -- 0, 0, 1, 1, 2, 4, -- 0, 0, 1, 1, 2, 5, --$

R21)  $0, 0, 1, 1, 2, 4, -- \rightarrow 0, 1, 0, -- 0, 0, 1, 3, 2, -- 0, 0, 1, 1, 2, 4, 4, -- 0, 0, 1, 2, -- 0, 0, 1, 3, --$

R22)  $0, 0, 1, 1, 2, 5, -- \rightarrow 0, 1, 0, -- 0, 0, 1, 3, 2, -- 0, 0, 1, 1, 2, 5, 4, -- 0, 0, 1, 1, 2, 5, 5, -- 0, 1, --$

R23)  $0, 0, 1, 1, 3, 3, -- \rightarrow 0, 0, 2, 1, -- 0, 0, 1, 1, 2, -- 0, 0, 1, 1, 3, -- 0, 0, 1, 1, 4, --$

R24)  $0, 0, 1, 1, 4, 3, -- \rightarrow 0, 0, 2, 1, -- 0, 0, 1, 1, 4, 3, 3, --$

R25)  $0, 0, 1, 1, 4, 4, -- \rightarrow 0, 0, 2, 1, -- 0, 0, 1, 1, 4, 3, -- 0, 0, 1, -- 0, 0, 2, --$

R26)

$0, 0, 1, 1, 2, 2, 3, -- \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, -- 0, 0, 1, 1, 2, 2, 3, 4, -- 0, 0, 1, 1, 2, 2, 3, 5, -- 0, 0, 1, 1, 2, 2, 3, 6, -- 0, 0, 1, 1, 2, 2, 3, 7, --$

R27)

$0, 0, 1, 1, 2, 2, 4, -- \rightarrow 0, 0, 2, 1, -- 0, 0, 1, 1, 2, 2, 4, 4, -- 0, 0, 1, 1, 2, 3, -- 0, 0, 1, 1, 2, 4, -- 0, 0, 1, 1, 2, 5, --$

R28)

$0, 0, 1, 1, 2, 2, 5, -- \rightarrow 0, 0, 2, 1, -- 0, 0, 1, 1, 4, 3, -- 0, 0, 1, 1, 2, 2, 5, 5, -- 0, 0, 1, 2, -- 0, 0, 1, 3, --$

R29)

$0, 0, 1, 1, 2, 2, 6, -- \rightarrow 0, 0, 2, 1, -- 0, 0, 1, 1, 4, 3, -- 0, 0, 1, 1, 2, 2, 6, 5, -- 0, 0, 1, 1, 2, 2, 6, 6, -- 0, 1, --$

R30)

$0, 0, 1, 1, 2, 3, 3, -- \rightarrow 0, 1, 0, -- 0, 0, 1, 1, 2, 2, 3, -- 0, 0, 1, 1, 2, 2, 4, -- 0, 0, 1, 1, 2, 2, 5, -- 0, 0, 1, 1, 2, 2, 6, --$

R31)  $0, 0, 1, 1, 2, 4, 4, -- \rightarrow 0, 1, 0, -- 0, 0, 1, 3, 2, -- 0, 0, 1, 1, 2, -- 0, 0, 1, 1, 3, -- 0, 0, 1, 1, 4, --$

R32)  $0, 0, 1, 1, 2, 5, 4, -- \rightarrow 0, 1, 0, -- 0, 0, 1, 3, 2, -- 0, 0, 1, 1, 2, 5, 4, 4, --$

R33)  $0, 0, 1, 1, 2, 5, 5, -- \rightarrow 0, 1, 0, -- 0, 0, 1, 3, 2, -- 0, 0, 1, 1, 2, 5, 4, -- 0, 0, 1, -- 0, 0, 2, --$

R34)  $0, 0, 1, 1, 4, 3, 3, -- \rightarrow 0, 0, 2, 1, --$

R35)

$0, 0, 1, 1, 2, 2, 3, 3, -- \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, -- 0, 0, 1, 1, 2, 2, 3, 3, 5, -- 0, 0, 1, 1, 2, 2, 3, 3, 6, -- 0, 0, 1, 1, 2, 2, 3, 3, 7, -- 0, 0, 1, 1, 2, 2, 3, 3, 8, --$

R36)

0,0,1,1,2,2,3,4,-->0,1,0,--0,0,1,1,2,2,3,4,4,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--  
0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--

R37)

0,0,1,1,2,2,3,5,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,2,3,5,5,--0,0,1,1,2,3,--0,0,1,1,2,  
4,--0,0,1,1,2,5,--

R38)

0,0,1,1,2,2,3,6,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--0,0,1,1,2,2,3,6,6,--0,0,1,2,  
--0,0,1,3,--

R39)

0,0,1,1,2,2,3,7,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--0,0,1,1,2,2,3,7,6,--0,0,1,1,  
2,2,3,7,7,--0,1,--

R40)

0,0,1,1,2,2,4,4,-->0,0,2,1,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,  
1,2,2,6,--

R41)

0,0,1,1,2,2,5,5,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--

R42) 0,0,1,1,2,2,6,5,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,6,5,5,--

R43) 0,0,1,1,2,2,6,6,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,6,5,--0,0,1,--0,0,2,--

R44) 0,0,1,1,2,5,4,4,-->0,1,0,--0,0,1,3,2,--

R45)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,--0,0,1,1,2,2,3,3,4,  
6,--0,0,1,1,2,2,3,3,4,7,--0,0,1,1,2,2,3,3,4,8,--0,0,1,1,2,2,3,3,4,9,--

R46)

0,0,1,1,2,2,3,3,5,-->0,0,2,1,--0,0,1,1,2,2,3,3,5,5,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,  
3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--

R47)

0,0,1,1,2,2,3,3,6,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,3,3,6,6,--0,0,1,1,2,3,--0,  
0,1,1,2,4,--0,0,1,1,2,5,--

R48)

0,0,1,1,2,2,3,3,7,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,6,5,--0,0,1,1,2,2,3,3,7,7,  
--0,0,1,2,--0,0,1,3,--

R49)

0,0,1,1,2,2,3,3,8,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,6,5,--0,0,1,1,2,2,3,3,8,7,  
--0,0,1,1,2,2,3,3,8,8,--0,1,--

R50)

0,0,1,1,2,2,3,4,4,-->0,1,0,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,  
3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R51)

0,0,1,1,2,2,3,5,5,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,  
2,5,--0,0,1,1,2,2,6,--

R52)

0,0,1,1,2,2,3,6,6,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--0,0,1,1,2,--0,0,1,1,3,--0,  
0,1,1,4,--

R53)

0,0,1,1,2,2,3,7,6,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--0,0,1,1,2,2,3,7,6,6,--

R54)

0,0,1,1,2,2,3,7,7,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--0,0,1,1,2,2,3,7,6,--0,0,1,  
--0,0,2,--

R55) 0,0,1,1,2,2,6,5,5,-->0,0,2,1,--0,0,1,1,4,3,--

List of different nodes in T[L]

LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,1, : 0,0,2, : 0,1,0, : 0,1,1, :  
 LEN=4) 0,0,1,1, : 0,0,1,2, : 0,0,1,3, : 0,0,2,1, : 0,0,2,2, :  
 LEN=5) 0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, : 0,0,1,2,2, : 0,0,1,3,2, : 0,0,1,3,3, :  
 LEN=6) 0,0,1,1,2,2, : 0,0,1,1,2,3, : 0,0,1,1,2,4, : 0,0,1,1,2,5, : 0,0,1,1,3,3, :  
 0,0,1,1,4,3, : 0,0,1,1,4,4, :  
 LEN=7) 0,0,1,1,2,2,3, : 0,0,1,1,2,2,4, : 0,0,1,1,2,2,5, : 0,0,1,1,2,2,6, :  
 0,0,1,1,2,3,3, : 0,0,1,1,2,4,4, : 0,0,1,1,2,5,4, : 0,0,1,1,2,5,5, : 0,0,1,1,4,3,3, :  
 LEN=8) 0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,3,4, : 0,0,1,1,2,2,3,5, : 0,0,1,1,2,2,3,6, :  
 0,0,1,1,2,2,3,7, : 0,0,1,1,2,2,4,4, : 0,0,1,1,2,2,5,5, : 0,0,1,1,2,2,6,5, :  
 0,0,1,1,2,2,6,6, : 0,0,1,1,2,5,4,4, :  
 LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,3,5, : 0,0,1,1,2,2,3,3,6, :  
 0,0,1,1,2,2,3,3,7, : 0,0,1,1,2,2,3,3,8, : 0,0,1,1,2,2,3,4,4, : 0,0,1,1,2,2,3,5,5, :  
 0,0,1,1,2,2,3,6,6, : 0,0,1,1,2,2,3,7,6, : 0,0,1,1,2,2,3,7,7, : 0,0,1,1,2,2,6,5,5, :  
 LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,4,5, : 0,0,1,1,2,2,3,3,4,6, :  
 0,0,1,1,2,2,3,3,4,7, : 0,0,1,1,2,2,3,3,4,8, : 0,0,1,1,2,2,3,3,4,9, :  
 0,0,1,1,2,2,3,3,5,5, : 0,0,1,1,2,2,3,3,6,6, : 0,0,1,1,2,2,3,3,7,7, :  
 0,0,1,1,2,2,3,3,8,7, : 0,0,1,1,2,2,3,3,8,8, : 0,0,1,1,2,2,3,7,6,6, :  
 Number new nodes in level n is given by : 1,2,4,5,6,7,9,10,11,12,

-----Class

485-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][101][102][120][210]]$

-----

--

Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,1, --0,0,2, --
- R3) 0,1, -->0,1,0, --0,1,1, --0,1, --
- R4) 0,0,1, -->0,0,1,1, --0,0,1,2, --0,0,1,3, --
- R5) 0,0,2, -->0,0,2,1, --0,0,2,2, --0,1, --
- R6) 0,1,0, -->
- R7) 0,1,1, -->0,1,0, --0,0,1, --0,0,2, --
- R8) 0,0,1,1, -->0,0,1,1,2, --0,0,1,1,3, --0,0,1,1,4, --
- R9) 0,0,1,2, -->0,1,0, --0,0,1,2,2, --0,0,1,2, --0,0,1,3, --
- R10) 0,0,1,3, -->0,0,1,3,1, --0,0,2,1, --0,0,1,3,3, --0,1, --
- R11) 0,0,2,1, -->0,1,0, --
- R12) 0,0,2,2, -->0,0,2,1, --0,0,1, --0,0,2, --
- R13) 0,0,1,1,2, -->0,0,1,1,2,2, --0,0,1,1,2,3, --0,0,1,1,2,4, --0,0,1,1,2,5, --
- R14) 0,0,1,1,3, -->0,0,2,1, --0,0,1,1,3,3, --0,0,1,2, --0,0,1,3, --
- R15) 0,0,1,1,4, -->0,0,1,1,4,2, --0,0,2,1, --0,0,1,1,4,4, --0,1, --
- R16) 0,0,1,2,2, -->0,1,0, --0,0,1,1,2, --0,0,1,1,3, --0,0,1,1,4, --
- R17) 0,0,1,3,1, -->0,0,2,1, --
- R18) 0,0,1,3,3, -->0,0,1,3,1, --0,0,2,1, --0,0,1, --0,0,2, --
- R19)
- 0,0,1,1,2,2, -->0,0,1,1,2,2,3, --0,0,1,1,2,2,4, --0,0,1,1,2,2,5, --0,0,1,1,2,2,6, --
- R20)
- 0,0,1,1,2,3, -->0,1,0, --0,0,1,1,2,3,3, --0,0,1,1,2,3, --0,0,1,1,2,4, --0,0,1,1,2,5, --
- R21) 0,0,1,1,2,4, -->0,0,1,3,1, --0,0,2,1, --0,0,1,1,2,4,4, --0,0,1,2, --0,0,1,3, --

R22) 0,0,1,1,2,5,-->0,0,1,1,2,5,2,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,5,5,--0,1,--  
R23) 0,0,1,1,3,3,-->0,0,2,1,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--  
R24) 0,0,1,1,4,2,-->0,0,1,3,1,--0,0,2,1,--  
R25) 0,0,1,1,4,4,-->0,0,1,1,4,2,--0,0,2,1,--0,0,1,--0,0,2,--  
R26)  
0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,  
3,6,--0,0,1,1,2,2,3,7,--  
R27)  
0,0,1,1,2,2,4,-->0,0,2,1,--0,0,1,1,2,2,4,4,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,  
5,--  
R28)  
0,0,1,1,2,2,5,-->0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,5,5,--0,0,1,2,--0,0,1,3,--  
R29)  
0,0,1,1,2,2,6,-->0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,6,6,--0,1,--  
R30)  
0,0,1,1,2,3,3,-->0,1,0,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,  
2,6,--  
R31) 0,0,1,1,2,4,4,-->0,0,1,3,1,--0,0,2,1,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--  
R32) 0,0,1,1,2,5,2,-->0,0,1,1,4,2,--0,0,2,1,--  
R33) 0,0,1,1,2,5,5,-->0,0,1,1,2,5,2,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,--0,0,2,--  
R34)  
0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,  
1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--  
R35)  
0,0,1,1,2,2,3,4,-->0,1,0,--0,0,1,1,2,2,3,4,4,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--  
0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--  
R36)  
0,0,1,1,2,2,3,5,-->0,0,1,3,1,--0,0,2,1,--0,0,1,1,2,2,3,5,5,--0,0,1,1,2,3,--0,0,1,1,  
2,4,--0,0,1,1,2,5,--  
R37)  
0,0,1,1,2,2,3,6,-->0,0,1,1,2,5,2,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,3,6,6,--0,0,  
1,2,--0,0,1,3,--  
R38)  
0,0,1,1,2,2,3,7,-->0,0,1,1,2,2,3,7,3,--0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,2,1,--0,  
0,1,1,2,2,3,7,7,--0,1,--  
R39)  
0,0,1,1,2,2,4,4,-->0,0,2,1,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,  
1,2,2,6,--  
R40)  
0,0,1,1,2,2,5,5,-->0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--  
R41) 0,0,1,1,2,2,6,3,-->0,0,1,1,2,5,2,--0,0,1,1,4,2,--0,0,2,1,--  
R42) 0,0,1,1,2,2,6,6,-->0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,--0,0,2,--  
R43)  
0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,--0,0,1,1,2,2,3,3,4,  
6,--0,0,1,1,2,2,3,3,4,7,--0,0,1,1,2,2,3,3,4,8,--0,0,1,1,2,2,3,3,4,9,--  
R44)  
0,0,1,1,2,2,3,3,5,-->0,0,2,1,--0,0,1,1,2,2,3,3,5,5,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,  
3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--  
R45)  
0,0,1,1,2,2,3,3,6,-->0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,3,3,6,6,--0,0,1,1,2,3,--0,

0,1,1,2,4,--0,0,1,1,2,5,--  
 R46)  
 0,0,1,1,2,2,3,3,7,-->0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,3,3,7,7,  
 --0,0,1,2,--0,0,1,3,--  
 R47)  
 0,0,1,1,2,2,3,3,8,-->0,0,1,1,2,2,3,3,8,4,--0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,2,1,  
 --0,0,1,1,2,2,3,3,8,8,--0,1,--  
 R48)  
 0,0,1,1,2,2,3,4,4,-->0,1,0,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,  
 3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--  
 R49)  
 0,0,1,1,2,2,3,5,5,-->0,0,1,3,1,--0,0,2,1,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,  
 2,2,5,--0,0,1,1,2,2,6,--  
 R50)  
 0,0,1,1,2,2,3,6,6,-->0,0,1,1,2,5,2,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,--0,0,1,1,3,  
 --0,0,1,1,4,--  
 R51) 0,0,1,1,2,2,3,7,3,-->0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,2,1,--  
 R52)  
 0,0,1,1,2,2,3,7,7,-->0,0,1,1,2,2,3,7,3,--0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,2,1,--  
 0,0,1,--0,0,2,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,1, : 0,0,2, : 0,1,0, : 0,1,1, :  
 LEN=4) 0,0,1,1, : 0,0,1,2, : 0,0,1,3, : 0,0,2,1, : 0,0,2,2, :  
 LEN=5) 0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, : 0,0,1,2,2, : 0,0,1,3,1, : 0,0,1,3,3, :  
 LEN=6) 0,0,1,1,2,2, : 0,0,1,1,2,3, : 0,0,1,1,2,4, : 0,0,1,1,2,5, : 0,0,1,1,3,3, :  
 0,0,1,1,4,2, : 0,0,1,1,4,4, :  
 LEN=7) 0,0,1,1,2,2,3, : 0,0,1,1,2,2,4, : 0,0,1,1,2,2,5, : 0,0,1,1,2,2,6, :  
 0,0,1,1,2,3,3, : 0,0,1,1,2,4,4, : 0,0,1,1,2,5,2, : 0,0,1,1,2,5,5, :  
 LEN=8) 0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,3,4, : 0,0,1,1,2,2,3,5, : 0,0,1,1,2,2,3,6, :  
 0,0,1,1,2,2,3,7, : 0,0,1,1,2,2,4,4, : 0,0,1,1,2,2,5,5, : 0,0,1,1,2,2,6,3, :  
 0,0,1,1,2,2,6,6, :  
 LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,3,5, : 0,0,1,1,2,2,3,3,6, :  
 0,0,1,1,2,2,3,3,7, : 0,0,1,1,2,2,3,3,8, : 0,0,1,1,2,2,3,4,4, : 0,0,1,1,2,2,3,5,5, :  
 0,0,1,1,2,2,3,6,6, : 0,0,1,1,2,2,3,7,3, : 0,0,1,1,2,2,3,7,7, :  
 LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,4,5, : 0,0,1,1,2,2,3,3,4,6, :  
 0,0,1,1,2,2,3,3,4,7, : 0,0,1,1,2,2,3,3,4,8, : 0,0,1,1,2,2,3,3,4,9, :  
 0,0,1,1,2,2,3,3,5,5, : 0,0,1,1,2,2,3,3,6,6, : 0,0,1,1,2,2,3,3,7,7, :  
 0,0,1,1,2,2,3,3,8,4, : 0,0,1,1,2,2,3,3,8,8, :  
 Number new nodes in level n is given by : 1,2,4,5,6,7,8,9,10,11,

-----Class

486-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][101][102][201][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,1,--0,0,2,--



R3) 0,1,-->0,1,0,--0,1,1,--0,1,2,--  
R4) 0,0,1,-->0,0,1,1,--0,0,1,2,--0,0,1,3,--  
R5) 0,0,2,-->0,0,2,1,--0,0,2,2,--0,0,2,3,--  
R6) 0,1,0,-->  
R7) 0,1,1,-->0,1,0,--0,0,1,2,--0,0,1,3,--  
R8) 0,1,2,-->0,1,0,--0,1,0,--0,1,2,2,--0,1,2,3,--  
R9) 0,0,1,1,-->0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--  
R10) 0,0,1,2,-->0,1,0,--0,0,1,2,2,--0,0,1,2,3,--0,0,1,2,4,--  
R11) 0,0,1,3,-->0,1,0,--0,0,2,1,--0,0,1,3,3,--0,0,1,3,4,--  
R12) 0,0,2,1,-->0,1,0,--  
R13) 0,0,2,2,-->0,0,2,1,--0,0,1,1,3,--0,0,1,1,4,--  
R14) 0,0,2,3,-->0,0,2,1,--0,1,0,--0,0,2,3,3,--0,0,2,3,4,--  
R15) 0,1,2,2,-->0,1,0,--0,1,0,--0,0,1,2,3,--0,0,1,2,4,--  
R16) 0,1,2,3,-->0,1,0,--0,1,0,--0,1,0,--0,1,2,3,3,--0,1,2,3,4,--  
R17) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--  
R18) 0,0,1,1,3,-->0,0,2,1,--0,0,1,1,3,3,--0,0,1,1,3,4,--0,0,1,1,3,5,--  
R19) 0,0,1,1,4,-->0,0,2,1,--0,0,2,1,--0,0,1,1,4,4,--0,0,1,1,4,5,--  
R20) 0,0,1,2,2,-->0,1,0,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--  
R21) 0,0,1,2,3,-->0,1,0,--0,1,0,--0,0,1,2,3,3,--0,0,1,2,3,4,--0,0,1,2,3,5,--  
R22) 0,0,1,2,4,-->0,1,0,--0,1,0,--0,0,2,1,--0,0,1,2,4,4,--0,0,1,2,4,5,--  
R23) 0,0,1,3,3,-->0,1,0,--0,0,2,1,--0,0,1,1,2,4,--0,0,1,1,2,5,--  
R24) 0,0,1,3,4,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,1,3,4,4,--0,0,1,3,4,5,--  
R25) 0,0,2,3,3,-->0,0,2,1,--0,1,0,--0,0,1,1,3,4,--0,0,1,1,3,5,--  
R26) 0,0,2,3,4,-->0,0,2,1,--0,1,0,--0,1,0,--0,0,2,3,4,4,--0,0,2,3,4,5,--  
R27) 0,1,2,3,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,--0,0,1,2,3,5,--  
R28) 0,1,2,3,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,3,4,4,--0,1,2,3,4,5,--  
R29)  
0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--  
R30)  
0,0,1,1,2,3,-->0,1,0,--0,0,1,1,2,3,3,--0,0,1,1,2,3,4,--0,0,1,1,2,3,5,--0,0,1,1,2,3,6,--  
R31)  
0,0,1,1,2,4,-->0,1,0,--0,0,2,1,--0,0,1,1,2,4,4,--0,0,1,1,2,4,5,--0,0,1,1,2,4,6,--  
R32) 0,0,1,1,2,5,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,5,5,--0,0,1,1,2,5,6,--  
R33) 0,0,1,1,3,3,-->0,0,2,1,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--  
R34)  
0,0,1,1,3,4,-->0,0,2,1,--0,1,0,--0,0,1,1,3,4,4,--0,0,1,1,3,4,5,--0,0,1,1,3,4,6,--  
R35) 0,0,1,1,3,5,-->0,0,2,1,--0,1,0,--0,0,2,1,--0,0,1,1,3,5,5,--0,0,1,1,3,5,6,--  
R36) 0,0,1,1,4,4,-->0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--  
R37) 0,0,1,1,4,5,-->0,0,2,1,--0,0,2,1,--0,1,0,--0,0,1,1,4,5,5,--0,0,1,1,4,5,6,--  
R38)  
0,0,1,2,3,3,-->0,1,0,--0,1,0,--0,0,1,1,2,3,4,--0,0,1,1,2,3,5,--0,0,1,1,2,3,6,--  
R39)  
0,0,1,2,3,4,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,4,--0,0,1,2,3,4,5,--0,0,1,2,3,4,6,--  
R40)  
0,0,1,2,3,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,0,1,2,3,5,5,--0,0,1,2,3,5,6,--  
R41) 0,0,1,2,4,4,-->0,1,0,--0,1,0,--0,0,2,1,--0,0,1,1,2,3,5,--0,0,1,1,2,3,6,--  
R42)  
0,0,1,2,4,5,-->0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,0,1,2,4,5,5,--0,0,1,2,4,5,6,--

R43) 0,0,1,3,4,4,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,1,1,2,4,5,--0,0,1,1,2,4,6,--  
R44)  
0,0,1,3,4,5,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,1,3,4,5,5,--0,0,1,3,4,5,6,--  
R45) 0,0,2,3,4,4,-->0,0,2,1,--0,1,0,--0,1,0,--0,0,1,1,3,4,5,--0,0,1,1,3,4,6,--  
R46)  
0,0,2,3,4,5,-->0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,2,3,4,5,5,--0,0,2,3,4,5,6,--  
R47)  
0,1,2,3,4,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,5,--0,0,1,2,3,4,6,--  
R48)  
0,1,2,3,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,3,4,5,5,--0,1,2,3,4,5,  
6,--  
R49)  
0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,  
3,6,--0,0,1,1,2,2,3,7,--  
R50)  
0,0,1,1,2,2,4,-->0,0,2,1,--0,0,1,1,2,2,4,4,--0,0,1,1,2,2,4,5,--0,0,1,1,2,2,4,6,--0,  
0,1,1,2,2,4,7,--  
R51)  
0,0,1,1,2,2,5,-->0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,5,5,--0,0,1,1,2,2,5,6,--0,0,1,1,2,  
2,5,7,--  
R52)  
0,0,1,1,2,2,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,6,6,--0,0,1,1,2,2,6,7,--  
R53)  
0,0,1,1,2,3,3,-->0,1,0,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,  
1,1,2,2,3,7,--  
R54)  
0,0,1,1,2,3,4,-->0,1,0,--0,1,0,--0,0,1,1,2,3,4,4,--0,0,1,1,2,3,4,5,--0,0,1,1,2,3,4,  
6,--0,0,1,1,2,3,4,7,--  
R55)  
0,0,1,1,2,3,5,-->0,1,0,--0,1,0,--0,0,2,1,--0,0,1,1,2,3,5,5,--0,0,1,1,2,3,5,6,--0,0,  
1,1,2,3,5,7,--  
R56)  
0,0,1,1,2,3,6,-->0,1,0,--0,1,0,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,3,6,6,--0,0,1,1,2,3,  
6,7,--  
R57)  
0,0,1,1,2,4,4,-->0,1,0,--0,0,2,1,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,  
3,7,--  
R58)  
0,0,1,1,2,4,5,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,1,1,2,4,5,5,--0,0,1,1,2,4,5,6,--0,0,  
1,1,2,4,5,7,--  
R59)  
0,0,1,1,2,4,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,2,1,--0,0,1,1,2,4,6,6,--0,0,1,1,2,4,  
6,7,--  
R60)  
0,0,1,1,2,5,5,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--  
R61)  
0,0,1,1,2,5,6,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,1,0,--0,0,1,1,2,5,6,6,--0,0,1,1,2,5,  
6,7,--  
R62)  
0,0,1,1,3,4,4,-->0,0,2,1,--0,1,0,--0,0,1,1,2,2,4,5,--0,0,1,1,2,2,4,6,--0,0,1,1,2,2,

4,7, --  
R63)  
0,0,1,1,3,4,5, -->0,0,2,1, --0,1,0, --0,1,0, --0,0,1,1,3,4,5,5, --0,0,1,1,3,4,5,6, --0,0,  
1,1,3,4,5,7, --  
R64)  
0,0,1,1,3,4,6, -->0,0,2,1, --0,1,0, --0,1,0, --0,0,2,1, --0,0,1,1,3,4,6,6, --0,0,1,1,3,4,  
6,7, --  
R65)  
0,0,1,1,3,5,5, -->0,0,2,1, --0,1,0, --0,0,2,1, --0,0,1,1,2,2,4,6, --0,0,1,1,2,2,4,7, --  
R66)  
0,0,1,1,3,5,6, -->0,0,2,1, --0,1,0, --0,0,2,1, --0,1,0, --0,0,1,1,3,5,6,6, --0,0,1,1,3,5,  
6,7, --  
R67)  
0,0,1,1,4,5,5, -->0,0,2,1, --0,0,2,1, --0,1,0, --0,0,1,1,2,2,5,6, --0,0,1,1,2,2,5,7, --  
R68)  
0,0,1,1,4,5,6, -->0,0,2,1, --0,0,2,1, --0,1,0, --0,1,0, --0,0,1,1,4,5,6,6, --0,0,1,1,4,5,  
6,7, --  
R69)  
0,0,1,2,3,4,4, -->0,1,0, --0,1,0, --0,1,0, --0,0,1,1,2,3,4,5, --0,0,1,1,2,3,4,6, --0,0,1,  
1,2,3,4,7, --  
R70)  
0,0,1,2,3,4,5, -->0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,0,1,2,3,4,5,5, --0,0,1,2,3,4,5,6,  
--0,0,1,2,3,4,5,7, --  
R71)  
0,0,1,2,3,4,6, -->0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,0,2,1, --0,0,1,2,3,4,6,6, --0,0,1,  
2,3,4,6,7, --  
R72)  
0,0,1,2,3,5,5, -->0,1,0, --0,1,0, --0,1,0, --0,0,2,1, --0,0,1,1,2,3,4,6, --0,0,1,1,2,3,4,  
7, --  
R73)  
0,0,1,2,3,5,6, -->0,1,0, --0,1,0, --0,1,0, --0,0,2,1, --0,1,0, --0,0,1,2,3,5,6,6, --0,0,1,  
2,3,5,6,7, --  
R74)  
0,0,1,2,4,5,5, -->0,1,0, --0,1,0, --0,0,2,1, --0,1,0, --0,0,1,1,2,3,5,6, --0,0,1,1,2,3,5,  
7, --  
R75)  
0,0,1,2,4,5,6, -->0,1,0, --0,1,0, --0,0,2,1, --0,1,0, --0,1,0, --0,0,1,2,4,5,6,6, --0,0,1,  
2,4,5,6,7, --  
R76)  
0,0,1,3,4,5,5, -->0,1,0, --0,0,2,1, --0,1,0, --0,1,0, --0,0,1,1,2,4,5,6, --0,0,1,1,2,4,5,  
7, --  
R77)  
0,0,1,3,4,5,6, -->0,1,0, --0,0,2,1, --0,1,0, --0,1,0, --0,1,0, --0,0,1,3,4,5,6,6, --0,0,1,  
3,4,5,6,7, --  
R78)  
0,0,2,3,4,5,5, -->0,0,2,1, --0,1,0, --0,1,0, --0,1,0, --0,0,1,1,3,4,5,6, --0,0,1,1,3,4,5,  
7, --  
R79)  
0,0,2,3,4,5,6, -->0,0,2,1, --0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,0,2,3,4,5,6,6, --0,0,2,  
3,4,5,6,7, --

R80)

0,1,2,3,4,5,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,5,6,--0,0,1,2,3,4,5,7,--

R81)

0,1,2,3,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,3,4,5,6,6,--0,1,2,3,4,5,6,7,--

R82)

0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R83)

0,0,1,1,2,2,3,4,-->0,1,0,--0,0,1,1,2,2,3,4,4,--0,0,1,1,2,2,3,4,5,--0,0,1,1,2,2,3,4,6,--0,0,1,1,2,2,3,4,7,--0,0,1,1,2,2,3,4,8,--

R84)

0,0,1,1,2,2,3,5,-->0,1,0,--0,0,2,1,--0,0,1,1,2,2,3,5,5,--0,0,1,1,2,2,3,5,6,--0,0,1,1,2,2,3,5,7,--0,0,1,1,2,2,3,5,8,--

R85)

0,0,1,1,2,2,3,6,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,3,6,6,--0,0,1,1,2,2,3,6,7,--0,0,1,1,2,2,3,6,8,--

R86)

0,0,1,1,2,2,3,7,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,3,7,7,--0,0,1,1,2,2,3,7,8,--

R87)

0,0,1,1,2,2,4,4,-->0,0,2,1,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R88)

0,0,1,1,2,2,4,5,-->0,0,2,1,--0,1,0,--0,0,1,1,2,2,4,5,5,--0,0,1,1,2,2,4,5,6,--0,0,1,1,2,2,4,5,7,--0,0,1,1,2,2,4,5,8,--

R89)

0,0,1,1,2,2,4,6,-->0,0,2,1,--0,1,0,--0,0,2,1,--0,0,1,1,2,2,4,6,6,--0,0,1,1,2,2,4,6,7,--0,0,1,1,2,2,4,6,8,--

R90)

0,0,1,1,2,2,4,7,-->0,0,2,1,--0,1,0,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,4,7,7,--0,0,1,1,2,2,4,7,8,--

R91)

0,0,1,1,2,2,5,5,-->0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R92)

0,0,1,1,2,2,5,6,-->0,0,2,1,--0,0,2,1,--0,1,0,--0,0,1,1,2,2,5,6,6,--0,0,1,1,2,2,5,6,7,--0,0,1,1,2,2,5,6,8,--

R93)

0,0,1,1,2,2,5,7,-->0,0,2,1,--0,0,2,1,--0,1,0,--0,0,2,1,--0,0,1,1,2,2,5,7,7,--0,0,1,1,2,2,5,7,8,--

R94)

0,0,1,1,2,2,6,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R95)

0,0,1,1,2,2,6,7,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,0,--0,0,1,1,2,2,6,7,7,--0,0,1,1,2,2,6,7,8,--

R96)

0,0,1,1,2,3,4,4,-->0,1,0,--0,1,0,--0,0,1,1,2,2,3,4,5,--0,0,1,1,2,2,3,4,6,--0,0,1,1,

2,2,3,4,7,--0,0,1,1,2,2,3,4,8,--

R97)

0,0,1,1,2,3,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,3,4,5,5,--0,0,1,1,2,3,4,5,6,--

0,0,1,1,2,3,4,5,7,--0,0,1,1,2,3,4,5,8,--

R98)

0,0,1,1,2,3,4,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,0,1,1,2,3,4,6,6,--0,0,1,1,2,

3,4,6,7,--0,0,1,1,2,3,4,6,8,--

R99)

0,0,1,1,2,3,4,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,3,4,7,7,--

0,0,1,1,2,3,4,7,8,--

R100)

0,0,1,1,2,3,5,5,-->0,1,0,--0,1,0,--0,0,2,1,--0,0,1,1,2,2,3,4,6,--0,0,1,1,2,2,3,4,7,

--0,0,1,1,2,2,3,4,8,--

R101)

0,0,1,1,2,3,5,6,-->0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,0,1,1,2,3,5,6,6,--0,0,1,1,2,

3,5,6,7,--0,0,1,1,2,3,5,6,8,--

R102)

0,0,1,1,2,3,5,7,-->0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,0,2,1,--0,0,1,1,2,3,5,7,7,--

0,0,1,1,2,3,5,7,8,--

R103)

0,0,1,1,2,3,6,6,-->0,1,0,--0,1,0,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,3,4,7,--0,0,1,1,

2,2,3,4,8,--

R104)

0,0,1,1,2,3,6,7,-->0,1,0,--0,1,0,--0,0,2,1,--0,0,2,1,--0,1,0,--0,0,1,1,2,3,6,7,7,--

0,0,1,1,2,3,6,7,8,--

R105)

0,0,1,1,2,4,5,5,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,1,1,2,2,3,5,6,--0,0,1,1,2,2,3,5,7,

--0,0,1,1,2,2,3,5,8,--

R106)

0,0,1,1,2,4,5,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,1,1,2,4,5,6,6,--0,0,1,1,2,

4,5,6,7,--0,0,1,1,2,4,5,6,8,--

R107)

0,0,1,1,2,4,5,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,2,1,--0,0,1,1,2,4,5,7,7,--

0,0,1,1,2,4,5,7,8,--

R108)

0,0,1,1,2,4,6,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,2,1,--0,0,1,1,2,2,3,5,7,--0,0,1,1,

2,2,3,5,8,--

R109)

0,0,1,1,2,4,6,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,2,1,--0,1,0,--0,0,1,1,2,4,6,7,7,--

0,0,1,1,2,4,6,7,8,--

R110)

0,0,1,1,2,5,6,6,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,1,0,--0,0,1,1,2,2,3,6,7,--0,0,1,1,

2,2,3,6,8,--

R111)

0,0,1,1,2,5,6,7,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,1,0,--0,1,0,--0,0,1,1,2,5,6,7,7,--

0,0,1,1,2,5,6,7,8,--

R112)

0,0,1,1,3,4,5,5,-->0,0,2,1,--0,1,0,--0,1,0,--0,0,1,1,2,2,4,5,6,--0,0,1,1,2,2,4,5,7,

--0,0,1,1,2,2,4,5,8,--

R113)

0,0,1,1,3,4,5,6,-->0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,3,4,5,6,6,--0,0,1,1,3,4,5,6,7,--0,0,1,1,3,4,5,6,8,--

R114)

0,0,1,1,3,4,5,7,-->0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,0,1,1,3,4,5,7,7,--0,0,1,1,3,4,5,7,8,--

R115)

0,0,1,1,3,4,6,6,-->0,0,2,1,--0,1,0,--0,1,0,--0,0,2,1,--0,0,1,1,2,2,4,5,7,--0,0,1,1,2,2,4,5,8,--

R116)

0,0,1,1,3,4,6,7,-->0,0,2,1,--0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,0,1,1,3,4,6,7,7,--0,0,1,1,3,4,6,7,8,--

R117)

0,0,1,1,3,5,6,6,-->0,0,2,1,--0,1,0,--0,0,2,1,--0,1,0,--0,0,1,1,2,2,4,6,7,--0,0,1,1,2,2,4,6,8,--

R118)

0,0,1,1,3,5,6,7,-->0,0,2,1,--0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,1,1,3,5,6,7,7,--0,0,1,1,3,5,6,7,8,--

R119)

0,0,1,1,4,5,6,6,-->0,0,2,1,--0,0,2,1,--0,1,0,--0,1,0,--0,0,1,1,2,2,5,6,7,--0,0,1,1,2,2,5,6,8,--

R120)

0,0,1,1,4,5,6,7,-->0,0,2,1,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,4,5,6,7,7,--0,0,1,1,4,5,6,7,8,--

R121)

0,0,1,2,3,4,5,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,3,4,5,6,--0,0,1,1,2,3,4,5,7,--0,0,1,1,2,3,4,5,8,--

R122)

0,0,1,2,3,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,5,6,6,--0,0,1,2,3,4,5,6,7,--0,0,1,2,3,4,5,6,8,--

R123)

0,0,1,2,3,4,5,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,0,1,2,3,4,5,7,7,--0,0,1,2,3,4,5,7,8,--

R124)

0,0,1,2,3,4,6,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,0,1,1,2,3,4,5,7,--0,0,1,1,2,3,4,5,8,--

R125)

0,0,1,2,3,4,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,0,1,2,3,4,6,7,7,--0,0,1,2,3,4,6,7,8,--

R126)

0,0,1,2,3,5,6,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,0,1,1,2,3,4,6,7,--0,0,1,1,2,3,4,6,8,--

R127)

0,0,1,2,3,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,1,2,3,5,6,7,7,--0,0,1,2,3,5,6,7,8,--

R128)

0,0,1,2,4,5,6,6,-->0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,1,1,2,3,5,6,7,--0,0,1,1,2,3,5,6,8,--

R129)

0,0,1,2,4,5,6,7,-->0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,5,6,7,7,--0,0,1,2,4,5,6,7,8,--

R130)

0,0,1,3,4,5,6,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,4,5,6,7,--0,  
0,1,1,2,4,5,6,8,--

R131)

0,0,1,3,4,5,6,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,3,4,5,6,  
7,7,--0,0,1,3,4,5,6,7,8,--

R132)

0,0,2,3,4,5,6,6,-->0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,3,4,5,6,7,--0,  
0,1,1,3,4,5,6,8,--

R133)

0,0,2,3,4,5,6,7,-->0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,3,4,5,6,  
7,7,--0,0,2,3,4,5,6,7,8,--

R134)

0,1,2,3,4,5,6,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,5,6,  
7,--0,0,1,2,3,4,5,6,8,--

R135)

0,1,2,3,4,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,3,  
4,5,6,7,7,--0,1,2,3,4,5,6,7,8,--

R136)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,--0,0,1,1,2,2,3,3,4,  
6,--0,0,1,1,2,2,3,3,4,7,--0,0,1,1,2,2,3,3,4,8,--0,0,1,1,2,2,3,3,4,9,--

R137)

0,0,1,1,2,2,3,3,5,-->0,0,2,1,--0,0,1,1,2,2,3,3,5,5,--0,0,1,1,2,2,3,3,5,6,--0,0,1,1,  
2,2,3,3,5,7,--0,0,1,1,2,2,3,3,5,8,--0,0,1,1,2,2,3,3,5,9,--

R138)

0,0,1,1,2,2,3,3,6,-->0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,3,3,6,6,--0,0,1,1,2,2,3,3,6,7,  
--0,0,1,1,2,2,3,3,6,8,--0,0,1,1,2,2,3,3,6,9,--

R139)

0,0,1,1,2,2,3,3,7,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,3,3,7,7,--0,0,1,1,2,  
2,3,3,7,8,--0,0,1,1,2,2,3,3,7,9,--

R140)

0,0,1,1,2,2,3,3,8,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,3,3,8,8,--  
0,0,1,1,2,2,3,3,8,9,--

R141)

0,0,1,1,2,2,3,4,4,-->0,1,0,--0,0,1,1,2,2,3,3,4,5,--0,0,1,1,2,2,3,3,4,6,--0,0,1,1,2,  
2,3,3,4,7,--0,0,1,1,2,2,3,3,4,8,--0,0,1,1,2,2,3,3,4,9,--

R142)

0,0,1,1,2,2,3,4,5,-->0,1,0,--0,1,0,--0,0,1,1,2,2,3,4,5,5,--0,0,1,1,2,2,3,4,5,6,--0,  
0,1,1,2,2,3,4,5,7,--0,0,1,1,2,2,3,4,5,8,--0,0,1,1,2,2,3,4,5,9,--

R143)

0,0,1,1,2,2,3,4,6,-->0,1,0,--0,1,0,--0,0,2,1,--0,0,1,1,2,2,3,4,6,6,--0,0,1,1,2,2,3,  
4,6,7,--0,0,1,1,2,2,3,4,6,8,--0,0,1,1,2,2,3,4,6,9,--

R144)

0,0,1,1,2,2,3,4,7,-->0,1,0,--0,1,0,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,3,4,7,7,--0,0,  
1,1,2,2,3,4,7,8,--0,0,1,1,2,2,3,4,7,9,--

R145)

0,0,1,1,2,2,3,4,8,-->0,1,0,--0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,3,4,  
8,8,--0,0,1,1,2,2,3,4,8,9,--

R146)

0,0,1,1,2,2,3,5,5,-->0,1,0,--0,0,2,1,--0,0,1,1,2,2,3,3,4,6,--0,0,1,1,2,2,3,3,4,7,--

0,0,1,1,2,2,3,3,4,8,--0,0,1,1,2,2,3,3,4,9,--  
R147)  
0,0,1,1,2,2,3,5,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,1,1,2,2,3,5,6,6,--0,0,1,1,2,2,3,  
5,6,7,--0,0,1,1,2,2,3,5,6,8,--0,0,1,1,2,2,3,5,6,9,--  
R148)  
0,0,1,1,2,2,3,5,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,2,1,--0,0,1,1,2,2,3,5,7,7,--0,0,  
1,1,2,2,3,5,7,8,--0,0,1,1,2,2,3,5,7,9,--  
R149)  
0,0,1,1,2,2,3,5,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,3,5,  
8,8,--0,0,1,1,2,2,3,5,8,9,--  
R150)  
0,0,1,1,2,2,3,6,6,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,3,3,4,7,--0,0,1,1,2,2,  
3,3,4,8,--0,0,1,1,2,2,3,3,4,9,--  
R151)  
0,0,1,1,2,2,3,6,7,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,1,0,--0,0,1,1,2,2,3,6,7,7,--0,0,  
1,1,2,2,3,6,7,8,--0,0,1,1,2,2,3,6,7,9,--  
R152)  
0,0,1,1,2,2,3,6,8,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,1,0,--0,0,2,1,--0,0,1,1,2,2,3,6,  
8,8,--0,0,1,1,2,2,3,6,8,9,--  
R153)  
0,0,1,1,2,2,3,7,7,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,3,3,4,8,--0,  
0,1,1,2,2,3,3,4,9,--  
R154)  
0,0,1,1,2,2,3,7,8,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,0,--0,0,1,1,2,2,3,7,  
8,8,--0,0,1,1,2,2,3,7,8,9,--  
R155)  
0,0,1,1,2,2,4,5,5,-->0,0,2,1,--0,1,0,--0,0,1,1,2,2,3,3,5,6,--0,0,1,1,2,2,3,3,5,7,--  
0,0,1,1,2,2,3,3,5,8,--0,0,1,1,2,2,3,3,5,9,--  
R156)  
0,0,1,1,2,2,4,5,6,-->0,0,2,1,--0,1,0,--0,1,0,--0,0,1,1,2,2,4,5,6,6,--0,0,1,1,2,2,4,  
5,6,7,--0,0,1,1,2,2,4,5,6,8,--0,0,1,1,2,2,4,5,6,9,--  
R157)  
0,0,1,1,2,2,4,5,7,-->0,0,2,1,--0,1,0,--0,1,0,--0,0,2,1,--0,0,1,1,2,2,4,5,7,7,--0,0,  
1,1,2,2,4,5,7,8,--0,0,1,1,2,2,4,5,7,9,--  
R158)  
0,0,1,1,2,2,4,5,8,-->0,0,2,1,--0,1,0,--0,1,0,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,4,5,  
8,8,--0,0,1,1,2,2,4,5,8,9,--  
R159)  
0,0,1,1,2,2,4,6,6,-->0,0,2,1,--0,1,0,--0,0,2,1,--0,0,1,1,2,2,3,3,5,7,--0,0,1,1,2,2,  
3,3,5,8,--0,0,1,1,2,2,3,3,5,9,--  
R160)  
0,0,1,1,2,2,4,6,7,-->0,0,2,1,--0,1,0,--0,0,2,1,--0,1,0,--0,0,1,1,2,2,4,6,7,7,--0,0,  
1,1,2,2,4,6,7,8,--0,0,1,1,2,2,4,6,7,9,--  
R161)  
0,0,1,1,2,2,4,6,8,-->0,0,2,1,--0,1,0,--0,0,2,1,--0,1,0,--0,0,2,1,--0,0,1,1,2,2,4,6,  
8,8,--0,0,1,1,2,2,4,6,8,9,--  
R162)  
0,0,1,1,2,2,4,7,7,-->0,0,2,1,--0,1,0,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,3,3,5,8,--0,  
0,1,1,2,2,3,3,5,9,--  
R163)



0,0,1,1,2,2,4,7,8,-->0,0,2,1,--0,1,0,--0,0,2,1,--0,0,2,1,--0,1,0,--0,0,1,1,2,2,4,7,  
8,8,--0,0,1,1,2,2,4,7,8,9,--

R164)

0,0,1,1,2,2,5,6,6,-->0,0,2,1,--0,0,2,1,--0,1,0,--0,0,1,1,2,2,3,3,6,7,--0,0,1,1,2,2,  
3,3,6,8,--0,0,1,1,2,2,3,3,6,9,--

R165)

0,0,1,1,2,2,5,6,7,-->0,0,2,1,--0,0,2,1,--0,1,0,--0,1,0,--0,0,1,1,2,2,5,6,7,7,--0,0,  
1,1,2,2,5,6,7,8,--0,0,1,1,2,2,5,6,7,9,--

R166)

0,0,1,1,2,2,5,6,8,-->0,0,2,1,--0,0,2,1,--0,1,0,--0,1,0,--0,0,2,1,--0,0,1,1,2,2,5,6,  
8,8,--0,0,1,1,2,2,5,6,8,9,--

R167)

0,0,1,1,2,2,5,7,7,-->0,0,2,1,--0,0,2,1,--0,1,0,--0,0,2,1,--0,0,1,1,2,2,3,3,6,8,--0,  
0,1,1,2,2,3,3,6,9,--

R168)

0,0,1,1,2,2,5,7,8,-->0,0,2,1,--0,0,2,1,--0,1,0,--0,0,2,1,--0,1,0,--0,0,1,1,2,2,5,7,  
8,8,--0,0,1,1,2,2,5,7,8,9,--

R169)

0,0,1,1,2,2,6,7,7,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,0,--0,0,1,1,2,2,3,3,7,8,--0,  
0,1,1,2,2,3,3,7,9,--

R170)

0,0,1,1,2,2,6,7,8,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,0,--0,1,0,--0,0,1,1,2,2,6,7,  
8,8,--0,0,1,1,2,2,6,7,8,9,--

R171)

0,0,1,1,2,3,4,5,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,2,3,4,5,6,--0,0,1,1,2,2,3,4,  
5,7,--0,0,1,1,2,2,3,4,5,8,--0,0,1,1,2,2,3,4,5,9,--

R172)

0,0,1,1,2,3,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,3,4,5,6,6,--0,0,1,1,  
2,3,4,5,6,7,--0,0,1,1,2,3,4,5,6,8,--0,0,1,1,2,3,4,5,6,9,--

R173)

0,0,1,1,2,3,4,5,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,0,1,1,2,3,4,5,7,7,  
--0,0,1,1,2,3,4,5,7,8,--0,0,1,1,2,3,4,5,7,9,--

R174)

0,0,1,1,2,3,4,5,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,  
3,4,5,8,8,--0,0,1,1,2,3,4,5,8,9,--

R175)

0,0,1,1,2,3,4,6,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,0,1,1,2,2,3,4,5,7,--0,0,1,  
1,2,2,3,4,5,8,--0,0,1,1,2,2,3,4,5,9,--

R176)

0,0,1,1,2,3,4,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,0,1,1,2,3,4,6,7,7,  
--0,0,1,1,2,3,4,6,7,8,--0,0,1,1,2,3,4,6,7,9,--

R177)

0,0,1,1,2,3,4,6,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,0,2,1,--0,0,1,1,2,  
3,4,6,8,8,--0,0,1,1,2,3,4,6,8,9,--

R178)

0,0,1,1,2,3,4,7,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,3,4,5,  
8,--0,0,1,1,2,2,3,4,5,9,--

R179)

0,0,1,1,2,3,4,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,0,2,1,--0,1,0,--0,0,1,1,2,  
3,4,7,8,8,--0,0,1,1,2,3,4,7,8,9,--

R180)

0,0,1,1,2,3,5,6,6,-->0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,0,1,1,2,2,3,4,6,7,--0,0,1,1,2,2,3,4,6,8,--0,0,1,1,2,2,3,4,6,9,--

R181)

0,0,1,1,2,3,5,6,7,-->0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,1,1,2,3,5,6,7,7,--0,0,1,1,2,3,5,6,7,8,--0,0,1,1,2,3,5,6,7,9,--

R182)

0,0,1,1,2,3,5,6,8,-->0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,2,1,--0,0,1,1,2,3,5,6,8,8,--0,0,1,1,2,3,5,6,8,9,--

R183)

0,0,1,1,2,3,5,7,7,-->0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,0,2,1,--0,0,1,1,2,2,3,4,6,8,--0,0,1,1,2,2,3,4,6,9,--

R184)

0,0,1,1,2,3,5,7,8,-->0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,0,2,1,--0,1,0,--0,0,1,1,2,3,5,7,8,8,--0,0,1,1,2,3,5,7,8,9,--

R185)

0,0,1,1,2,3,6,7,7,-->0,1,0,--0,1,0,--0,0,2,1,--0,0,2,1,--0,1,0,--0,0,1,1,2,2,3,4,7,8,--0,0,1,1,2,2,3,4,7,9,--

R186)

0,0,1,1,2,3,6,7,8,-->0,1,0,--0,1,0,--0,0,2,1,--0,0,2,1,--0,1,0,--0,1,0,--0,0,1,1,2,3,6,7,8,8,--0,0,1,1,2,3,6,7,8,9,--

R187)

0,0,1,1,2,4,5,6,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,1,1,2,2,3,5,6,7,--0,0,1,1,2,2,3,5,6,8,--0,0,1,1,2,2,3,5,6,9,--

R188)

0,0,1,1,2,4,5,6,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,4,5,6,7,7,--0,0,1,1,2,4,5,6,7,8,--0,0,1,1,2,4,5,6,7,9,--

R189)

0,0,1,1,2,4,5,6,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,0,1,1,2,4,5,6,8,8,--0,0,1,1,2,4,5,6,8,9,--

R190)

0,0,1,1,2,4,5,7,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,2,1,--0,0,1,1,2,2,3,5,6,8,--0,0,1,1,2,2,3,5,6,9,--

R191)

0,0,1,1,2,4,5,7,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,0,1,1,2,4,5,7,8,8,--0,0,1,1,2,4,5,7,8,9,--

R192)

0,0,1,1,2,4,6,7,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,2,1,--0,1,0,--0,0,1,1,2,2,3,5,7,8,--0,0,1,1,2,2,3,5,7,9,--

R193)

0,0,1,1,2,4,6,7,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,1,1,2,4,6,7,8,8,--0,0,1,1,2,4,6,7,8,9,--

R194)

0,0,1,1,2,5,6,7,7,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,1,0,--0,1,0,--0,0,1,1,2,2,3,6,7,8,--0,0,1,1,2,2,3,6,7,9,--

R195)

0,0,1,1,2,5,6,7,8,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,5,6,7,8,8,--0,0,1,1,2,5,6,7,8,9,--

R196)

0,0,1,1,3,4,5,6,6,-->0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,2,4,5,6,7,--0,0,1,

1,2,2,4,5,6,8,--0,0,1,1,2,2,4,5,6,9,--

R197)

0,0,1,1,3,4,5,6,7,-->0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,3,4,5,6,7,7,  
--0,0,1,1,3,4,5,6,7,8,--0,0,1,1,3,4,5,6,7,9,--

R198)

0,0,1,1,3,4,5,6,8,-->0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,0,1,1,3,  
4,5,6,8,8,--0,0,1,1,3,4,5,6,8,9,--

R199)

0,0,1,1,3,4,5,7,7,-->0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,0,1,1,2,2,4,5,6,  
8,--0,0,1,1,2,2,4,5,6,9,--

R200)

0,0,1,1,3,4,5,7,8,-->0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,0,1,1,3,  
4,5,7,8,8,--0,0,1,1,3,4,5,7,8,9,--

R201)

0,0,1,1,3,4,6,7,7,-->0,0,2,1,--0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,0,1,1,2,2,4,5,7,  
8,--0,0,1,1,2,2,4,5,7,9,--

R202)

0,0,1,1,3,4,6,7,8,-->0,0,2,1,--0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,1,1,3,  
4,6,7,8,8,--0,0,1,1,3,4,6,7,8,9,--

R203)

0,0,1,1,3,5,6,7,7,-->0,0,2,1,--0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,1,1,2,2,4,6,7,  
8,--0,0,1,1,2,2,4,6,7,9,--

R204)

0,0,1,1,3,5,6,7,8,-->0,0,2,1,--0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,3,  
5,6,7,8,8,--0,0,1,1,3,5,6,7,8,9,--

R205)

0,0,1,1,4,5,6,7,7,-->0,0,2,1,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,2,5,6,7,  
8,--0,0,1,1,2,2,5,6,7,9,--

R206)

0,0,1,1,4,5,6,7,8,-->0,0,2,1,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,4,  
5,6,7,8,8,--0,0,1,1,4,5,6,7,8,9,--

R207)

0,0,1,2,3,4,5,6,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,3,4,5,6,7,--  
0,0,1,1,2,3,4,5,6,8,--0,0,1,1,2,3,4,5,6,9,--

R208)

0,0,1,2,3,4,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,5,  
6,7,7,--0,0,1,2,3,4,5,6,7,8,--0,0,1,2,3,4,5,6,7,9,--

R209)

0,0,1,2,3,4,5,6,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,0,  
1,2,3,4,5,6,8,8,--0,0,1,2,3,4,5,6,8,9,--

R210)

0,0,1,2,3,4,5,7,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,0,1,1,2,3,  
4,5,6,8,--0,0,1,1,2,3,4,5,6,9,--

R211)

0,0,1,2,3,4,5,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,0,  
1,2,3,4,5,7,8,8,--0,0,1,2,3,4,5,7,8,9,--

R212)

0,0,1,2,3,4,6,7,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,0,1,1,2,3,  
4,5,7,8,--0,0,1,1,2,3,4,5,7,9,--

R213)

0,0,1,2,3,4,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,  
1,2,3,4,6,7,8,8,--0,0,1,2,3,4,6,7,8,9,--

R214)

0,0,1,2,3,5,6,7,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,1,1,2,3,  
4,6,7,8,--0,0,1,1,2,3,4,6,7,9,--

R215)

0,0,1,2,3,5,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,  
1,2,3,5,6,7,8,8,--0,0,1,2,3,5,6,7,8,9,--

R216)

0,0,1,2,4,5,6,7,7,-->0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,3,  
5,6,7,8,--0,0,1,1,2,3,5,6,7,9,--

R217)

0,0,1,2,4,5,6,7,8,-->0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,  
1,2,4,5,6,7,8,8,--0,0,1,2,4,5,6,7,8,9,--

R218)

0,0,1,3,4,5,6,7,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,4,  
5,6,7,8,--0,0,1,1,2,4,5,6,7,9,--

R219)

0,0,1,3,4,5,6,7,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,  
1,3,4,5,6,7,8,8,--0,0,1,3,4,5,6,7,8,9,--

R220)

0,0,2,3,4,5,6,7,7,-->0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,3,4,  
5,6,7,8,--0,0,1,1,3,4,5,6,7,9,--

R221)

0,0,2,3,4,5,6,7,8,-->0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,  
2,3,4,5,6,7,8,8,--0,0,2,3,4,5,6,7,8,9,--

R222)

0,1,2,3,4,5,6,7,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,  
2,3,4,5,6,7,8,--0,0,1,2,3,4,5,6,7,9,--

R223)

0,1,2,3,4,5,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,  
--0,1,2,3,4,5,6,7,8,8,--0,1,2,3,4,5,6,7,8,9,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0, : 0,1,:

LEN=3) 0,0,1, : 0,0,2, : 0,1,0, : 0,1,1, : 0,1,2,:

LEN=4) 0,0,1,1, : 0,0,1,2, : 0,0,1,3, : 0,0,2,1, : 0,0,2,2, : 0,0,2,3, : 0,1,2,2, :

0,1,2,3, :

LEN=5) 0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, : 0,0,1,2,2, : 0,0,1,2,3, : 0,0,1,2,4, :

0,0,1,3,3, : 0,0,1,3,4, : 0,0,2,3,3, : 0,0,2,3,4, : 0,1,2,3,3, : 0,1,2,3,4, :

LEN=6) 0,0,1,1,2,2, : 0,0,1,1,2,3, : 0,0,1,1,2,4, : 0,0,1,1,2,5, : 0,0,1,1,3,3, :

0,0,1,1,3,4, : 0,0,1,1,3,5, : 0,0,1,1,4,4, : 0,0,1,1,4,5, : 0,0,1,2,3,3, : 0,0,1,2,3,4, :

0,0,1,2,3,5, : 0,0,1,2,4,4, : 0,0,1,2,4,5, : 0,0,1,3,4,4, : 0,0,1,3,4,5, : 0,0,2,3,4,4, :

0,0,2,3,4,5, : 0,1,2,3,4,4, : 0,1,2,3,4,5, :

LEN=7) 0,0,1,1,2,2,3, : 0,0,1,1,2,2,4, : 0,0,1,1,2,2,5, : 0,0,1,1,2,2,6, :

0,0,1,1,2,3,3, : 0,0,1,1,2,3,4, : 0,0,1,1,2,3,5, : 0,0,1,1,2,3,6, : 0,0,1,1,2,4,4, :

0,0,1,1,2,4,5, : 0,0,1,1,2,4,6, : 0,0,1,1,2,5,5, : 0,0,1,1,2,5,6, : 0,0,1,1,3,4,4, :

0,0,1,1,3,4,5, : 0,0,1,1,3,4,6, : 0,0,1,1,3,5,5, : 0,0,1,1,3,5,6, : 0,0,1,1,4,5,5, :

0,0,1,1,4,5,6, : 0,0,1,2,3,4,4, : 0,0,1,2,3,4,5, : 0,0,1,2,3,4,6, : 0,0,1,2,3,5,5, :

0,0,1,2,3,5,6, : 0,0,1,2,4,5,5, : 0,0,1,2,4,5,6, : 0,0,1,3,4,5,5, : 0,0,1,3,4,5,6, :

0,0,2,3,4,5,5, : 0,0,2,3,4,5,6, : 0,1,2,3,4,5,5, : 0,1,2,3,4,5,6, :  
LEN=8) 0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,3,4, : 0,0,1,1,2,2,3,5, : 0,0,1,1,2,2,3,6, :  
0,0,1,1,2,2,3,7, : 0,0,1,1,2,2,4,4, : 0,0,1,1,2,2,4,5, : 0,0,1,1,2,2,4,6, :  
0,0,1,1,2,2,4,7, : 0,0,1,1,2,2,5,5, : 0,0,1,1,2,2,5,6, : 0,0,1,1,2,2,5,7, :  
0,0,1,1,2,2,6,6, : 0,0,1,1,2,2,6,7, : 0,0,1,1,2,3,4,4, : 0,0,1,1,2,3,4,5, :  
0,0,1,1,2,3,4,6, : 0,0,1,1,2,3,4,7, : 0,0,1,1,2,3,5,5, : 0,0,1,1,2,3,5,6, :  
0,0,1,1,2,3,5,7, : 0,0,1,1,2,3,6,6, : 0,0,1,1,2,3,6,7, : 0,0,1,1,2,4,5,5, :  
0,0,1,1,2,4,5,6, : 0,0,1,1,2,4,5,7, : 0,0,1,1,2,4,6,6, : 0,0,1,1,2,4,6,7, :  
0,0,1,1,2,5,6,6, : 0,0,1,1,2,5,6,7, : 0,0,1,1,3,4,5,5, : 0,0,1,1,3,4,5,6, :  
0,0,1,1,3,4,5,7, : 0,0,1,1,3,4,6,6, : 0,0,1,1,3,4,6,7, : 0,0,1,1,3,5,6,6, :  
0,0,1,1,3,5,6,7, : 0,0,1,1,4,5,6,6, : 0,0,1,1,4,5,6,7, : 0,0,1,2,3,4,5,5, :  
0,0,1,2,3,4,5,6, : 0,0,1,2,3,4,5,7, : 0,0,1,2,3,4,6,6, : 0,0,1,2,3,4,6,7, :  
0,0,1,2,3,5,6,6, : 0,0,1,2,3,5,6,7, : 0,0,1,2,4,5,6,6, : 0,0,1,2,4,5,6,7, :  
0,0,1,3,4,5,6,6, : 0,0,1,3,4,5,6,7, : 0,0,2,3,4,5,6,6, : 0,0,2,3,4,5,6,7, :  
0,1,2,3,4,5,6,6, : 0,1,2,3,4,5,6,7, :  
LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,3,5, : 0,0,1,1,2,2,3,3,6, :  
0,0,1,1,2,2,3,3,7, : 0,0,1,1,2,2,3,3,8, : 0,0,1,1,2,2,3,4,4, : 0,0,1,1,2,2,3,4,5, :  
0,0,1,1,2,2,3,4,6, : 0,0,1,1,2,2,3,4,7, : 0,0,1,1,2,2,3,4,8, : 0,0,1,1,2,2,3,5,5, :  
0,0,1,1,2,2,3,5,6, : 0,0,1,1,2,2,3,5,7, : 0,0,1,1,2,2,3,5,8, : 0,0,1,1,2,2,3,6,6, :  
0,0,1,1,2,2,3,6,7, : 0,0,1,1,2,2,3,6,8, : 0,0,1,1,2,2,3,7,7, : 0,0,1,1,2,2,3,7,8, :  
0,0,1,1,2,2,4,5,5, : 0,0,1,1,2,2,4,5,6, : 0,0,1,1,2,2,4,5,7, : 0,0,1,1,2,2,4,5,8, :  
0,0,1,1,2,2,4,6,6, : 0,0,1,1,2,2,4,6,7, : 0,0,1,1,2,2,4,6,8, : 0,0,1,1,2,2,4,7,7, :  
0,0,1,1,2,2,4,7,8, : 0,0,1,1,2,2,5,6,6, : 0,0,1,1,2,2,5,6,7, : 0,0,1,1,2,2,5,6,8, :  
0,0,1,1,2,2,5,7,7, : 0,0,1,1,2,2,5,7,8, : 0,0,1,1,2,2,6,7,7, : 0,0,1,1,2,2,6,7,8, :  
0,0,1,1,2,3,4,5,5, : 0,0,1,1,2,3,4,5,6, : 0,0,1,1,2,3,4,5,7, : 0,0,1,1,2,3,4,5,8, :  
0,0,1,1,2,3,4,6,6, : 0,0,1,1,2,3,4,6,7, : 0,0,1,1,2,3,4,6,8, : 0,0,1,1,2,3,4,7,7, :  
0,0,1,1,2,3,4,7,8, : 0,0,1,1,2,3,5,6,6, : 0,0,1,1,2,3,5,6,7, : 0,0,1,1,2,3,5,6,8, :  
0,0,1,1,2,3,5,7,7, : 0,0,1,1,2,3,5,7,8, : 0,0,1,1,2,3,6,7,7, : 0,0,1,1,2,3,6,7,8, :  
0,0,1,1,2,4,5,6,6, : 0,0,1,1,2,4,5,6,7, : 0,0,1,1,2,4,5,6,8, : 0,0,1,1,2,4,5,7,7, :  
0,0,1,1,2,4,5,7,8, : 0,0,1,1,2,4,6,7,7, : 0,0,1,1,2,4,6,7,8, : 0,0,1,1,2,5,6,7,7, :  
0,0,1,1,2,5,6,7,8, : 0,0,1,1,3,4,5,6,6, : 0,0,1,1,3,4,5,6,7, : 0,0,1,1,3,4,5,6,8, :  
0,0,1,1,3,4,5,7,7, : 0,0,1,1,3,4,5,7,8, : 0,0,1,1,3,4,6,7,7, : 0,0,1,1,3,4,6,7,8, :  
0,0,1,1,3,5,6,7,7, : 0,0,1,1,3,5,6,7,8, : 0,0,1,1,4,5,6,7,7, : 0,0,1,1,4,5,6,7,8, :  
0,0,1,2,3,4,5,6,6, : 0,0,1,2,3,4,5,6,7, : 0,0,1,2,3,4,5,6,8, : 0,0,1,2,3,4,5,7,7, :  
0,0,1,2,3,4,5,7,8, : 0,0,1,2,3,4,6,7,7, : 0,0,1,2,3,4,6,7,8, : 0,0,1,2,3,5,6,7,7, :  
0,0,1,2,3,5,6,7,8, : 0,0,1,2,4,5,6,7,7, : 0,0,1,2,4,5,6,7,8, : 0,0,1,3,4,5,6,7,7, :  
0,0,1,3,4,5,6,7,8, : 0,0,2,3,4,5,6,7,7, : 0,0,2,3,4,5,6,7,8, : 0,1,2,3,4,5,6,7,7, :  
0,1,2,3,4,5,6,7,8, :  
LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,4,5, : 0,0,1,1,2,2,3,3,4,6, :  
0,0,1,1,2,2,3,3,4,7, : 0,0,1,1,2,2,3,3,4,8, : 0,0,1,1,2,2,3,3,4,9, :  
0,0,1,1,2,2,3,3,5,5, : 0,0,1,1,2,2,3,3,5,6, : 0,0,1,1,2,2,3,3,5,7, :  
0,0,1,1,2,2,3,3,5,8, : 0,0,1,1,2,2,3,3,5,9, : 0,0,1,1,2,2,3,3,6,6, :  
0,0,1,1,2,2,3,3,6,7, : 0,0,1,1,2,2,3,3,6,8, : 0,0,1,1,2,2,3,3,6,9, :  
0,0,1,1,2,2,3,3,7,7, : 0,0,1,1,2,2,3,3,7,8, : 0,0,1,1,2,2,3,3,7,9, :  
0,0,1,1,2,2,3,3,8,8, : 0,0,1,1,2,2,3,3,8,9, : 0,0,1,1,2,2,3,4,5,5, :  
0,0,1,1,2,2,3,4,5,6, : 0,0,1,1,2,2,3,4,5,7, : 0,0,1,1,2,2,3,4,5,8, :  
0,0,1,1,2,2,3,4,5,9, : 0,0,1,1,2,2,3,4,6,6, : 0,0,1,1,2,2,3,4,6,7, :  
0,0,1,1,2,2,3,4,6,8, : 0,0,1,1,2,2,3,4,6,9, : 0,0,1,1,2,2,3,4,7,7, :  
0,0,1,1,2,2,3,4,7,8, : 0,0,1,1,2,2,3,4,7,9, : 0,0,1,1,2,2,3,4,8,8, :  
0,0,1,1,2,2,3,4,8,9, : 0,0,1,1,2,2,3,5,6,6, : 0,0,1,1,2,2,3,5,6,7, :

0,0,1,1,2,2,3,5,6,8, : 0,0,1,1,2,2,3,5,6,9, : 0,0,1,1,2,2,3,5,7,7, :  
 0,0,1,1,2,2,3,5,7,8, : 0,0,1,1,2,2,3,5,7,9, : 0,0,1,1,2,2,3,5,8,8, :  
 0,0,1,1,2,2,3,5,8,9, : 0,0,1,1,2,2,3,6,7,7, : 0,0,1,1,2,2,3,6,7,8, :  
 0,0,1,1,2,2,3,6,7,9, : 0,0,1,1,2,2,3,6,8,8, : 0,0,1,1,2,2,3,6,8,9, :  
 0,0,1,1,2,2,3,7,8,8, : 0,0,1,1,2,2,3,7,8,9, : 0,0,1,1,2,2,4,5,6,6, :  
 0,0,1,1,2,2,4,5,6,7, : 0,0,1,1,2,2,4,5,6,8, : 0,0,1,1,2,2,4,5,6,9, :  
 0,0,1,1,2,2,4,5,7,7, : 0,0,1,1,2,2,4,5,7,8, : 0,0,1,1,2,2,4,5,7,9, :  
 0,0,1,1,2,2,4,5,8,8, : 0,0,1,1,2,2,4,5,8,9, : 0,0,1,1,2,2,4,6,7,7, :  
 0,0,1,1,2,2,4,6,7,8, : 0,0,1,1,2,2,4,6,7,9, : 0,0,1,1,2,2,4,6,8,8, :  
 0,0,1,1,2,2,4,6,8,9, : 0,0,1,1,2,2,4,7,8,8, : 0,0,1,1,2,2,4,7,8,9, :  
 0,0,1,1,2,2,5,6,7,7, : 0,0,1,1,2,2,5,6,7,8, : 0,0,1,1,2,2,5,6,7,9, :  
 0,0,1,1,2,2,5,6,8,8, : 0,0,1,1,2,2,5,6,8,9, : 0,0,1,1,2,2,5,7,8,8, :  
 0,0,1,1,2,2,5,7,8,9, : 0,0,1,1,2,2,6,7,8,8, : 0,0,1,1,2,2,6,7,8,9, :  
 0,0,1,1,2,3,4,5,6,6, : 0,0,1,1,2,3,4,5,6,7, : 0,0,1,1,2,3,4,5,6,8, :  
 0,0,1,1,2,3,4,5,6,9, : 0,0,1,1,2,3,4,5,7,7, : 0,0,1,1,2,3,4,5,7,8, :  
 0,0,1,1,2,3,4,5,7,9, : 0,0,1,1,2,3,4,5,8,8, : 0,0,1,1,2,3,4,5,8,9, :  
 0,0,1,1,2,3,4,6,7,7, : 0,0,1,1,2,3,4,6,7,8, : 0,0,1,1,2,3,4,6,7,9, :  
 0,0,1,1,2,3,4,6,8,8, : 0,0,1,1,2,3,4,6,8,9, : 0,0,1,1,2,3,4,7,8,8, :  
 0,0,1,1,2,3,4,7,8,9, : 0,0,1,1,2,3,5,6,7,7, : 0,0,1,1,2,3,5,6,7,8, :  
 0,0,1,1,2,3,5,6,7,9, : 0,0,1,1,2,3,5,6,8,8, : 0,0,1,1,2,3,5,6,8,9, :  
 0,0,1,1,2,3,5,7,8,8, : 0,0,1,1,2,3,5,7,8,9, : 0,0,1,1,2,3,6,7,8,8, :  
 0,0,1,1,2,3,6,7,8,9, : 0,0,1,1,2,4,5,6,7,7, : 0,0,1,1,2,4,5,6,7,8, :  
 0,0,1,1,2,4,5,6,7,9, : 0,0,1,1,2,4,5,6,8,8, : 0,0,1,1,2,4,5,6,8,9, :  
 0,0,1,1,2,4,5,7,8,8, : 0,0,1,1,2,4,5,7,8,9, : 0,0,1,1,2,4,6,7,8,8, :  
 0,0,1,1,2,4,6,7,8,9, : 0,0,1,1,2,5,6,7,8,8, : 0,0,1,1,2,5,6,7,8,9, :  
 0,0,1,1,3,4,5,6,7,7, : 0,0,1,1,3,4,5,6,7,8, : 0,0,1,1,3,4,5,6,7,9, :  
 0,0,1,1,3,4,5,6,8,8, : 0,0,1,1,3,4,5,6,8,9, : 0,0,1,1,3,4,5,7,8,8, :  
 0,0,1,1,3,4,5,7,8,9, : 0,0,1,1,3,4,6,7,8,8, : 0,0,1,1,3,4,6,7,8,9, :  
 0,0,1,1,3,5,6,7,8,8, : 0,0,1,1,3,5,6,7,8,9, : 0,0,1,1,4,5,6,7,8,8, :  
 0,0,1,1,4,5,6,7,8,9, : 0,0,1,2,3,4,5,6,7,7, : 0,0,1,2,3,4,5,6,7,8, :  
 0,0,1,2,3,4,5,6,7,9, : 0,0,1,2,3,4,5,6,8,8, : 0,0,1,2,3,4,5,6,8,9, :  
 0,0,1,2,3,4,5,7,8,8, : 0,0,1,2,3,4,5,7,8,9, : 0,0,1,2,3,4,6,7,8,8, :  
 0,0,1,2,3,4,6,7,8,9, : 0,0,1,2,3,5,6,7,8,8, : 0,0,1,2,3,5,6,7,8,9, :  
 0,0,1,2,4,5,6,7,8,8, : 0,0,1,2,4,5,6,7,8,9, : 0,0,1,3,4,5,6,7,8,8, :  
 0,0,1,3,4,5,6,7,8,9, : 0,0,2,3,4,5,6,7,8,8, : 0,0,2,3,4,5,6,7,8,9, :  
 0,1,2,3,4,5,6,7,8,8, : 0,1,2,3,4,5,6,7,8,9, :  
 Number new nodes in level n is given by : 1,2,5,8,12,20,33,54,88,143,

-----Class

487-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][101][110][120][201]]$

-----

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,0,2,--
- R3) 0,1,-->0,0,--0,0,--0,1,--
- R4) 0,0,1,-->0,0,1,1,--0,0,1,2,--0,0,1,3,--
- R5) 0,0,2,-->0,0,2,1,--0,0,--0,1,--
- R6) 0,0,1,1,-->0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--

R7) 0,0,1,2,-->0,0,1,1,--0,0,1,1,--0,0,1,2,--0,0,1,3,--  
R8) 0,0,1,3,-->0,0,--0,0,1,3,2,--0,0,--0,1,--  
R9) 0,0,2,1,-->0,0,1,1,--0,0,1,--0,0,2,--  
R10) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--  
R11) 0,0,1,1,3,-->0,0,1,1,3,2,--0,0,1,1,--0,0,1,2,--0,0,1,3,--  
R12) 0,0,1,1,4,-->0,0,2,1,--0,0,1,1,4,3,--0,0,--0,1,--  
R13) 0,0,1,3,2,-->0,0,1,1,--0,0,1,1,--0,0,1,--0,0,2,--  
R14)  
0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--  
R15)  
0,0,1,1,2,3,-->0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,  
--  
R16) 0,0,1,1,2,4,-->0,0,1,1,--0,0,1,1,2,4,3,--0,0,1,1,--0,0,1,2,--0,0,1,3,--  
R17) 0,0,1,1,2,5,-->0,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--0,0,--0,1,--  
R18) 0,0,1,1,3,2,-->0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--  
R19) 0,0,1,1,4,3,-->0,0,1,1,3,2,--0,0,1,1,--0,0,1,--0,0,2,--  
R20)  
0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,  
3,6,--0,0,1,1,2,2,3,7,--  
R21)  
0,0,1,1,2,2,4,-->0,0,1,1,2,2,4,3,--0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,  
1,2,5,--  
R22)  
0,0,1,1,2,2,5,-->0,0,1,1,3,2,--0,0,1,1,2,2,5,4,--0,0,1,1,--0,0,1,2,--0,0,1,3,--  
R23) 0,0,1,1,2,2,6,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,6,5,--0,0,--0,1,--  
R24)  
0,0,1,1,2,4,3,-->0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--  
R25) 0,0,1,1,2,5,4,-->0,0,1,1,--0,0,1,1,2,4,3,--0,0,1,1,--0,0,1,--0,0,2,--  
R26)  
0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,  
1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--  
R27)  
0,0,1,1,2,2,3,4,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,1,1,2,  
2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--  
R28)  
0,0,1,1,2,2,3,5,-->0,0,1,1,2,2,--0,0,1,1,2,2,3,5,4,--0,0,1,1,2,2,--0,0,1,1,2,3,--0,  
0,1,1,2,4,--0,0,1,1,2,5,--  
R29)  
0,0,1,1,2,2,3,6,-->0,0,1,1,--0,0,1,1,2,4,3,--0,0,1,1,2,2,3,6,5,--0,0,1,1,--0,0,1,2,  
--0,0,1,3,--  
R30)  
0,0,1,1,2,2,3,7,-->0,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--0,0,1,1,2,2,3,7,6,--0,0,--0,1,  
--  
R31)  
0,0,1,1,2,2,4,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,  
--0,0,1,1,2,2,6,--  
R32)  
0,0,1,1,2,2,5,4,-->0,0,1,1,2,2,4,3,--0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,  
4,--  
R33) 0,0,1,1,2,2,6,5,-->0,0,1,1,3,2,--0,0,1,1,2,2,5,4,--0,0,1,1,--0,0,1,--0,0,2,--

R34)  
0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,--0,0,1,1,2,2,3,3,4,6,--0,0,1,1,2,2,3,3,4,7,--0,0,1,1,2,2,3,3,4,8,--0,0,1,1,2,2,3,3,4,9,--

R35)  
0,0,1,1,2,2,3,3,5,-->0,0,1,1,2,2,3,3,5,4,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--

R36)  
0,0,1,1,2,2,3,3,6,-->0,0,1,1,2,2,4,3,--0,0,1,1,2,2,3,3,6,5,--0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--

R37)  
0,0,1,1,2,2,3,3,7,-->0,0,1,1,3,2,--0,0,1,1,2,2,5,4,--0,0,1,1,2,2,3,3,7,6,--0,0,1,1,--0,0,1,2,--0,0,1,3,--

R38)  
0,0,1,1,2,2,3,3,8,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,6,5,--0,0,1,1,2,2,3,3,8,7,--0,0,--0,1,--

R39)  
0,0,1,1,2,2,3,5,4,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--

R40)  
0,0,1,1,2,2,3,6,5,-->0,0,1,1,2,2,--0,0,1,1,2,2,3,5,4,--0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--

R41)  
0,0,1,1,2,2,3,7,6,-->0,0,1,1,--0,0,1,1,2,4,3,--0,0,1,1,2,2,3,6,5,--0,0,1,1,--0,0,1,--0,0,2,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,1, : 0,0,2, :

LEN=4) 0,0,1,1, : 0,0,1,2, : 0,0,1,3, : 0,0,2,1, :

LEN=5) 0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, : 0,0,1,3,2, :

LEN=6) 0,0,1,1,2,2, : 0,0,1,1,2,3, : 0,0,1,1,2,4, : 0,0,1,1,2,5, : 0,0,1,1,3,2, :  
0,0,1,1,4,3, :

LEN=7) 0,0,1,1,2,2,3, : 0,0,1,1,2,2,4, : 0,0,1,1,2,2,5, : 0,0,1,1,2,2,6, :

0,0,1,1,2,4,3, : 0,0,1,1,2,5,4, :

LEN=8) 0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,3,4, : 0,0,1,1,2,2,3,5, : 0,0,1,1,2,2,3,6, :

0,0,1,1,2,2,3,7, : 0,0,1,1,2,2,4,3, : 0,0,1,1,2,2,5,4, : 0,0,1,1,2,2,6,5, :

LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,3,5, : 0,0,1,1,2,2,3,3,6, :

0,0,1,1,2,2,3,3,7, : 0,0,1,1,2,2,3,3,8, : 0,0,1,1,2,2,3,5,4, : 0,0,1,1,2,2,3,6,5, :

0,0,1,1,2,2,3,7,6, :

LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,4,5, : 0,0,1,1,2,2,3,3,4,6, :

0,0,1,1,2,2,3,3,4,7, : 0,0,1,1,2,2,3,3,4,8, : 0,0,1,1,2,2,3,3,4,9, :

0,0,1,1,2,2,3,3,5,4, : 0,0,1,1,2,2,3,3,6,5, : 0,0,1,1,2,2,3,3,7,6, :

0,0,1,1,2,2,3,3,8,7, :

Number new nodes in level n is given by : 1,2,2,4,4,6,6,8,8,10,

-----Class

488-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][101][110][120][210]]$

-----

--





0,0,1,1,2,2,4,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,  
--0,0,1,1,2,2,6,--

R32)

0,0,1,1,2,2,5,3,-->0,0,1,1,2,2,3,5,3,--0,0,1,1,2,2,4,3,--0,0,1,1,2,--0,0,1,1,3,--0,  
0,1,1,4,--

R33)

0,0,1,1,2,2,6,3,-->0,0,1,1,2,2,3,6,3,--0,0,1,1,2,2,5,3,--0,0,1,1,3,2,--0,0,1,--0,0,  
2,--

R34)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,--0,0,1,1,2,2,3,3,4,  
6,--0,0,1,1,2,2,3,3,4,7,--0,0,1,1,2,2,3,3,4,8,--0,0,1,1,2,2,3,3,4,9,--

R35)

0,0,1,1,2,2,3,3,5,-->0,0,1,1,2,2,3,3,5,4,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,  
1,1,2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--

R36)

0,0,1,1,2,2,3,3,6,-->0,0,1,1,2,2,3,3,6,4,--0,0,1,1,2,2,4,3,--0,0,1,1,2,2,--0,0,1,1,  
2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--

R37)

0,0,1,1,2,2,3,3,7,-->0,0,1,1,2,2,3,3,7,4,--0,0,1,1,2,2,5,3,--0,0,1,1,3,2,--0,0,1,1,  
--0,0,1,2,--0,0,1,3,--

R38)

0,0,1,1,2,2,3,3,8,-->0,0,1,1,2,2,3,3,8,4,--0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,2,1,  
--0,0,--0,1,--

R39)

0,0,1,1,2,2,3,5,3,-->0,0,1,1,2,2,3,3,5,4,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,  
2,2,5,--0,0,1,1,2,2,6,--

R40)

0,0,1,1,2,2,3,6,3,-->0,0,1,1,2,2,3,3,6,4,--0,0,1,1,2,2,4,3,--0,0,1,1,2,--0,0,1,1,3,  
--0,0,1,1,4,--

R41)

0,0,1,1,2,2,3,7,3,-->0,0,1,1,2,2,3,3,7,4,--0,0,1,1,2,2,5,3,--0,0,1,1,3,2,--0,0,1,--  
0,0,2,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,1,: 0,0,2,:

LEN=4) 0,0,1,1,: 0,0,1,2,: 0,0,1,3,: 0,0,2,1,:

LEN=5) 0,0,1,1,2,: 0,0,1,1,3,: 0,0,1,1,4,: 0,0,1,3,1,:

LEN=6) 0,0,1,1,2,2,: 0,0,1,1,2,3,: 0,0,1,1,2,4,: 0,0,1,1,2,5,: 0,0,1,1,3,2,:

0,0,1,1,4,2,:

LEN=7) 0,0,1,1,2,2,3,: 0,0,1,1,2,2,4,: 0,0,1,1,2,2,5,: 0,0,1,1,2,2,6,:

0,0,1,1,2,4,2,: 0,0,1,1,2,5,2,:

LEN=8) 0,0,1,1,2,2,3,3,: 0,0,1,1,2,2,3,4,: 0,0,1,1,2,2,3,5,: 0,0,1,1,2,2,3,6,:

0,0,1,1,2,2,3,7,: 0,0,1,1,2,2,4,3,: 0,0,1,1,2,2,5,3,: 0,0,1,1,2,2,6,3,:

LEN=9) 0,0,1,1,2,2,3,3,4,: 0,0,1,1,2,2,3,3,5,: 0,0,1,1,2,2,3,3,6,:

0,0,1,1,2,2,3,3,7,: 0,0,1,1,2,2,3,3,8,: 0,0,1,1,2,2,3,5,3,: 0,0,1,1,2,2,3,6,3,:

0,0,1,1,2,2,3,7,3,:

LEN=10) 0,0,1,1,2,2,3,3,4,4,: 0,0,1,1,2,2,3,3,4,5,: 0,0,1,1,2,2,3,3,4,6,:

0,0,1,1,2,2,3,3,4,7,: 0,0,1,1,2,2,3,3,4,8,: 0,0,1,1,2,2,3,3,4,9,:

0,0,1,1,2,2,3,3,5,4,: 0,0,1,1,2,2,3,3,6,4,: 0,0,1,1,2,2,3,3,7,4,:

0,0,1,1,2,2,3,3,8,4,:

Number new nodes in level n is given by : 1,2,2,4,4,6,6,8,8,10,

-----Class

489-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][101][110][201][210]]$

-----

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,0,2,--
- R3) 0,1,-->0,0,--0,0,--0,1,2,--
- R4) 0,0,1,-->0,0,1,1,--0,0,1,2,--0,0,1,3,--
- R5) 0,0,2,-->0,0,1,--0,0,--0,0,2,3,--
- R6) 0,1,2,-->0,0,--0,0,--0,0,--0,1,2,3,--
- R7) 0,0,1,1,-->0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--
- R8) 0,0,1,2,-->0,0,1,1,--0,0,1,1,--0,0,1,2,3,--0,0,1,2,4,--
- R9) 0,0,1,3,-->0,0,--0,0,1,--0,0,--0,0,1,3,4,--
- R10) 0,0,2,3,-->0,0,1,--0,0,--0,0,--0,0,2,3,4,--
- R11) 0,1,2,3,-->0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,--
- R12) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--
- R13) 0,0,1,1,3,-->0,0,1,1,2,--0,0,1,1,--0,0,1,1,3,4,--0,0,1,1,3,5,--
- R14) 0,0,1,1,4,-->0,0,1,--0,0,1,--0,0,--0,0,1,1,4,5,--
- R15) 0,0,1,2,3,-->0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,2,3,4,--0,0,1,2,3,5,--
- R16) 0,0,1,2,4,-->0,0,--0,0,--0,0,1,--0,0,--0,0,1,2,4,5,--
- R17) 0,0,1,3,4,-->0,0,--0,0,1,--0,0,--0,0,--0,0,1,3,4,5,--
- R18) 0,0,2,3,4,-->0,0,1,--0,0,--0,0,--0,0,--0,0,2,3,4,5,--
- R19) 0,1,2,3,4,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,--
- R20)
- 0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--
- R21)
- 0,0,1,1,2,3,-->0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,3,4,--0,0,1,1,2,3,5,--0,0,1,1,2,3,6,--
- R22)
- 0,0,1,1,2,4,-->0,0,1,1,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,2,4,5,--0,0,1,1,2,4,6,--
- R23) 0,0,1,1,2,5,-->0,0,--0,0,1,--0,0,1,--0,0,--0,0,1,1,2,5,6,--
- R24)
- 0,0,1,1,3,4,-->0,0,1,1,2,--0,0,1,1,--0,0,1,1,--0,0,1,1,3,4,5,--0,0,1,1,3,4,6,--
- R25) 0,0,1,1,3,5,-->0,0,1,--0,0,--0,0,1,--0,0,--0,0,1,1,3,5,6,--
- R26) 0,0,1,1,4,5,-->0,0,1,--0,0,1,--0,0,--0,0,--0,0,1,1,4,5,6,--
- R27)
- 0,0,1,2,3,4,-->0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,2,3,4,5,--0,0,1,2,3,4,6,--
- R28) 0,0,1,2,3,5,-->0,0,--0,0,--0,0,--0,0,1,--0,0,--0,0,1,2,3,5,6,--
- R29) 0,0,1,2,4,5,-->0,0,--0,0,--0,0,1,--0,0,--0,0,--0,0,1,2,4,5,6,--
- R30) 0,0,1,3,4,5,-->0,0,--0,0,1,--0,0,--0,0,--0,0,--0,0,1,3,4,5,6,--
- R31) 0,0,2,3,4,5,-->0,0,1,--0,0,--0,0,--0,0,--0,0,--0,0,2,3,4,5,6,--
- R32) 0,1,2,3,4,5,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,--
- R33)
- 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,

3,6,--0,0,1,1,2,2,3,7,--  
 R34) 0,0,1,1,2,2,4,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,--0,0,1,1,2,2,4,5,--0,0,1,1,2,2,4,6,--  
 0,0,1,1,2,2,4,7,--  
 R35) 0,0,1,1,2,2,5,-->0,0,1,1,2,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,2,2,5,6,--0,0,1,1,2,2,5,  
 7,--  
 R36) 0,0,1,1,2,2,6,-->0,0,1,--0,0,1,--0,0,1,--0,0,--0,0,1,1,2,2,6,7,--  
 R37) 0,0,1,1,2,3,4,-->0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,3,4,5,--0,0,1,  
 1,2,3,4,6,--0,0,1,1,2,3,4,7,--  
 R38) 0,0,1,1,2,3,5,-->0,0,1,1,--0,0,1,1,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,2,3,5,6,--0,0,1,  
 1,2,3,5,7,--  
 R39) 0,0,1,1,2,3,6,-->0,0,--0,0,--0,0,1,--0,0,1,--0,0,--0,0,1,1,2,3,6,7,--  
 R40) 0,0,1,1,2,4,5,-->0,0,1,1,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,--0,0,1,1,2,4,5,6,--0,0,1,  
 1,2,4,5,7,--  
 R41) 0,0,1,1,2,4,6,-->0,0,--0,0,1,--0,0,--0,0,1,--0,0,--0,0,1,1,2,4,6,7,--  
 R42) 0,0,1,1,2,5,6,-->0,0,--0,0,1,--0,0,1,--0,0,--0,0,--0,0,--0,0,1,1,2,5,6,7,--  
 R43) 0,0,1,1,3,4,5,-->0,0,1,1,2,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,3,4,5,6,--0,0,1,  
 1,3,4,5,7,--  
 R44) 0,0,1,1,3,4,6,-->0,0,1,--0,0,--0,0,--0,0,1,--0,0,--0,0,1,1,3,4,6,7,--  
 R45) 0,0,1,1,3,5,6,-->0,0,1,--0,0,--0,0,1,--0,0,--0,0,--0,0,1,1,3,5,6,7,--  
 R46) 0,0,1,1,4,5,6,-->0,0,1,--0,0,1,--0,0,--0,0,--0,0,--0,0,1,1,4,5,6,7,--  
 R47) 0,0,1,2,3,4,5,-->0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,2,3,4,5,6,  
 --0,0,1,2,3,4,5,7,--  
 R48) 0,0,1,2,3,4,6,-->0,0,--0,0,--0,0,--0,0,--0,0,1,--0,0,--0,0,1,2,3,4,6,7,--  
 R49) 0,0,1,2,3,5,6,-->0,0,--0,0,--0,0,--0,0,1,--0,0,--0,0,--0,0,1,2,3,5,6,7,--  
 R50) 0,0,1,2,4,5,6,-->0,0,--0,0,--0,0,1,--0,0,--0,0,--0,0,--0,0,1,2,4,5,6,7,--  
 R51) 0,0,1,3,4,5,6,-->0,0,--0,0,1,--0,0,--0,0,--0,0,--0,0,--0,0,1,3,4,5,6,7,--  
 R52) 0,0,2,3,4,5,6,-->0,0,1,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,2,3,4,5,6,7,--  
 R53) 0,1,2,3,4,5,6,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,1,2,3,4,5,6,7,--  
 R54) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,  
 1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--  
 R55) 0,0,1,1,2,2,3,4,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,5,--0,0,1,1,  
 2,2,3,4,6,--0,0,1,1,2,2,3,4,7,--0,0,1,1,2,2,3,4,8,--  
 R56) 0,0,1,1,2,2,3,5,-->0,0,1,1,2,2,--0,0,1,1,2,2,3,--0,0,1,1,2,2,--0,0,1,1,2,2,3,5,6,--  
 0,0,1,1,2,2,3,5,7,--0,0,1,1,2,2,3,5,8,--  
 R57) 0,0,1,1,2,2,3,6,-->0,0,1,1,--0,0,1,1,2,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,2,2,3,6,7,--  
 0,0,1,1,2,2,3,6,8,--  
 R58) 0,0,1,1,2,2,3,7,-->0,0,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,--0,0,1,1,2,2,3,7,8,--  
 R59) 0,0,1,1,2,2,4,5,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,4,5,6,--

0,0,1,1,2,2,4,5,7,--0,0,1,1,2,2,4,5,8,--  
R60)  
0,0,1,1,2,2,4,6,-->0,0,1,1,2,--0,0,1,1,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,2,2,4,6,7,--  
0,0,1,1,2,2,4,6,8,--  
R61) 0,0,1,1,2,2,4,7,-->0,0,1,--0,0,--0,0,1,--0,0,1,--0,0,--0,0,1,1,2,2,4,7,8,--  
R62)  
0,0,1,1,2,2,5,6,-->0,0,1,1,2,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,--0,0,1,1,2,2,5,6,7,--  
0,0,1,1,2,2,5,6,8,--  
R63) 0,0,1,1,2,2,5,7,-->0,0,1,--0,0,1,--0,0,--0,0,1,--0,0,--0,0,1,1,2,2,5,7,8,--  
R64) 0,0,1,1,2,2,6,7,-->0,0,1,--0,0,1,--0,0,1,--0,0,--0,0,--0,0,1,1,2,2,6,7,8,--  
R65)  
0,0,1,1,2,3,4,5,-->0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,  
2,3,4,5,6,--0,0,1,1,2,3,4,5,7,--0,0,1,1,2,3,4,5,8,--  
R66)  
0,0,1,1,2,3,4,6,-->0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,2,3,  
4,6,7,--0,0,1,1,2,3,4,6,8,--  
R67)  
0,0,1,1,2,3,4,7,-->0,0,--0,0,--0,0,--0,0,1,--0,0,1,--0,0,--0,0,1,1,2,3,4,7,8,--  
R68)  
0,0,1,1,2,3,5,6,-->0,0,1,1,--0,0,1,1,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,--0,0,1,1,2,3,  
5,6,7,--0,0,1,1,2,3,5,6,8,--  
R69)  
0,0,1,1,2,3,5,7,-->0,0,--0,0,--0,0,1,--0,0,--0,0,1,--0,0,--0,0,1,1,2,3,5,7,8,--  
R70)  
0,0,1,1,2,3,6,7,-->0,0,--0,0,--0,0,1,--0,0,1,--0,0,--0,0,--0,0,1,1,2,3,6,7,8,--  
R71)  
0,0,1,1,2,4,5,6,-->0,0,1,1,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,2,4,  
5,6,7,--0,0,1,1,2,4,5,6,8,--  
R72)  
0,0,1,1,2,4,5,7,-->0,0,--0,0,1,--0,0,--0,0,--0,0,1,--0,0,--0,0,1,1,2,4,5,7,8,--  
R73)  
0,0,1,1,2,4,6,7,-->0,0,--0,0,1,--0,0,--0,0,1,--0,0,--0,0,--0,0,1,1,2,4,6,7,8,--  
R74)  
0,0,1,1,2,5,6,7,-->0,0,--0,0,1,--0,0,1,--0,0,--0,0,--0,0,--0,0,--0,0,1,1,2,5,6,7,8,--  
R75)  
0,0,1,1,3,4,5,6,-->0,0,1,1,2,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,3,4,  
5,6,7,--0,0,1,1,3,4,5,6,8,--  
R76)  
0,0,1,1,3,4,5,7,-->0,0,1,--0,0,--0,0,--0,0,--0,0,1,--0,0,--0,0,1,1,3,4,5,7,8,--  
R77)  
0,0,1,1,3,4,6,7,-->0,0,1,--0,0,--0,0,--0,0,1,--0,0,--0,0,--0,0,1,1,3,4,6,7,8,--  
R78)  
0,0,1,1,3,5,6,7,-->0,0,1,--0,0,--0,0,1,--0,0,--0,0,--0,0,--0,0,1,1,3,5,6,7,8,--  
R79)  
0,0,1,1,4,5,6,7,-->0,0,1,--0,0,1,--0,0,--0,0,--0,0,--0,0,--0,0,1,1,4,5,6,7,8,--  
R80)  
0,0,1,2,3,4,5,6,-->0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,  
1,2,3,4,5,6,7,--0,0,1,2,3,4,5,6,8,--  
R81)  
0,0,1,2,3,4,5,7,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,1,--0,0,--0,0,1,2,3,4,5,7,8,--

R82)

0,0,1,2,3,4,6,7,-->0,0,--0,0,--0,0,--0,0,--0,0,1,--0,0,--0,0,--0,0,1,2,3,4,6,7,8,--

R83)

0,0,1,2,3,5,6,7,-->0,0,--0,0,--0,0,--0,0,1,--0,0,--0,0,--0,0,--0,0,1,2,3,5,6,7,8,--

R84)

0,0,1,2,4,5,6,7,-->0,0,--0,0,--0,0,1,--0,0,--0,0,--0,0,--0,0,--0,0,1,2,4,5,6,7,8,--

R85)

0,0,1,3,4,5,6,7,-->0,0,--0,0,1,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,1,3,4,5,6,7,8,--

R86)

0,0,2,3,4,5,6,7,-->0,0,1,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,2,3,4,5,6,7,8,--

R87)

0,1,2,3,4,5,6,7,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,7,

8,--

R88)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,--0,0,1,1,2,2,3,3,4,

6,--0,0,1,1,2,2,3,3,4,7,--0,0,1,1,2,2,3,3,4,8,--0,0,1,1,2,2,3,3,4,9,--

R89)

0,0,1,1,2,2,3,3,5,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,5,6,--0,

0,1,1,2,2,3,3,5,7,--0,0,1,1,2,2,3,3,5,8,--0,0,1,1,2,2,3,3,5,9,--

R90)

0,0,1,1,2,2,3,3,6,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,--0,0,1,1,2,2,3,3,

6,7,--0,0,1,1,2,2,3,3,6,8,--0,0,1,1,2,2,3,3,6,9,--

R91)

0,0,1,1,2,2,3,3,7,-->0,0,1,1,2,--0,0,1,1,2,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,2,2,3,3,

7,8,--0,0,1,1,2,2,3,3,7,9,--

R92)

0,0,1,1,2,2,3,3,8,-->0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,--0,0,1,1,2,2,3,3,8,9,--

R93)

0,0,1,1,2,2,3,4,5,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,--0,0,1,1,

2,2,3,4,5,6,--0,0,1,1,2,2,3,4,5,7,--0,0,1,1,2,2,3,4,5,8,--0,0,1,1,2,2,3,4,5,9,--

R94)

0,0,1,1,2,2,3,4,6,-->0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,3,--0,0,1,1,2,2,--0,0,

1,1,2,2,3,4,6,7,--0,0,1,1,2,2,3,4,6,8,--0,0,1,1,2,2,3,4,6,9,--

R95)

0,0,1,1,2,2,3,4,7,-->0,0,1,1,--0,0,1,1,--0,0,1,1,2,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,

2,2,3,4,7,8,--0,0,1,1,2,2,3,4,7,9,--

R96)

0,0,1,1,2,2,3,4,8,-->0,0,--0,0,--0,0,1,--0,0,1,--0,0,1,--0,0,--0,0,1,1,2,2,3,4,8,9,

--

R97)

0,0,1,1,2,2,3,5,6,-->0,0,1,1,2,2,--0,0,1,1,2,2,3,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,

1,1,2,2,3,5,6,7,--0,0,1,1,2,2,3,5,6,8,--0,0,1,1,2,2,3,5,6,9,--

R98)

0,0,1,1,2,2,3,5,7,-->0,0,1,1,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,

2,2,3,5,7,8,--0,0,1,1,2,2,3,5,7,9,--

R99)

0,0,1,1,2,2,3,5,8,-->0,0,--0,0,1,--0,0,--0,0,1,--0,0,1,--0,0,--0,0,1,1,2,2,3,5,8,9,

--

R100)

0,0,1,1,2,2,3,6,7,-->0,0,1,1,--0,0,1,1,2,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,--0,0,1,1,

2,2,3,6,7,8,--0,0,1,1,2,2,3,6,7,9,--

R101)

0,0,1,1,2,2,3,6,8,-->0,0,--0,0,1,--0,0,1,--0,0,--0,0,1,--0,0,--0,0,1,1,2,2,3,6,8,9,  
--

R102)

0,0,1,1,2,2,3,7,8,-->0,0,--0,0,1,--0,0,1,--0,0,1,--0,0,--0,0,--0,0,1,1,2,2,3,7,8,9,  
--

R103)

0,0,1,1,2,2,4,5,6,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,  
1,1,2,2,4,5,6,7,--0,0,1,1,2,2,4,5,6,8,--0,0,1,1,2,2,4,5,6,9,--

R104)

0,0,1,1,2,2,4,5,7,-->0,0,1,1,2,--0,0,1,1,--0,0,1,1,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,  
2,2,4,5,7,8,--0,0,1,1,2,2,4,5,7,9,--

R105)

0,0,1,1,2,2,4,5,8,-->0,0,1,--0,0,--0,0,--0,0,1,--0,0,1,--0,0,--0,0,1,1,2,2,4,5,8,9,  
--

R106)

0,0,1,1,2,2,4,6,7,-->0,0,1,1,2,--0,0,1,1,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,--0,0,1,1,  
2,2,4,6,7,8,--0,0,1,1,2,2,4,6,7,9,--

R107)

0,0,1,1,2,2,4,6,8,-->0,0,1,--0,0,--0,0,1,--0,0,--0,0,1,--0,0,--0,0,1,1,2,2,4,6,8,9,  
--

R108)

0,0,1,1,2,2,4,7,8,-->0,0,1,--0,0,--0,0,1,--0,0,1,--0,0,--0,0,--0,0,1,1,2,2,4,7,8,9,  
--

R109)

0,0,1,1,2,2,5,6,7,-->0,0,1,1,2,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,  
2,2,5,6,7,8,--0,0,1,1,2,2,5,6,7,9,--

R110)

0,0,1,1,2,2,5,6,8,-->0,0,1,--0,0,1,--0,0,--0,0,--0,0,1,--0,0,--0,0,1,1,2,2,5,6,8,9,  
--

R111)

0,0,1,1,2,2,5,7,8,-->0,0,1,--0,0,1,--0,0,--0,0,1,--0,0,--0,0,--0,0,1,1,2,2,5,7,8,9,  
--

R112)

0,0,1,1,2,2,6,7,8,-->0,0,1,--0,0,1,--0,0,1,--0,0,--0,0,--0,0,--0,0,1,1,2,2,6,7,8,9,  
--

R113)

0,0,1,1,2,3,4,5,6,-->0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,  
1,2,2,--0,0,1,1,2,3,4,5,6,7,--0,0,1,1,2,3,4,5,6,8,--0,0,1,1,2,3,4,5,6,9,--

R114)

0,0,1,1,2,3,4,5,7,-->0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,2,--0,0,1,1,--  
0,0,1,1,2,3,4,5,7,8,--0,0,1,1,2,3,4,5,7,9,--

R115)

0,0,1,1,2,3,4,5,8,-->0,0,--0,0,--0,0,--0,0,--0,0,1,--0,0,1,--0,0,--0,0,1,1,2,3,4,5,  
8,9,--

R116)

0,0,1,1,2,3,4,6,7,-->0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,--  
0,0,1,1,2,3,4,6,7,8,--0,0,1,1,2,3,4,6,7,9,--

R117)

0,0,1,1,2,3,4,6,8,-->0,0,--0,0,--0,0,--0,0,1,--0,0,--0,0,1,--0,0,--0,0,1,1,2,3,4,6,  
8,9,--

R118)

0,0,1,1,2,3,4,7,8,-->0,0,--0,0,--0,0,--0,0,1,--0,0,1,--0,0,--0,0,--0,0,1,1,2,3,4,7,  
8,9,--

R119)

0,0,1,1,2,3,5,6,7,-->0,0,1,1,--0,0,1,1,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,--0,0,1,1,--  
0,0,1,1,2,3,5,6,7,8,--0,0,1,1,2,3,5,6,7,9,--

R120)

0,0,1,1,2,3,5,6,8,-->0,0,--0,0,--0,0,1,--0,0,--0,0,--0,0,1,--0,0,--0,0,1,1,2,3,5,6,  
8,9,--

R121)

0,0,1,1,2,3,5,7,8,-->0,0,--0,0,--0,0,1,--0,0,--0,0,1,--0,0,--0,0,--0,0,1,1,2,3,5,7,  
8,9,--

R122)

0,0,1,1,2,3,6,7,8,-->0,0,--0,0,--0,0,1,--0,0,1,--0,0,--0,0,--0,0,--0,0,1,1,2,3,6,7,  
8,9,--

R123)

0,0,1,1,2,4,5,6,7,-->0,0,1,1,--0,0,1,1,2,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--  
0,0,1,1,2,4,5,6,7,8,--0,0,1,1,2,4,5,6,7,9,--

R124)

0,0,1,1,2,4,5,6,8,-->0,0,--0,0,1,--0,0,--0,0,--0,0,--0,0,--0,0,1,--0,0,--0,0,1,1,2,4,5,6,  
8,9,--

R125)

0,0,1,1,2,4,5,7,8,-->0,0,--0,0,1,--0,0,--0,0,--0,0,1,--0,0,--0,0,--0,0,1,1,2,4,5,7,  
8,9,--

R126)

0,0,1,1,2,4,6,7,8,-->0,0,--0,0,1,--0,0,--0,0,1,--0,0,--0,0,--0,0,--0,0,1,1,2,4,6,7,  
8,9,--

R127)

0,0,1,1,2,5,6,7,8,-->0,0,--0,0,1,--0,0,1,--0,0,--0,0,--0,0,--0,0,--0,0,1,1,2,5,6,7,  
8,9,--

R128)

0,0,1,1,3,4,5,6,7,-->0,0,1,1,2,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--  
0,0,1,1,3,4,5,6,7,8,--0,0,1,1,3,4,5,6,7,9,--

R129)

0,0,1,1,3,4,5,6,8,-->0,0,1,--0,0,--0,0,--0,0,--0,0,--0,0,1,--0,0,--0,0,1,1,3,4,5,6,  
8,9,--

R130)

0,0,1,1,3,4,5,7,8,-->0,0,1,--0,0,--0,0,--0,0,--0,0,1,--0,0,--0,0,--0,0,1,1,3,4,5,7,  
8,9,--

R131)

0,0,1,1,3,4,6,7,8,-->0,0,1,--0,0,--0,0,--0,0,1,--0,0,--0,0,--0,0,--0,0,1,1,3,4,6,7,  
8,9,--

R132)

0,0,1,1,3,5,6,7,8,-->0,0,1,--0,0,--0,0,1,--0,0,--0,0,--0,0,--0,0,--0,0,1,1,3,5,6,7,  
8,9,--

R133)

0,0,1,1,4,5,6,7,8,-->0,0,1,--0,0,1,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,1,1,4,5,6,7,  
8,9,--





0,0,2,3,4,5,6,7, : 0,1,2,3,4,5,6,7, :  
 LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,3,5, : 0,0,1,1,2,2,3,3,6, :  
 0,0,1,1,2,2,3,3,7, : 0,0,1,1,2,2,3,3,8, : 0,0,1,1,2,2,3,4,5, : 0,0,1,1,2,2,3,4,6, :  
 0,0,1,1,2,2,3,4,7, : 0,0,1,1,2,2,3,4,8, : 0,0,1,1,2,2,3,5,6, : 0,0,1,1,2,2,3,5,7, :  
 0,0,1,1,2,2,3,5,8, : 0,0,1,1,2,2,3,6,7, : 0,0,1,1,2,2,3,6,8, : 0,0,1,1,2,2,3,7,8, :  
 0,0,1,1,2,2,4,5,6, : 0,0,1,1,2,2,4,5,7, : 0,0,1,1,2,2,4,5,8, : 0,0,1,1,2,2,4,6,7, :  
 0,0,1,1,2,2,4,6,8, : 0,0,1,1,2,2,4,7,8, : 0,0,1,1,2,2,5,6,7, : 0,0,1,1,2,2,5,6,8, :  
 0,0,1,1,2,2,5,7,8, : 0,0,1,1,2,2,6,7,8, : 0,0,1,1,2,3,4,5,6, : 0,0,1,1,2,3,4,5,7, :  
 0,0,1,1,2,3,4,5,8, : 0,0,1,1,2,3,4,6,7, : 0,0,1,1,2,3,4,6,8, : 0,0,1,1,2,3,4,7,8, :  
 0,0,1,1,2,3,5,6,7, : 0,0,1,1,2,3,5,6,8, : 0,0,1,1,2,3,5,7,8, : 0,0,1,1,2,3,6,7,8, :  
 0,0,1,1,2,4,5,6,7, : 0,0,1,1,2,4,5,6,8, : 0,0,1,1,2,4,5,7,8, : 0,0,1,1,2,4,6,7,8, :  
 0,0,1,1,2,5,6,7,8, : 0,0,1,1,3,4,5,6,7, : 0,0,1,1,3,4,5,6,8, : 0,0,1,1,3,4,5,7,8, :  
 0,0,1,1,3,4,6,7,8, : 0,0,1,1,3,5,6,7,8, : 0,0,1,1,4,5,6,7,8, : 0,0,1,2,3,4,5,6,7, :  
 0,0,1,2,3,4,5,6,8, : 0,0,1,2,3,4,5,7,8, : 0,0,1,2,3,4,6,7,8, : 0,0,1,2,3,5,6,7,8, :  
 0,0,1,2,4,5,6,7,8, : 0,0,1,3,4,5,6,7,8, : 0,0,2,3,4,5,6,7,8, : 0,1,2,3,4,5,6,7,8, :  
 LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,4,5, : 0,0,1,1,2,2,3,3,4,6, :  
 0,0,1,1,2,2,3,3,4,7, : 0,0,1,1,2,2,3,3,4,8, : 0,0,1,1,2,2,3,3,4,9, :  
 0,0,1,1,2,2,3,3,5,6, : 0,0,1,1,2,2,3,3,5,7, : 0,0,1,1,2,2,3,3,5,8, :  
 0,0,1,1,2,2,3,3,5,9, : 0,0,1,1,2,2,3,3,6,7, : 0,0,1,1,2,2,3,3,6,8, :  
 0,0,1,1,2,2,3,3,6,9, : 0,0,1,1,2,2,3,3,7,8, : 0,0,1,1,2,2,3,3,7,9, :  
 0,0,1,1,2,2,3,3,8,9, : 0,0,1,1,2,2,3,4,5,6, : 0,0,1,1,2,2,3,4,5,7, :  
 0,0,1,1,2,2,3,4,5,8, : 0,0,1,1,2,2,3,4,5,9, : 0,0,1,1,2,2,3,4,6,7, :  
 0,0,1,1,2,2,3,4,6,8, : 0,0,1,1,2,2,3,4,6,9, : 0,0,1,1,2,2,3,4,7,8, :  
 0,0,1,1,2,2,3,4,7,9, : 0,0,1,1,2,2,3,4,8,9, : 0,0,1,1,2,2,3,5,6,7, :  
 0,0,1,1,2,2,3,5,6,8, : 0,0,1,1,2,2,3,5,6,9, : 0,0,1,1,2,2,3,5,7,8, :  
 0,0,1,1,2,2,3,5,7,9, : 0,0,1,1,2,2,3,5,8,9, : 0,0,1,1,2,2,3,6,7,8, :  
 0,0,1,1,2,2,3,6,7,9, : 0,0,1,1,2,2,3,6,8,9, : 0,0,1,1,2,2,3,7,8,9, :  
 0,0,1,1,2,2,4,5,6,7, : 0,0,1,1,2,2,4,5,6,8, : 0,0,1,1,2,2,4,5,6,9, :  
 0,0,1,1,2,2,4,5,7,8, : 0,0,1,1,2,2,4,5,7,9, : 0,0,1,1,2,2,4,5,8,9, :  
 0,0,1,1,2,2,4,6,7,8, : 0,0,1,1,2,2,4,6,7,9, : 0,0,1,1,2,2,4,6,8,9, :  
 0,0,1,1,2,2,4,7,8,9, : 0,0,1,1,2,2,5,6,7,8, : 0,0,1,1,2,2,5,6,7,9, :  
 0,0,1,1,2,2,5,6,8,9, : 0,0,1,1,2,2,5,7,8,9, : 0,0,1,1,2,2,6,7,8,9, :  
 0,0,1,1,2,3,4,5,6,7, : 0,0,1,1,2,3,4,5,6,8, : 0,0,1,1,2,3,4,5,6,9, :  
 0,0,1,1,2,3,4,5,7,8, : 0,0,1,1,2,3,4,5,7,9, : 0,0,1,1,2,3,4,5,8,9, :  
 0,0,1,1,2,3,4,6,7,8, : 0,0,1,1,2,3,4,6,7,9, : 0,0,1,1,2,3,4,6,8,9, :  
 0,0,1,1,2,3,4,7,8,9, : 0,0,1,1,2,3,5,6,7,8, : 0,0,1,1,2,3,5,6,7,9, :  
 0,0,1,1,2,3,5,6,8,9, : 0,0,1,1,2,3,5,7,8,9, : 0,0,1,1,2,3,6,7,8,9, :  
 0,0,1,1,2,4,5,6,7,8, : 0,0,1,1,2,4,5,6,7,9, : 0,0,1,1,2,4,5,6,8,9, :  
 0,0,1,1,2,4,5,7,8,9, : 0,0,1,1,2,4,6,7,8,9, : 0,0,1,1,2,5,6,7,8,9, :  
 0,0,1,1,3,4,5,6,7,8, : 0,0,1,1,3,4,5,6,7,9, : 0,0,1,1,3,4,5,6,8,9, :  
 0,0,1,1,3,4,5,7,8,9, : 0,0,1,1,3,4,6,7,8,9, : 0,0,1,1,3,5,6,7,8,9, :  
 0,0,1,1,4,5,6,7,8,9, : 0,0,1,2,3,4,5,6,7,8, : 0,0,1,2,3,4,5,6,7,9, :  
 0,0,1,2,3,4,5,6,8,9, : 0,0,1,2,3,4,5,7,8,9, : 0,0,1,2,3,4,6,7,8,9, :  
 0,0,1,2,3,5,6,7,8,9, : 0,0,1,2,4,5,6,7,8,9, : 0,0,1,3,4,5,6,7,8,9, :  
 0,0,2,3,4,5,6,7,8,9, : 0,1,2,3,4,5,6,7,8,9, :

Number new nodes in level n is given by : 1,2,3,5,8,13,21,34,55,89,

-----Class

490-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][101][120][201][210]]$

-----  
--  
Rules of T[L]:

R1)  $0, -- \rightarrow 0, 0, -- 0, 1, --$

R2)  $0, 0, -- \rightarrow 0, 0, 1, -- 0, 0, 2, --$

R3)  $0, 1, -- \rightarrow 0, 0, -- 0, 1, 1, -- 0, 1, --$

R4)  $0, 0, 1, -- \rightarrow 0, 0, 1, 1, -- 0, 0, 1, 2, -- 0, 0, 1, 3, --$

R5)  $0, 0, 2, -- \rightarrow 0, 1, 1, -- 0, 0, 2, 2, -- 0, 1, --$

R6)  $0, 1, 1, -- \rightarrow 0, 0, 1, 1, -- 0, 0, 1, -- 0, 0, 2, --$

R7)  $0, 0, 1, 1, -- \rightarrow 0, 0, 1, 1, 2, -- 0, 0, 1, 1, 3, -- 0, 0, 1, 1, 4, --$

R8)  $0, 0, 1, 2, -- \rightarrow 0, 0, 1, 1, -- 0, 0, 1, 2, 2, -- 0, 0, 1, 2, -- 0, 0, 1, 3, --$

R9)  $0, 0, 1, 3, -- \rightarrow 0, 0, -- 0, 1, 1, -- 0, 0, 1, 3, 3, -- 0, 1, --$

R10)  $0, 0, 2, 2, -- \rightarrow 0, 0, 1, 2, 2, -- 0, 0, 1, -- 0, 0, 2, --$

R11)  $0, 0, 1, 1, 2, -- \rightarrow 0, 0, 1, 1, 2, 2, -- 0, 0, 1, 1, 2, 3, -- 0, 0, 1, 1, 2, 4, -- 0, 0, 1, 1, 2, 5, --$

R12)  $0, 0, 1, 1, 3, -- \rightarrow 0, 0, 1, 2, 2, -- 0, 0, 1, 1, 3, 3, -- 0, 0, 1, 2, -- 0, 0, 1, 3, --$

R13)  $0, 0, 1, 1, 4, -- \rightarrow 0, 1, 1, -- 0, 1, 1, -- 0, 0, 1, 1, 4, 4, -- 0, 1, --$

R14)  $0, 0, 1, 2, 2, -- \rightarrow 0, 0, 1, 1, 2, 2, -- 0, 0, 1, 1, 2, -- 0, 0, 1, 1, 3, -- 0, 0, 1, 1, 4, --$

R15)  $0, 0, 1, 3, 3, -- \rightarrow 0, 0, 1, 1, -- 0, 0, 1, 2, 2, -- 0, 0, 1, -- 0, 0, 2, --$

R16)

$0, 0, 1, 1, 2, 2, -- \rightarrow 0, 0, 1, 1, 2, 2, 3, -- 0, 0, 1, 1, 2, 2, 4, -- 0, 0, 1, 1, 2, 2, 5, -- 0, 0, 1, 1, 2, 2, 6, --$

R17)

$0, 0, 1, 1, 2, 3, -- \rightarrow 0, 0, 1, 1, 2, 2, -- 0, 0, 1, 1, 2, 3, 3, -- 0, 0, 1, 1, 2, 3, -- 0, 0, 1, 1, 2, 4, -- 0, 0, 1, 1, 2, 5, --$

R18)  $0, 0, 1, 1, 2, 4, -- \rightarrow 0, 0, 1, 1, -- 0, 0, 1, 2, 2, -- 0, 0, 1, 1, 2, 4, 4, -- 0, 0, 1, 2, -- 0, 0, 1, 3, --$

R19)  $0, 0, 1, 1, 2, 5, -- \rightarrow 0, 0, -- 0, 1, 1, -- 0, 1, 1, -- 0, 0, 1, 1, 2, 5, 5, -- 0, 1, --$

R20)  $0, 0, 1, 1, 3, 3, -- \rightarrow 0, 0, 1, 1, 2, 3, 3, -- 0, 0, 1, 1, 2, -- 0, 0, 1, 1, 3, -- 0, 0, 1, 1, 4, --$

R21)  $0, 0, 1, 1, 4, 4, -- \rightarrow 0, 0, 1, 2, 2, -- 0, 0, 1, 2, 2, -- 0, 0, 1, -- 0, 0, 2, --$

R22)

$0, 0, 1, 1, 2, 2, 3, -- \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, -- 0, 0, 1, 1, 2, 2, 3, 4, -- 0, 0, 1, 1, 2, 2, 3, 5, -- 0, 0, 1, 1, 2, 2, 3, 6, -- 0, 0, 1, 1, 2, 2, 3, 7, --$

R23)

$0, 0, 1, 1, 2, 2, 4, -- \rightarrow 0, 0, 1, 1, 2, 3, 3, -- 0, 0, 1, 1, 2, 2, 4, 4, -- 0, 0, 1, 1, 2, 3, -- 0, 0, 1, 1, 2, 4, -- 0, 0, 1, 1, 2, 5, --$

R24)

$0, 0, 1, 1, 2, 2, 5, -- \rightarrow 0, 0, 1, 2, 2, -- 0, 0, 1, 2, 2, -- 0, 0, 1, 1, 2, 2, 5, 5, -- 0, 0, 1, 2, -- 0, 0, 1, 3, --$

R25)  $0, 0, 1, 1, 2, 2, 6, -- \rightarrow 0, 1, 1, -- 0, 1, 1, -- 0, 1, 1, -- 0, 0, 1, 1, 2, 2, 6, 6, -- 0, 1, --$

R26)

$0, 0, 1, 1, 2, 3, 3, -- \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, -- 0, 0, 1, 1, 2, 2, 3, -- 0, 0, 1, 1, 2, 2, 4, -- 0, 0, 1, 1, 2, 2, 5, -- 0, 0, 1, 1, 2, 2, 6, --$

R27)

$0, 0, 1, 1, 2, 4, 4, -- \rightarrow 0, 0, 1, 1, 2, 2, -- 0, 0, 1, 1, 2, 3, 3, -- 0, 0, 1, 1, 2, -- 0, 0, 1, 1, 3, -- 0, 0, 1, 1, 4, --$

R28)  $0, 0, 1, 1, 2, 5, 5, -- \rightarrow 0, 0, 1, 1, -- 0, 0, 1, 2, 2, -- 0, 0, 1, 2, 2, -- 0, 0, 1, -- 0, 0, 2, --$

R29)

$0, 0, 1, 1, 2, 2, 3, 3, -- \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, -- 0, 0, 1, 1, 2, 2, 3, 3, 5, -- 0, 0, 1, 1, 2, 2, 3, 3, 6, -- 0, 0, 1, 1, 2, 2, 3, 3, 7, -- 0, 0, 1, 1, 2, 2, 3, 3, 8, --$

R30)

$0, 0, 1, 1, 2, 2, 3, 4, -- \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, -- 0, 0, 1, 1, 2, 2, 3, 4, 4, -- 0, 0, 1, 1, 2, 2, 3, 4, -- 0, 0, 1, 1, 2, 2, 3, 5, -- 0, 0, 1, 1, 2, 2, 3, 6, -- 0, 0, 1, 1, 2, 2, 3, 7, --$

R31)

$0, 0, 1, 1, 2, 2, 3, 5, -- \rightarrow 0, 0, 1, 1, 2, 2, -- 0, 0, 1, 1, 2, 3, 3, -- 0, 0, 1, 1, 2, 2, 3, 5, 5, -- 0, 0, 1, 1, 2, 3, --$

0,0,1,1,2,4,--0,0,1,1,2,5,--  
 R32)  
 0,0,1,1,2,2,3,6,-->0,0,1,1,--0,0,1,2,2,--0,0,1,2,2,--0,0,1,1,2,2,3,6,6,--0,0,1,2,--  
 0,0,1,3,--  
 R33) 0,0,1,1,2,2,3,7,-->0,0,--0,1,1,--0,1,1,--0,1,1,--0,0,1,1,2,2,3,7,7,--0,1,--  
 R34)  
 0,0,1,1,2,2,4,4,-->0,0,1,1,2,2,3,4,4,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,  
 5,--0,0,1,1,2,2,6,--  
 R35)  
 0,0,1,1,2,2,5,5,-->0,0,1,1,2,3,3,--0,0,1,1,2,3,3,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,  
 4,--  
 R36) 0,0,1,1,2,2,6,6,-->0,0,1,2,2,--0,0,1,2,2,--0,0,1,2,2,--0,0,1,--0,0,2,--  
 R37)  
 0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,--0,0,1,1,2,2,3,3,4,  
 6,--0,0,1,1,2,2,3,3,4,7,--0,0,1,1,2,2,3,3,4,8,--0,0,1,1,2,2,3,3,4,9,--  
 R38)  
 0,0,1,1,2,2,3,3,5,-->0,0,1,1,2,2,3,4,4,--0,0,1,1,2,2,3,3,5,5,--0,0,1,1,2,2,3,4,--0,  
 0,1,1,2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--  
 R39)  
 0,0,1,1,2,2,3,3,6,-->0,0,1,1,2,3,3,--0,0,1,1,2,3,3,--0,0,1,1,2,2,3,3,6,6,--0,0,1,1,  
 2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--  
 R40)  
 0,0,1,1,2,2,3,3,7,-->0,0,1,2,2,--0,0,1,2,2,--0,0,1,2,2,--0,0,1,1,2,2,3,3,7,7,--0,0,  
 1,2,--0,0,1,3,--  
 R41)  
 0,0,1,1,2,2,3,3,8,-->0,1,1,--0,1,1,--0,1,1,--0,1,1,--0,0,1,1,2,2,3,3,8,8,--0,1,--  
 R42)  
 0,0,1,1,2,2,3,4,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--  
 0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--  
 R43)  
 0,0,1,1,2,2,3,5,5,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,4,--0,0,1,1,2,2,3,--0,0,1,1,  
 2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--  
 R44)  
 0,0,1,1,2,2,3,6,6,-->0,0,1,1,2,2,--0,0,1,1,2,3,3,--0,0,1,1,2,3,3,--0,0,1,1,2,--0,0,  
 1,1,3,--0,0,1,1,4,--  
 R45)  
 0,0,1,1,2,2,3,7,7,-->0,0,1,1,--0,0,1,2,2,--0,0,1,2,2,--0,0,1,2,2,--0,0,1,--0,0,2,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,1, : 0,0,2, : 0,1,1, :  
 LEN=4) 0,0,1,1, : 0,0,1,2, : 0,0,1,3, : 0,0,2,2, :  
 LEN=5) 0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, : 0,0,1,2,2, : 0,0,1,3,3, :  
 LEN=6) 0,0,1,1,2,2, : 0,0,1,1,2,3, : 0,0,1,1,2,4, : 0,0,1,1,2,5, : 0,0,1,1,3,3, :  
 0,0,1,1,4,4, :  
 LEN=7) 0,0,1,1,2,2,3, : 0,0,1,1,2,2,4, : 0,0,1,1,2,2,5, : 0,0,1,1,2,2,6, :  
 0,0,1,1,2,3,3, : 0,0,1,1,2,4,4, : 0,0,1,1,2,5,5, :  
 LEN=8) 0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,3,4, : 0,0,1,1,2,2,3,5, : 0,0,1,1,2,2,3,6, :  
 0,0,1,1,2,2,3,7, : 0,0,1,1,2,2,4,4, : 0,0,1,1,2,2,5,5, : 0,0,1,1,2,2,6,6, :  
 LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,3,5, : 0,0,1,1,2,2,3,3,6, :

$0,0,1,1,2,2,3,3,7, : 0,0,1,1,2,2,3,3,8, : 0,0,1,1,2,2,3,4,4, : 0,0,1,1,2,2,3,5,5, :$   
 $0,0,1,1,2,2,3,6,6, : 0,0,1,1,2,2,3,7,7, :$   
 LEN=10)  $0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,4,5, : 0,0,1,1,2,2,3,3,4,6, :$   
 $0,0,1,1,2,2,3,3,4,7, : 0,0,1,1,2,2,3,3,4,8, : 0,0,1,1,2,2,3,3,4,9, :$   
 $0,0,1,1,2,2,3,3,5,5, : 0,0,1,1,2,2,3,3,6,6, : 0,0,1,1,2,2,3,3,7,7, :$   
 $0,0,1,1,2,2,3,3,8,8, :$

Number new nodes in level n is given by : 1,2,3,4,5,6,7,8,9,10,

-----Class

491-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][102][110][120][201]]$

-----

--

Rules of  $T[L]$ :

- R1)  $0, -->0,0, --0,1, --$
- R2)  $0,0, -->0,0,1, --0,0,2, --$
- R3)  $0,1, -->0,1,0, --0,0, --0,1, --$
- R4)  $0,0,1, -->0,0,1,1, --0,0,1,2, --0,0,1,3, --$
- R5)  $0,0,2, -->0,0,2,1, --0,0, --0,1, --$
- R6)  $0,1,0, -->0,1,0,1, --$
- R7)  $0,0,1,1, -->0,0,1,1,2, --0,0,1,1,3, --0,0,1,1,4, --$
- R8)  $0,0,1,2, -->0,1,0, --0,0,1,1, --0,0,1,2, --0,0,1,3, --$
- R9)  $0,0,1,3, -->0,1,0, --0,0,1,3,2, --0,0, --0,1, --$
- R10)  $0,0,2,1, -->0,1,0, --0,1,0,1, --$
- R11)  $0,1,0,1, -->$
- R12)  $0,0,1,1,2, -->0,0,1,1,2,2, --0,0,1,1,2,3, --0,0,1,1,2,4, --0,0,1,1,2,5, --$
- R13)  $0,0,1,1,3, -->0,0,2,1, --0,0,1,1, --0,0,1,2, --0,0,1,3, --$
- R14)  $0,0,1,1,4, -->0,0,2,1, --0,0,1,1,4,3, --0,0, --0,1, --$
- R15)  $0,0,1,3,2, -->0,1,0,1, --0,1,0, --0,1,0,1, --$
- R16)  $0,0,1,1,2,2, -->0,0,1,1,2,2,3, --0,0,1,1,2,2,4, --0,0,1,1,2,2,5, --0,0,1,1,2,2,6, --$
- R17)  $0,0,1,1,2,3, -->0,1,0, --0,0,1,1,2,2, --0,0,1,1,2,3, --0,0,1,1,2,4, --0,0,1,1,2,5, --$
- R18)  $0,0,1,1,2,4, -->0,1,0, --0,0,1,3,2, --0,0,1,1, --0,0,1,2, --0,0,1,3, --$
- R19)  $0,0,1,1,2,5, -->0,1,0, --0,0,1,3,2, --0,0,1,1,2,5,4, --0,0, --0,1, --$
- R20)  $0,0,1,1,4,3, -->0,1,0, --0,1,0, --0,1,0,1, --$
- R21)  $0,0,1,1,2,2,3, -->0,0,1,1,2,2,3,3, --0,0,1,1,2,2,3,4, --0,0,1,1,2,2,3,5, --0,0,1,1,2,2,3,6, --0,0,1,1,2,2,3,7, --$
- R22)  $0,0,1,1,2,2,4, -->0,0,2,1, --0,0,1,1,2,2, --0,0,1,1,2,3, --0,0,1,1,2,4, --0,0,1,1,2,5, --$
- R23)  $0,0,1,1,2,2,5, -->0,0,2,1, --0,0,1,1,4,3, --0,0,1,1, --0,0,1,2, --0,0,1,3, --$
- R24)  $0,0,1,1,2,2,6, -->0,0,2,1, --0,0,1,1,4,3, --0,0,1,1,2,2,6,5, --0,0, --0,1, --$
- R25)  $0,0,1,1,2,5,4, -->0,1,0,1, --0,0,1,1,2,5,4,3, --0,1,0, --0,1,0,1, --$
- R26)  $0,0,1,1,2,2,3,3, -->0,0,1,1,2,2,3,3,4, --0,0,1,1,2,2,3,3,5, --0,0,1,1,2,2,3,3,6, --0,0,1,1,2,2,3,3,7, --0,0,1,1,2,2,3,3,8, --$
- R27)  $0,0,1,1,2,2,3,4, -->0,1,0, --0,0,1,1,2,2,3,3, --0,0,1,1,2,2,3,4, --0,0,1,1,2,2,3,5, --0,0,1,1,2,2,3,6, --0,0,1,1,2,2,3,7, --$

R28) 0,0,1,1,2,2,3,5, -->0,1,0, --0,0,1,3,2, --0,0,1,1,2,2, --0,0,1,1,2,3, --0,0,1,1,2,4, --0,0,1,1,2,5, --  
R29) 0,0,1,1,2,2,3,6, -->0,1,0, --0,0,1,3,2, --0,0,1,1,2,5,4, --0,0,1,1, --0,0,1,2, --0,0,1,3, --  
R30) 0,0,1,1,2,2,3,7, -->0,1,0, --0,0,1,3,2, --0,0,1,1,2,5,4, --0,0,1,1,2,2,3,7,6, --0,0, --0,1, --  
R31) 0,0,1,1,2,2,6,5, -->0,1,0, --0,0,2,1, --0,1,0, --0,1,0,1, --  
R32) 0,0,1,1,2,5,4,3, -->0,1,0,1, --0,1,0,1, --  
R33) 0,0,1,1,2,2,3,3,4, -->0,0,1,1,2,2,3,3,4,4, --0,0,1,1,2,2,3,3,4,5, --0,0,1,1,2,2,3,3,4,6, --0,0,1,1,2,2,3,3,4,7, --0,0,1,1,2,2,3,3,4,8, --0,0,1,1,2,2,3,3,4,9, --  
R34) 0,0,1,1,2,2,3,3,5, -->0,0,2,1, --0,0,1,1,2,2,3,3, --0,0,1,1,2,2,3,4, --0,0,1,1,2,2,3,5, --0,0,1,1,2,2,3,6, --0,0,1,1,2,2,3,7, --  
R35) 0,0,1,1,2,2,3,3,6, -->0,0,2,1, --0,0,1,1,4,3, --0,0,1,1,2,2, --0,0,1,1,2,3, --0,0,1,1,2,4, --0,0,1,1,2,5, --  
R36) 0,0,1,1,2,2,3,3,7, -->0,0,2,1, --0,0,1,1,4,3, --0,0,1,1,2,2,6,5, --0,0,1,1, --0,0,1,2, --0,0,1,3, --  
R37) 0,0,1,1,2,2,3,3,8, -->0,0,2,1, --0,0,1,1,4,3, --0,0,1,1,2,2,6,5, --0,0,1,1,2,2,3,3,8,7, --0,0, --0,1, --  
R38) 0,0,1,1,2,2,3,7,6, -->0,1,0,1, --0,0,1,1,2,5,4,3, --0,0,1,1,2,2,3,7,6,5, --0,1,0, --0,1,0,1, --

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,1, : 0,0,2, : 0,1,0, :  
LEN=4) 0,0,1,1, : 0,0,1,2, : 0,0,1,3, : 0,0,2,1, : 0,1,0,1, :  
LEN=5) 0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, : 0,0,1,3,2, :  
LEN=6) 0,0,1,1,2,2, : 0,0,1,1,2,3, : 0,0,1,1,2,4, : 0,0,1,1,2,5, : 0,0,1,1,4,3, :  
LEN=7) 0,0,1,1,2,2,3, : 0,0,1,1,2,2,4, : 0,0,1,1,2,2,5, : 0,0,1,1,2,2,6, :  
0,0,1,1,2,5,4, :  
LEN=8) 0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,3,4, : 0,0,1,1,2,2,3,5, : 0,0,1,1,2,2,3,6, :  
0,0,1,1,2,2,3,7, : 0,0,1,1,2,2,6,5, : 0,0,1,1,2,5,4,3, :  
LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,3,5, : 0,0,1,1,2,2,3,3,6, :  
0,0,1,1,2,2,3,3,7, : 0,0,1,1,2,2,3,3,8, : 0,0,1,1,2,2,3,7,6, :  
LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,4,5, : 0,0,1,1,2,2,3,3,4,6, :  
0,0,1,1,2,2,3,3,4,7, : 0,0,1,1,2,2,3,3,4,8, : 0,0,1,1,2,2,3,3,4,9, :  
0,0,1,1,2,2,3,3,8,7, : 0,0,1,1,2,2,3,7,6,5, :  
Number new nodes in level n is given by : 1,2,3,5,4,5,5,7,6,8,

-----Class

492-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][102][110][120][210]]$

-----  
--  
Rules of T[L]:

R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

R2)  $0, 0, \rightarrow 0, 0, 1, \rightarrow 0, 0, 2, \rightarrow$

R3)  $0, 1, \rightarrow 0, 1, 0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

R4)  $0, 0, 1, \rightarrow 0, 0, 1, 1, \rightarrow 0, 0, 1, 2, \rightarrow 0, 0, 1, 3, \rightarrow$

R5)  $0, 0, 2, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

R6)  $0, 1, 0, \rightarrow 0, 1, 0, 1, \rightarrow$

R7)  $0, 0, 1, 1, \rightarrow 0, 0, 1, 1, 2, \rightarrow 0, 0, 1, 1, 3, \rightarrow 0, 0, 1, 1, 4, \rightarrow$

R8)  $0, 0, 1, 2, \rightarrow 0, 1, 0, \rightarrow 0, 0, 1, 1, \rightarrow 0, 0, 1, 2, \rightarrow 0, 0, 1, 3, \rightarrow$

R9)  $0, 0, 1, 3, \rightarrow 0, 0, 1, 3, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

R10)  $0, 0, 2, 1, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, 1, \rightarrow$

R11)  $0, 1, 0, 1, \rightarrow$

R12)  $0, 0, 1, 1, 2, \rightarrow 0, 0, 1, 1, 2, 2, \rightarrow 0, 0, 1, 1, 2, 3, \rightarrow 0, 0, 1, 1, 2, 4, \rightarrow 0, 0, 1, 1, 2, 5, \rightarrow$

R13)  $0, 0, 1, 1, 3, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 1, 1, \rightarrow 0, 0, 1, 2, \rightarrow 0, 0, 1, 3, \rightarrow$

R14)  $0, 0, 1, 1, 4, \rightarrow 0, 0, 1, 1, 4, 2, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

R15)  $0, 0, 1, 3, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 1, 0, 1, \rightarrow$

R16)

$0, 0, 1, 1, 2, 2, \rightarrow 0, 0, 1, 1, 2, 2, 3, \rightarrow 0, 0, 1, 1, 2, 2, 4, \rightarrow 0, 0, 1, 1, 2, 2, 5, \rightarrow 0, 0, 1, 1, 2, 2, 6, \rightarrow$

R17)

$0, 0, 1, 1, 2, 3, \rightarrow 0, 1, 0, \rightarrow 0, 0, 1, 1, 2, 2, \rightarrow 0, 0, 1, 1, 2, 3, \rightarrow 0, 0, 1, 1, 2, 4, \rightarrow 0, 0, 1, 1, 2, 5, \rightarrow$

R18)  $0, 0, 1, 1, 2, 4, \rightarrow 0, 0, 1, 3, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 1, 1, \rightarrow 0, 0, 1, 2, \rightarrow 0, 0, 1, 3, \rightarrow$

R19)  $0, 0, 1, 1, 2, 5, \rightarrow 0, 0, 1, 1, 2, 5, 2, \rightarrow 0, 0, 1, 1, 4, 2, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

R20)  $0, 0, 1, 1, 4, 2, \rightarrow 0, 0, 1, 3, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 1, 0, 1, \rightarrow$

R21)

$0, 0, 1, 1, 2, 2, 3, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, \rightarrow 0, 0, 1, 1, 2, 2, 3, 4, \rightarrow 0, 0, 1, 1, 2, 2, 3, 5, \rightarrow 0, 0, 1, 1, 2, 2, 3, 6, \rightarrow 0, 0, 1, 1, 2, 2, 3, 7, \rightarrow$

R22)

$0, 0, 1, 1, 2, 2, 4, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 1, 1, 2, 2, \rightarrow 0, 0, 1, 1, 2, 3, \rightarrow 0, 0, 1, 1, 2, 4, \rightarrow 0, 0, 1, 1, 2, 5, \rightarrow$

R23)  $0, 0, 1, 1, 2, 2, 5, \rightarrow 0, 0, 1, 1, 4, 2, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 1, 1, \rightarrow 0, 0, 1, 2, \rightarrow 0, 0, 1, 3, \rightarrow$

R24)  $0, 0, 1, 1, 2, 2, 6, \rightarrow 0, 0, 1, 1, 2, 2, 6, 3, \rightarrow 0, 0, 1, 1, 4, 2, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

R25)  $0, 0, 1, 1, 2, 5, 2, \rightarrow 0, 0, 1, 1, 4, 2, \rightarrow 0, 0, 2, 1, \rightarrow 0, 1, 0, 1, \rightarrow$

R26)

$0, 0, 1, 1, 2, 2, 3, 3, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 5, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 6, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 7, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 8, \rightarrow$

R27)

$0, 0, 1, 1, 2, 2, 3, 4, \rightarrow 0, 1, 0, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, \rightarrow 0, 0, 1, 1, 2, 2, 3, 4, \rightarrow 0, 0, 1, 1, 2, 2, 3, 5, \rightarrow 0, 0, 1, 1, 2, 2, 3, 6, \rightarrow 0, 0, 1, 1, 2, 2, 3, 7, \rightarrow$

R28)

$0, 0, 1, 1, 2, 2, 3, 5, \rightarrow 0, 0, 1, 3, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 1, 1, 2, 2, \rightarrow 0, 0, 1, 1, 2, 3, \rightarrow 0, 0, 1, 1, 2, 4, \rightarrow 0, 0, 1, 1, 2, 5, \rightarrow$

R29)

$0, 0, 1, 1, 2, 2, 3, 6, \rightarrow 0, 0, 1, 1, 2, 5, 2, \rightarrow 0, 0, 1, 1, 4, 2, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 1, 1, \rightarrow 0, 0, 1, 2, \rightarrow 0, 0, 1, 3, \rightarrow$

R30)

$0, 0, 1, 1, 2, 2, 3, 7, \rightarrow 0, 0, 1, 1, 2, 2, 3, 7, 3, \rightarrow 0, 0, 1, 1, 2, 2, 6, 3, \rightarrow 0, 0, 1, 1, 4, 2, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

R31)  $0, 0, 1, 1, 2, 2, 6, 3, \rightarrow 0, 0, 1, 1, 2, 5, 2, \rightarrow 0, 0, 1, 1, 4, 2, \rightarrow 0, 0, 2, 1, \rightarrow 0, 1, 0, 1, \rightarrow$

R32)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,--0,0,1,1,2,2,3,3,4,6,--0,0,1,1,2,2,3,3,4,7,--0,0,1,1,2,2,3,3,4,8,--0,0,1,1,2,2,3,3,4,9,--

R33)

0,0,1,1,2,2,3,3,5,-->0,0,2,1,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--

R34)

0,0,1,1,2,2,3,3,6,-->0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--

R35)

0,0,1,1,2,2,3,3,7,-->0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,--0,0,1,2,--0,0,1,3,--

R36)

0,0,1,1,2,2,3,3,8,-->0,0,1,1,2,2,3,3,8,4,--0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,2,1,--0,0,--0,1,--

R37) 0,0,1,1,2,2,3,7,3,-->0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,2,1,--0,1,0,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,1,: 0,0,2,: 0,1,0,:

LEN=4) 0,0,1,1,: 0,0,1,2,: 0,0,1,3,: 0,0,2,1,: 0,1,0,1,:

LEN=5) 0,0,1,1,2,: 0,0,1,1,3,: 0,0,1,1,4,: 0,0,1,3,1,:

LEN=6) 0,0,1,1,2,2,: 0,0,1,1,2,3,: 0,0,1,1,2,4,: 0,0,1,1,2,5,: 0,0,1,1,4,2,:

LEN=7) 0,0,1,1,2,2,3,: 0,0,1,1,2,2,4,: 0,0,1,1,2,2,5,: 0,0,1,1,2,2,6,:

0,0,1,1,2,5,2,:

LEN=8) 0,0,1,1,2,2,3,3,: 0,0,1,1,2,2,3,4,: 0,0,1,1,2,2,3,5,: 0,0,1,1,2,2,3,6,:

0,0,1,1,2,2,3,7,: 0,0,1,1,2,2,6,3,:

LEN=9) 0,0,1,1,2,2,3,3,4,: 0,0,1,1,2,2,3,3,5,: 0,0,1,1,2,2,3,3,6,:

0,0,1,1,2,2,3,3,7,: 0,0,1,1,2,2,3,3,8,: 0,0,1,1,2,2,3,7,3,:

LEN=10) 0,0,1,1,2,2,3,3,4,4,: 0,0,1,1,2,2,3,3,4,5,: 0,0,1,1,2,2,3,3,4,6,:

0,0,1,1,2,2,3,3,4,7,: 0,0,1,1,2,2,3,3,4,8,: 0,0,1,1,2,2,3,3,4,9,:

0,0,1,1,2,2,3,3,8,4,:

Number new nodes in level n is given by : 1,2,3,5,4,5,5,6,6,7,

-----Class

493-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][102][110][201][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,1,--0,0,2,--

R3) 0,1,-->0,1,0,--0,0,--0,1,2,--

R4) 0,0,1,-->0,0,1,1,--0,0,1,2,--0,0,1,3,--

R5) 0,0,2,-->0,0,2,1,--0,0,--0,0,2,3,--

R6) 0,1,0,-->0,1,0,1,--

R7) 0,1,2,-->0,1,0,1,--0,1,0,--0,0,--0,1,2,3,--

R8) 0,0,1,1,-->0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--

R9) 0,0,1,2,-->0,1,0,--0,0,1,1,--0,0,1,2,3,--0,0,1,2,4,--

R10) 0,0,1,3,-->0,1,0,--0,0,2,1,--0,0,--0,0,1,3,4,--

R11) 0,0,2,1,-->0,1,0,--0,1,0,1,--



R12) 0,0,2,3,-->0,1,0,--0,1,0,--0,0,--0,0,2,3,4,--  
R13) 0,1,0,1,-->  
R14) 0,1,2,3,-->0,1,0,1,--0,1,0,1,--0,1,0,--0,0,--0,1,2,3,4,--  
R15) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--  
R16) 0,0,1,1,3,-->0,0,2,1,--0,0,1,1,--0,0,1,1,3,4,--0,0,1,1,3,5,--  
R17) 0,0,1,1,4,-->0,0,2,1,--0,0,2,1,--0,0,--0,0,1,1,4,5,--  
R18) 0,0,1,2,3,-->0,1,0,1,--0,1,0,--0,0,1,1,--0,0,1,2,3,4,--0,0,1,2,3,5,--  
R19) 0,0,1,2,4,-->0,1,0,1,--0,1,0,--0,0,2,1,--0,0,--0,0,1,2,4,5,--  
R20) 0,0,1,3,4,-->0,1,0,1,--0,1,0,--0,1,0,--0,0,--0,0,1,3,4,5,--  
R21) 0,0,2,3,4,-->0,1,0,--0,1,0,1,--0,1,0,--0,0,--0,0,2,3,4,5,--  
R22) 0,1,2,3,4,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,--0,1,2,3,4,5,--  
R23)  
0,0,1,1,2,2,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--  
R24)  
0,0,1,1,2,3,-->0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,3,4,--0,0,1,1,2,3,5,--0,0,1,1,2,3,6,  
--  
R25) 0,0,1,1,2,4,-->0,1,0,--0,0,2,1,--0,0,1,1,--0,0,1,1,2,4,5,--0,0,1,1,2,4,6,--  
R26) 0,0,1,1,2,5,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,--0,0,1,1,2,5,6,--  
R27) 0,0,1,1,3,4,-->0,1,0,--0,1,0,--0,0,1,1,--0,0,1,1,3,4,5,--0,0,1,1,3,4,6,--  
R28) 0,0,1,1,3,5,-->0,1,0,--0,1,0,--0,0,2,1,--0,0,--0,0,1,1,3,5,6,--  
R29) 0,0,1,1,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,1,1,4,5,6,--  
R30)  
0,0,1,2,3,4,-->0,1,0,1,--0,1,0,1,--0,1,0,--0,0,1,1,--0,0,1,2,3,4,5,--0,0,1,2,3,4,6,  
--  
R31) 0,0,1,2,3,5,-->0,1,0,1,--0,1,0,1,--0,1,0,--0,0,2,1,--0,0,--0,0,1,2,3,5,6,--  
R32) 0,0,1,2,4,5,-->0,1,0,1,--0,1,0,1,--0,1,0,--0,1,0,--0,0,--0,0,1,2,4,5,6,--  
R33) 0,0,1,3,4,5,-->0,1,0,1,--0,1,0,--0,1,0,1,--0,1,0,--0,0,--0,0,1,3,4,5,6,--  
R34) 0,0,2,3,4,5,-->0,1,0,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,--0,0,2,3,4,5,6,--  
R35)  
0,1,2,3,4,5,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,--0,1,2,3,4,5,6,  
--  
R36)  
0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,  
3,6,--0,0,1,1,2,2,3,7,--  
R37)  
0,0,1,1,2,2,4,-->0,0,2,1,--0,0,1,1,2,2,--0,0,1,1,2,2,4,5,--0,0,1,1,2,2,4,6,--0,0,1,  
1,2,2,4,7,--  
R38)  
0,0,1,1,2,2,5,-->0,0,2,1,--0,0,2,1,--0,0,1,1,--0,0,1,1,2,2,5,6,--0,0,1,1,2,2,5,7,--  
R39) 0,0,1,1,2,2,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,--0,0,1,1,2,2,6,7,--  
R40)  
0,0,1,1,2,3,4,-->0,1,0,1,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,3,4,5,--0,0,1,1,2,3,4,6,  
--0,0,1,1,2,3,4,7,--  
R41)  
0,0,1,1,2,3,5,-->0,1,0,1,--0,1,0,--0,0,2,1,--0,0,1,1,--0,0,1,1,2,3,5,6,--0,0,1,1,2,  
3,5,7,--  
R42)  
0,0,1,1,2,3,6,-->0,1,0,1,--0,1,0,--0,0,2,1,--0,0,2,1,--0,0,--0,0,1,1,2,3,6,7,--  
R43)  
0,0,1,1,2,4,5,-->0,1,0,1,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,1,2,4,5,6,--0,0,1,1,2,4,

5,7, --

R44) 0,0,1,1,2,4,6, -->0,1,0,1, --0,1,0, --0,1,0, --0,0,2,1, --0,0, --0,0,1,1,2,4,6,7, --

R45) 0,0,1,1,2,5,6, -->0,1,0,1, --0,1,0, --0,1,0, --0,1,0, --0,0, --0,0,1,1,2,5,6,7, --

R46)

0,0,1,1,3,4,5, -->0,1,0, --0,1,0,1, --0,1,0, --0,0,1,1, --0,0,1,1,3,4,5,6, --0,0,1,1,3,4,5,7, --

R47) 0,0,1,1,3,4,6, -->0,1,0, --0,1,0,1, --0,1,0, --0,0,2,1, --0,0, --0,0,1,1,3,4,6,7, --

R48) 0,0,1,1,3,5,6, -->0,1,0, --0,1,0,1, --0,1,0, --0,1,0, --0,0, --0,0,1,1,3,5,6,7, --

R49) 0,0,1,1,4,5,6, -->0,1,0, --0,1,0, --0,1,0,1, --0,1,0, --0,0, --0,0,1,1,4,5,6,7, --

R50)

0,0,1,2,3,4,5, -->0,1,0,1, --0,1,0,1, --0,1,0,1, --0,1,0, --0,0,1,1, --0,0,1,2,3,4,5,6, --0,0,1,2,3,4,5,7, --

R51)

0,0,1,2,3,4,6, -->0,1,0,1, --0,1,0,1, --0,1,0,1, --0,1,0, --0,0,2,1, --0,0, --0,0,1,2,3,4,6,7, --

R52)

0,0,1,2,3,5,6, -->0,1,0,1, --0,1,0,1, --0,1,0,1, --0,1,0, --0,1,0, --0,0, --0,0,1,2,3,5,6,7, --

R53)

0,0,1,2,4,5,6, -->0,1,0,1, --0,1,0,1, --0,1,0, --0,1,0,1, --0,1,0, --0,0, --0,0,1,2,4,5,6,7, --

R54)

0,0,1,3,4,5,6, -->0,1,0,1, --0,1,0, --0,1,0,1, --0,1,0,1, --0,1,0, --0,0, --0,0,1,3,4,5,6,7, --

R55)

0,0,2,3,4,5,6, -->0,1,0, --0,1,0,1, --0,1,0,1, --0,1,0,1, --0,1,0, --0,0, --0,0,2,3,4,5,6,7, --

R56)

0,1,2,3,4,5,6, -->0,1,0,1, --0,1,0,1, --0,1,0,1, --0,1,0,1, --0,1,0,1, --0,1,0, --0,0, --0,0,1,2,3,4,5,6,7, --

R57)

0,0,1,1,2,2,3,3, -->0,0,1,1,2,2,3,3,4, --0,0,1,1,2,2,3,3,5, --0,0,1,1,2,2,3,3,6, --0,0,1,1,2,2,3,3,7, --0,0,1,1,2,2,3,3,8, --

R58)

0,0,1,1,2,2,3,4, -->0,1,0, --0,0,1,1,2,2,3,3, --0,0,1,1,2,2,3,4,5, --0,0,1,1,2,2,3,4,6, --0,0,1,1,2,2,3,4,7, --0,0,1,1,2,2,3,4,8, --

R59)

0,0,1,1,2,2,3,5, -->0,1,0, --0,0,2,1, --0,0,1,1,2,2, --0,0,1,1,2,2,3,5,6, --0,0,1,1,2,2,3,5,7, --0,0,1,1,2,2,3,5,8, --

R60)

0,0,1,1,2,2,3,6, -->0,1,0, --0,0,2,1, --0,0,2,1, --0,0,1,1, --0,0,1,1,2,2,3,6,7, --0,0,1,1,2,2,3,6,8, --

R61)

0,0,1,1,2,2,3,7, -->0,1,0, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0, --0,0,1,1,2,2,3,7,8, --

R62)

0,0,1,1,2,2,4,5, -->0,1,0, --0,1,0, --0,0,1,1,2,2, --0,0,1,1,2,2,4,5,6, --0,0,1,1,2,2,4,5,7, --0,0,1,1,2,2,4,5,8, --

R63)

0,0,1,1,2,2,4,6, -->0,1,0, --0,1,0, --0,0,2,1, --0,0,1,1, --0,0,1,1,2,2,4,6,7, --0,0,1,1,2,2,4,6,8, --

R64)

0,0,1,1,2,2,4,7,-->0,1,0,--0,1,0,--0,0,2,1,--0,0,2,1,--0,0,--0,0,1,1,2,2,4,7,8,--

R65)

0,0,1,1,2,2,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,1,2,2,5,6,7,--0,0,1,1,2,2,5,6,8,--

R66)

0,0,1,1,2,2,5,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,0,--0,0,1,1,2,2,5,7,8,--

R67) 0,0,1,1,2,2,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,1,1,2,2,6,7,8,--

R68)

0,0,1,1,2,3,4,5,-->0,1,0,1,--0,1,0,1,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,3,4,5,6,--0,0,1,1,2,3,4,5,7,--0,0,1,1,2,3,4,5,8,--

R69)

0,0,1,1,2,3,4,6,-->0,1,0,1,--0,1,0,1,--0,1,0,--0,0,2,1,--0,0,1,1,--0,0,1,1,2,3,4,6,7,--0,0,1,1,2,3,4,6,8,--

R70)

0,0,1,1,2,3,4,7,-->0,1,0,1,--0,1,0,1,--0,1,0,--0,0,2,1,--0,0,2,1,--0,0,--0,0,1,1,2,3,4,7,8,--

R71)

0,0,1,1,2,3,5,6,-->0,1,0,1,--0,1,0,1,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,1,2,3,5,6,7,--0,0,1,1,2,3,5,6,8,--

R72)

0,0,1,1,2,3,5,7,-->0,1,0,1,--0,1,0,1,--0,1,0,--0,1,0,--0,0,2,1,--0,0,--0,0,1,1,2,3,5,7,8,--

R73)

0,0,1,1,2,3,6,7,-->0,1,0,1,--0,1,0,1,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,1,1,2,3,6,7,8,--

R74)

0,0,1,1,2,4,5,6,-->0,1,0,1,--0,1,0,--0,1,0,1,--0,1,0,--0,0,1,1,--0,0,1,1,2,4,5,6,7,--0,0,1,1,2,4,5,6,8,--

R75)

0,0,1,1,2,4,5,7,-->0,1,0,1,--0,1,0,--0,1,0,1,--0,1,0,--0,0,2,1,--0,0,--0,0,1,1,2,4,5,7,8,--

R76)

0,0,1,1,2,4,6,7,-->0,1,0,1,--0,1,0,--0,1,0,1,--0,1,0,--0,1,0,--0,0,--0,0,1,1,2,4,6,7,8,--

R77)

0,0,1,1,2,5,6,7,-->0,1,0,1,--0,1,0,--0,1,0,--0,1,0,1,--0,1,0,--0,0,--0,0,1,1,2,5,6,7,8,--

R78)

0,0,1,1,3,4,5,6,-->0,1,0,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,1,1,--0,0,1,1,3,4,5,6,7,--0,0,1,1,3,4,5,6,8,--

R79)

0,0,1,1,3,4,5,7,-->0,1,0,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,2,1,--0,0,--0,0,1,1,3,4,5,7,8,--

R80)

0,0,1,1,3,4,6,7,-->0,1,0,--0,1,0,1,--0,1,0,1,--0,1,0,--0,1,0,--0,0,--0,0,1,1,3,4,6,7,8,--

R81)

0,0,1,1,3,5,6,7,-->0,1,0,--0,1,0,1,--0,1,0,--0,1,0,1,--0,1,0,--0,0,--0,0,1,1,3,5,6,7,8,--

R82)

0,0,1,1,4,5,6,7,-->0,1,0,--0,1,0,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,--0,0,1,1,4,5,6,7,8,--

R83)

0,0,1,2,3,4,5,6,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,1,1,--0,0,1,2,3,4,5,6,7,--0,0,1,2,3,4,5,6,8,--

R84)

0,0,1,2,3,4,5,7,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,2,1,--0,0,--0,0,1,2,3,4,5,7,8,--

R85)

0,0,1,2,3,4,6,7,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,1,0,--0,0,--0,0,1,2,3,4,6,7,8,--

R86)

0,0,1,2,3,5,6,7,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,1,0,1,--0,1,0,--0,0,--0,0,1,2,3,5,6,7,8,--

R87)

0,0,1,2,4,5,6,7,-->0,1,0,1,--0,1,0,1,--0,1,0,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,--0,0,1,2,4,5,6,7,8,--

R88)

0,0,1,3,4,5,6,7,-->0,1,0,1,--0,1,0,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,--0,0,1,3,4,5,6,7,8,--

R89)

0,0,2,3,4,5,6,7,-->0,1,0,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,--0,0,2,3,4,5,6,7,8,--

R90)

0,1,2,3,4,5,6,7,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,--0,0,1,2,3,4,5,6,7,8,--

R91)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,--0,0,1,1,2,2,3,3,4,6,--0,0,1,1,2,2,3,3,4,7,--0,0,1,1,2,2,3,3,4,8,--0,0,1,1,2,2,3,3,4,9,--

R92)

0,0,1,1,2,2,3,3,5,-->0,0,2,1,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,5,6,--0,0,1,1,2,2,3,3,5,7,--0,0,1,1,2,2,3,3,5,8,--0,0,1,1,2,2,3,3,5,9,--

R93)

0,0,1,1,2,2,3,3,6,-->0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,--0,0,1,1,2,2,3,3,6,7,--0,0,1,1,2,2,3,3,6,8,--0,0,1,1,2,2,3,3,6,9,--

R94)

0,0,1,1,2,2,3,3,7,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,1,--0,0,1,1,2,2,3,3,7,8,--0,0,1,1,2,2,3,3,7,9,--

R95)

0,0,1,1,2,2,3,3,8,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,--0,0,1,1,2,2,3,3,8,9,--

R96)

0,0,1,1,2,2,3,4,5,-->0,1,0,1,--0,1,0,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,5,6,--0,0,1,1,2,2,3,4,5,7,--0,0,1,1,2,2,3,4,5,8,--0,0,1,1,2,2,3,4,5,9,--

R97)

0,0,1,1,2,2,3,4,6,-->0,1,0,1,--0,1,0,--0,0,2,1,--0,0,1,1,2,2,--0,0,1,1,2,2,3,4,6,7,--0,0,1,1,2,2,3,4,6,8,--0,0,1,1,2,2,3,4,6,9,--

R98)

0,0,1,1,2,2,3,4,7,-->0,1,0,1,--0,1,0,--0,0,2,1,--0,0,2,1,--0,0,1,1,--0,0,1,1,2,2,3,

4,7,8,--0,0,1,1,2,2,3,4,7,9,--

R99)

0,0,1,1,2,2,3,4,8,-->0,1,0,1,--0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,--0,0,1,1,  
2,2,3,4,8,9,--

R100)

0,0,1,1,2,2,3,5,6,-->0,1,0,1,--0,1,0,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,2,3,5,6,7,--  
0,0,1,1,2,2,3,5,6,8,--0,0,1,1,2,2,3,5,6,9,--

R101)

0,0,1,1,2,2,3,5,7,-->0,1,0,1,--0,1,0,--0,1,0,--0,0,2,1,--0,0,1,1,--0,0,1,1,2,2,3,5,  
7,8,--0,0,1,1,2,2,3,5,7,9,--

R102)

0,0,1,1,2,2,3,5,8,-->0,1,0,1,--0,1,0,--0,1,0,--0,0,2,1,--0,0,2,1,--0,0,--0,0,1,1,2,  
2,3,5,8,9,--

R103)

0,0,1,1,2,2,3,6,7,-->0,1,0,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,1,2,2,3,6,7,  
8,--0,0,1,1,2,2,3,6,7,9,--

R104)

0,0,1,1,2,2,3,6,8,-->0,1,0,1,--0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,0,--0,0,1,1,2,2,  
3,6,8,9,--

R105)

0,0,1,1,2,2,3,7,8,-->0,1,0,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,1,1,2,2,3,  
7,8,9,--

R106)

0,0,1,1,2,2,4,5,6,-->0,1,0,--0,1,0,1,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,2,4,5,6,7,--  
0,0,1,1,2,2,4,5,6,8,--0,0,1,1,2,2,4,5,6,9,--

R107)

0,0,1,1,2,2,4,5,7,-->0,1,0,--0,1,0,1,--0,1,0,--0,0,2,1,--0,0,1,1,--0,0,1,1,2,2,4,5,  
7,8,--0,0,1,1,2,2,4,5,7,9,--

R108)

0,0,1,1,2,2,4,5,8,-->0,1,0,--0,1,0,1,--0,1,0,--0,0,2,1,--0,0,2,1,--0,0,--0,0,1,1,2,  
2,4,5,8,9,--

R109)

0,0,1,1,2,2,4,6,7,-->0,1,0,--0,1,0,1,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,1,2,2,4,6,7,  
8,--0,0,1,1,2,2,4,6,7,9,--

R110)

0,0,1,1,2,2,4,6,8,-->0,1,0,--0,1,0,1,--0,1,0,--0,1,0,--0,0,2,1,--0,0,--0,0,1,1,2,2,  
4,6,8,9,--

R111)

0,0,1,1,2,2,4,7,8,-->0,1,0,--0,1,0,1,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,1,1,2,2,4,  
7,8,9,--

R112)

0,0,1,1,2,2,5,6,7,-->0,1,0,--0,1,0,--0,1,0,1,--0,1,0,--0,0,1,1,--0,0,1,1,2,2,5,6,7,  
8,--0,0,1,1,2,2,5,6,7,9,--

R113)

0,0,1,1,2,2,5,6,8,-->0,1,0,--0,1,0,--0,1,0,1,--0,1,0,--0,0,2,1,--0,0,--0,0,1,1,2,2,  
5,6,8,9,--

R114)

0,0,1,1,2,2,5,7,8,-->0,1,0,--0,1,0,--0,1,0,1,--0,1,0,--0,1,0,--0,0,--0,0,1,1,2,2,5,  
7,8,9,--

R115)

0,0,1,1,2,2,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,1,--0,1,0,--0,0,--0,0,1,1,2,2,6,7,8,9,--

R116)

0,0,1,1,2,3,4,5,6,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,3,4,5,6,7,--0,0,1,1,2,3,4,5,6,8,--0,0,1,1,2,3,4,5,6,9,--

R117)

0,0,1,1,2,3,4,5,7,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,2,1,--0,0,1,1,--0,0,1,1,2,3,4,5,7,8,--0,0,1,1,2,3,4,5,7,9,--

R118)

0,0,1,1,2,3,4,5,8,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,2,1,--0,0,2,1,--0,0,--0,0,1,1,2,3,4,5,8,9,--

R119)

0,0,1,1,2,3,4,6,7,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,1,2,3,4,6,7,8,--0,0,1,1,2,3,4,6,7,9,--

R120)

0,0,1,1,2,3,4,6,8,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,1,0,--0,0,2,1,--0,0,--0,0,1,1,2,3,4,6,8,9,--

R121)

0,0,1,1,2,3,4,7,8,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,1,1,2,3,4,7,8,9,--

R122)

0,0,1,1,2,3,5,6,7,-->0,1,0,1,--0,1,0,1,--0,1,0,--0,1,0,1,--0,1,0,--0,0,1,1,--0,0,1,1,2,3,5,6,7,8,--0,0,1,1,2,3,5,6,7,9,--

R123)

0,0,1,1,2,3,5,6,8,-->0,1,0,1,--0,1,0,1,--0,1,0,--0,1,0,1,--0,1,0,--0,0,2,1,--0,0,--0,0,1,1,2,3,5,6,8,9,--

R124)

0,0,1,1,2,3,5,7,8,-->0,1,0,1,--0,1,0,1,--0,1,0,--0,1,0,1,--0,1,0,--0,1,0,--0,0,--0,0,1,1,2,3,5,7,8,9,--

R125)

0,0,1,1,2,3,6,7,8,-->0,1,0,1,--0,1,0,1,--0,1,0,--0,1,0,--0,1,0,1,--0,1,0,--0,0,--0,0,1,1,2,3,6,7,8,9,--

R126)

0,0,1,1,2,4,5,6,7,-->0,1,0,1,--0,1,0,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,1,1,--0,0,1,1,2,4,5,6,7,8,--0,0,1,1,2,4,5,6,7,9,--

R127)

0,0,1,1,2,4,5,6,8,-->0,1,0,1,--0,1,0,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,2,1,--0,0,--0,0,1,1,2,4,5,6,8,9,--

R128)

0,0,1,1,2,4,5,7,8,-->0,1,0,1,--0,1,0,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,1,0,--0,0,--0,0,1,1,2,4,5,7,8,9,--

R129)

0,0,1,1,2,4,6,7,8,-->0,1,0,1,--0,1,0,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,--0,0,1,1,2,4,6,7,8,9,--

R130)

0,0,1,1,2,5,6,7,8,-->0,1,0,1,--0,1,0,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,--0,0,1,1,2,5,6,7,8,9,--

R131)

0,0,1,1,3,4,5,6,7,-->0,1,0,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,1,1,--0,0,1,1,3,4,5,6,7,8,--0,0,1,1,3,4,5,6,7,9,--

R132)

0,0,1,1,3,4,5,6,8,-->0,1,0,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,2,1,--0,0,--  
0,0,1,1,3,4,5,6,8,9,--

R133)

0,0,1,1,3,4,5,7,8,-->0,1,0,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,1,0,--0,0,--0,  
0,1,1,3,4,5,7,8,9,--

R134)

0,0,1,1,3,4,6,7,8,-->0,1,0,--0,1,0,1,--0,1,0,1,--0,1,0,--0,1,0,1,--0,1,0,--0,0,--0,  
0,1,1,3,4,6,7,8,9,--

R135)

0,0,1,1,3,5,6,7,8,-->0,1,0,--0,1,0,1,--0,1,0,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,--0,  
0,1,1,3,5,6,7,8,9,--

R136)

0,0,1,1,4,5,6,7,8,-->0,1,0,--0,1,0,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,--0,  
0,1,1,4,5,6,7,8,9,--

R137)

0,0,1,2,3,4,5,6,7,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,  
1,1,--0,0,1,2,3,4,5,6,7,8,--0,0,1,2,3,4,5,6,7,9,--

R138)

0,0,1,2,3,4,5,6,8,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,  
2,1,--0,0,--0,0,1,2,3,4,5,6,8,9,--

R139)

0,0,1,2,3,4,5,7,8,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,1,  
0,--0,0,--0,0,1,2,3,4,5,7,8,9,--

R140)

0,0,1,2,3,4,6,7,8,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,1,0,1,--0,1,  
0,--0,0,--0,0,1,2,3,4,6,7,8,9,--

R141)

0,0,1,2,3,5,6,7,8,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,1,0,1,--0,1,0,1,--0,1,  
0,--0,0,--0,0,1,2,3,5,6,7,8,9,--

R142)

0,0,1,2,4,5,6,7,8,-->0,1,0,1,--0,1,0,1,--0,1,0,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,  
0,--0,0,--0,0,1,2,4,5,6,7,8,9,--

R143)

0,0,1,3,4,5,6,7,8,-->0,1,0,1,--0,1,0,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,  
0,--0,0,--0,0,1,3,4,5,6,7,8,9,--

R144)

0,0,2,3,4,5,6,7,8,-->0,1,0,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,  
0,--0,0,--0,0,2,3,4,5,6,7,8,9,--

R145)

0,1,2,3,4,5,6,7,8,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,  
1,0,1,--0,1,0,--0,0,--0,1,2,3,4,5,6,7,8,9,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,1, : 0,0,2, : 0,1,0, : 0,1,2, :

LEN=4) 0,0,1,1, : 0,0,1,2, : 0,0,1,3, : 0,0,2,1, : 0,0,2,3, : 0,1,0,1, : 0,1,2,3, :

LEN=5) 0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, : 0,0,1,2,3, : 0,0,1,2,4, : 0,0,1,3,4, :

0,0,2,3,4, : 0,1,2,3,4, :

LEN=6) 0,0,1,1,2,2, : 0,0,1,1,2,3, : 0,0,1,1,2,4, : 0,0,1,1,2,5, : 0,0,1,1,3,4, :

0,0,1,1,3,5,: 0,0,1,1,4,5,: 0,0,1,2,3,4,: 0,0,1,2,3,5,: 0,0,1,2,4,5,: 0,0,1,3,4,5,:  
0,0,2,3,4,5,: 0,1,2,3,4,5,:  
LEN=7) 0,0,1,1,2,2,3,: 0,0,1,1,2,2,4,: 0,0,1,1,2,2,5,: 0,0,1,1,2,2,6,:  
0,0,1,1,2,3,4,: 0,0,1,1,2,3,5,: 0,0,1,1,2,3,6,: 0,0,1,1,2,4,5,: 0,0,1,1,2,4,6,:  
0,0,1,1,2,5,6,: 0,0,1,1,3,4,5,: 0,0,1,1,3,4,6,: 0,0,1,1,3,5,6,: 0,0,1,1,4,5,6,:  
0,0,1,2,3,4,5,: 0,0,1,2,3,4,6,: 0,0,1,2,3,5,6,: 0,0,1,2,4,5,6,: 0,0,1,3,4,5,6,:  
0,0,2,3,4,5,6,: 0,1,2,3,4,5,6,:  
LEN=8) 0,0,1,1,2,2,3,3,: 0,0,1,1,2,2,3,4,: 0,0,1,1,2,2,3,5,: 0,0,1,1,2,2,3,6,:  
0,0,1,1,2,2,3,7,: 0,0,1,1,2,2,4,5,: 0,0,1,1,2,2,4,6,: 0,0,1,1,2,2,4,7,:  
0,0,1,1,2,2,5,6,: 0,0,1,1,2,2,5,7,: 0,0,1,1,2,2,6,7,: 0,0,1,1,2,3,4,5,:  
0,0,1,1,2,3,4,6,: 0,0,1,1,2,3,4,7,: 0,0,1,1,2,3,5,6,: 0,0,1,1,2,3,5,7,:  
0,0,1,1,2,3,6,7,: 0,0,1,1,2,4,5,6,: 0,0,1,1,2,4,5,7,: 0,0,1,1,2,4,6,7,:  
0,0,1,1,2,5,6,7,: 0,0,1,1,3,4,5,6,: 0,0,1,1,3,4,5,7,: 0,0,1,1,3,4,6,7,:  
0,0,1,1,3,5,6,7,: 0,0,1,1,4,5,6,7,: 0,0,1,2,3,4,5,6,: 0,0,1,2,3,4,5,7,:  
0,0,1,2,3,4,6,7,: 0,0,1,2,3,5,6,7,: 0,0,1,2,4,5,6,7,: 0,0,1,3,4,5,6,7,:  
0,0,2,3,4,5,6,7,: 0,1,2,3,4,5,6,7,:  
LEN=9) 0,0,1,1,2,2,3,3,4,: 0,0,1,1,2,2,3,3,5,: 0,0,1,1,2,2,3,3,6,:  
0,0,1,1,2,2,3,3,7,: 0,0,1,1,2,2,3,3,8,: 0,0,1,1,2,2,3,4,5,: 0,0,1,1,2,2,3,4,6,:  
0,0,1,1,2,2,3,4,7,: 0,0,1,1,2,2,3,4,8,: 0,0,1,1,2,2,3,5,6,: 0,0,1,1,2,2,3,5,7,:  
0,0,1,1,2,2,3,5,8,: 0,0,1,1,2,2,3,6,7,: 0,0,1,1,2,2,3,6,8,: 0,0,1,1,2,2,3,7,8,:  
0,0,1,1,2,2,4,5,6,: 0,0,1,1,2,2,4,5,7,: 0,0,1,1,2,2,4,5,8,: 0,0,1,1,2,2,4,6,7,:  
0,0,1,1,2,2,4,6,8,: 0,0,1,1,2,2,4,7,8,: 0,0,1,1,2,2,5,6,7,: 0,0,1,1,2,2,5,6,8,:  
0,0,1,1,2,2,5,7,8,: 0,0,1,1,2,2,6,7,8,: 0,0,1,1,2,3,4,5,6,: 0,0,1,1,2,3,4,5,7,:  
0,0,1,1,2,3,4,5,8,: 0,0,1,1,2,3,4,6,7,: 0,0,1,1,2,3,4,6,8,: 0,0,1,1,2,3,4,7,8,:  
0,0,1,1,2,3,5,6,7,: 0,0,1,1,2,3,5,6,8,: 0,0,1,1,2,3,5,7,8,: 0,0,1,1,2,3,6,7,8,:  
0,0,1,1,2,4,5,6,7,: 0,0,1,1,2,4,5,6,8,: 0,0,1,1,2,4,5,7,8,: 0,0,1,1,2,4,6,7,8,:  
0,0,1,1,2,5,6,7,8,: 0,0,1,1,3,4,5,6,7,: 0,0,1,1,3,4,5,6,8,: 0,0,1,1,3,4,5,7,8,:  
0,0,1,1,3,4,6,7,8,: 0,0,1,1,3,5,6,7,8,: 0,0,1,1,4,5,6,7,8,: 0,0,1,2,3,4,5,6,7,:  
0,0,1,2,3,4,5,6,8,: 0,0,1,2,3,4,5,7,8,: 0,0,1,2,3,4,6,7,8,: 0,0,1,2,3,5,6,7,8,:  
0,0,1,2,4,5,6,7,8,: 0,0,1,3,4,5,6,7,8,: 0,0,2,3,4,5,6,7,8,: 0,1,2,3,4,5,6,7,8,:  
LEN=10) 0,0,1,1,2,2,3,3,4,4,: 0,0,1,1,2,2,3,3,4,5,: 0,0,1,1,2,2,3,3,4,6,:  
0,0,1,1,2,2,3,3,4,7,: 0,0,1,1,2,2,3,3,4,8,: 0,0,1,1,2,2,3,3,4,9,:  
0,0,1,1,2,2,3,3,5,6,: 0,0,1,1,2,2,3,3,5,7,: 0,0,1,1,2,2,3,3,5,8,:  
0,0,1,1,2,2,3,3,5,9,: 0,0,1,1,2,2,3,3,6,7,: 0,0,1,1,2,2,3,3,6,8,:  
0,0,1,1,2,2,3,3,6,9,: 0,0,1,1,2,2,3,3,7,8,: 0,0,1,1,2,2,3,3,7,9,:  
0,0,1,1,2,2,3,3,8,9,: 0,0,1,1,2,2,3,4,5,6,: 0,0,1,1,2,2,3,4,5,7,:  
0,0,1,1,2,2,3,4,5,8,: 0,0,1,1,2,2,3,4,5,9,: 0,0,1,1,2,2,3,4,6,7,:  
0,0,1,1,2,2,3,4,6,8,: 0,0,1,1,2,2,3,4,6,9,: 0,0,1,1,2,2,3,4,7,8,:  
0,0,1,1,2,2,3,4,7,9,: 0,0,1,1,2,2,3,4,8,9,: 0,0,1,1,2,2,3,5,6,7,:  
0,0,1,1,2,2,3,5,6,8,: 0,0,1,1,2,2,3,5,6,9,: 0,0,1,1,2,2,3,5,7,8,:  
0,0,1,1,2,2,3,5,7,9,: 0,0,1,1,2,2,3,5,8,9,: 0,0,1,1,2,2,3,6,7,8,:  
0,0,1,1,2,2,3,6,7,9,: 0,0,1,1,2,2,3,6,8,9,: 0,0,1,1,2,2,3,7,8,9,:  
0,0,1,1,2,2,4,5,6,7,: 0,0,1,1,2,2,4,5,6,8,: 0,0,1,1,2,2,4,5,6,9,:  
0,0,1,1,2,2,4,5,7,8,: 0,0,1,1,2,2,4,5,7,9,: 0,0,1,1,2,2,4,5,8,9,:  
0,0,1,1,2,2,4,6,7,8,: 0,0,1,1,2,2,4,6,7,9,: 0,0,1,1,2,2,4,6,8,9,:  
0,0,1,1,2,2,4,7,8,9,: 0,0,1,1,2,2,5,6,7,8,: 0,0,1,1,2,2,5,6,7,9,:  
0,0,1,1,2,2,5,6,8,9,: 0,0,1,1,2,2,5,7,8,9,: 0,0,1,1,2,2,6,7,8,9,:  
0,0,1,1,2,3,4,5,6,7,: 0,0,1,1,2,3,4,5,6,8,: 0,0,1,1,2,3,4,5,6,9,:  
0,0,1,1,2,3,4,5,7,8,: 0,0,1,1,2,3,4,5,7,9,: 0,0,1,1,2,3,4,5,8,9,:  
0,0,1,1,2,3,4,6,7,8,: 0,0,1,1,2,3,4,6,7,9,: 0,0,1,1,2,3,4,6,8,9,:



$0,0,1,1,2,3,4,7,8,9$ :  $0,0,1,1,2,3,5,6,7,8$ :  $0,0,1,1,2,3,5,6,7,9$ :  
 $0,0,1,1,2,3,5,6,8,9$ :  $0,0,1,1,2,3,5,7,8,9$ :  $0,0,1,1,2,3,6,7,8,9$ :  
 $0,0,1,1,2,4,5,6,7,8$ :  $0,0,1,1,2,4,5,6,7,9$ :  $0,0,1,1,2,4,5,6,8,9$ :  
 $0,0,1,1,2,4,5,7,8,9$ :  $0,0,1,1,2,4,6,7,8,9$ :  $0,0,1,1,2,5,6,7,8,9$ :  
 $0,0,1,1,3,4,5,6,7,8$ :  $0,0,1,1,3,4,5,6,7,9$ :  $0,0,1,1,3,4,5,6,8,9$ :  
 $0,0,1,1,3,4,5,7,8,9$ :  $0,0,1,1,3,4,6,7,8,9$ :  $0,0,1,1,3,5,6,7,8,9$ :  
 $0,0,1,1,4,5,6,7,8,9$ :  $0,0,1,2,3,4,5,6,7,8$ :  $0,0,1,2,3,4,5,6,7,9$ :  
 $0,0,1,2,3,4,5,6,8,9$ :  $0,0,1,2,3,4,5,7,8,9$ :  $0,0,1,2,3,4,6,7,8,9$ :  
 $0,0,1,2,3,5,6,7,8,9$ :  $0,0,1,2,4,5,6,7,8,9$ :  $0,0,1,3,4,5,6,7,8,9$ :  
 $0,0,2,3,4,5,6,7,8,9$ :  $0,1,2,3,4,5,6,7,8,9$ :  
 Number new nodes in level n is given by : 1,2,4,7,8,13,21,34,55,89,

-----Class

494-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][102][120][201][210]]$

-----

--

Rules of  $T[L]$ :

- R1)  $0, -->0,0, --0,1, --$
- R2)  $0,0, -->0,0,1, --0,0,2, --$
- R3)  $0,1, -->0,1,0, --0,1,1, --0,1, --$
- R4)  $0,0,1, -->0,0,1,1, --0,0,1,2, --0,0,1,3, --$
- R5)  $0,0,2, -->0,0,2,1, --0,0,2,2, --0,1, --$
- R6)  $0,1,0, -->0,1,0,1, --$
- R7)  $0,1,1, -->0,1,0,1, --0,0,1, --0,0,2, --$
- R8)  $0,0,1,1, -->0,0,1,1,2, --0,0,1,1,3, --0,0,1,1,4, --$
- R9)  $0,0,1,2, -->0,1,0, --0,0,1,2,2, --0,0,1,2, --0,0,1,3, --$
- R10)  $0,0,1,3, -->0,1,0, --0,0,2,1, --0,0,1,3,3, --0,1, --$
- R11)  $0,0,2,1, -->0,1,0, --0,1,0, --$
- R12)  $0,0,2,2, -->0,1,0, --0,0,1, --0,0,2, --$
- R13)  $0,1,0,1, -->$
- R14)  $0,0,1,1,2, -->0,0,1,1,2,2, --0,0,1,1,2,3, --0,0,1,1,2,4, --0,0,1,1,2,5, --$
- R15)  $0,0,1,1,3, -->0,0,2,1, --0,0,1,1,3,3, --0,0,1,2, --0,0,1,3, --$
- R16)  $0,0,1,1,4, -->0,0,2,1, --0,0,2,1, --0,0,1,1,4,4, --0,1, --$
- R17)  $0,0,1,2,2, -->0,1,0,1, --0,0,1,1,2, --0,0,1,1,3, --0,0,1,1,4, --$
- R18)  $0,0,1,3,3, -->0,1,0,1, --0,1,0, --0,0,1, --0,0,2, --$
- R19)
- $0,0,1,1,2,2, -->0,0,1,1,2,2,3, --0,0,1,1,2,2,4, --0,0,1,1,2,2,5, --0,0,1,1,2,2,6, --$
- R20)
- $0,0,1,1,2,3, -->0,1,0, --0,0,1,1,2,3,3, --0,0,1,1,2,3, --0,0,1,1,2,4, --0,0,1,1,2,5, --$
- R21)  $0,0,1,1,2,4, -->0,1,0, --0,0,2,1, --0,0,1,1,2,4,4, --0,0,1,2, --0,0,1,3, --$
- R22)  $0,0,1,1,2,5, -->0,1,0, --0,0,2,1, --0,0,2,1, --0,0,1,1,2,5,5, --0,1, --$
- R23)  $0,0,1,1,3,3, -->0,1,0, --0,0,1,1,2, --0,0,1,1,3, --0,0,1,1,4, --$
- R24)  $0,0,1,1,4,4, -->0,1,0, --0,1,0, --0,0,1, --0,0,2, --$
- R25)
- $0,0,1,1,2,2,3, -->0,0,1,1,2,2,3,3, --0,0,1,1,2,2,3,4, --0,0,1,1,2,2,3,5, --0,0,1,1,2,2,$   
 $3,6, --0,0,1,1,2,2,3,7, --$
- R26)
- $0,0,1,1,2,2,4, -->0,0,2,1, --0,0,1,1,2,2,4,4, --0,0,1,1,2,3, --0,0,1,1,2,4, --0,0,1,1,2,$   
 $5, --$

R27) 0,0,1,1,2,2,5,-->0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,5,5,--0,0,1,2,--0,0,1,3,--  
R28) 0,0,1,1,2,2,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,6,6,--0,1,--  
R29)  
0,0,1,1,2,3,3,-->0,1,0,1,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,  
2,2,6,--  
R30) 0,0,1,1,2,4,4,-->0,1,0,1,--0,1,0,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--  
R31) 0,0,1,1,2,5,5,-->0,1,0,1,--0,1,0,--0,1,0,--0,0,1,--0,0,2,--  
R32)  
0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,  
1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--  
R33)  
0,0,1,1,2,2,3,4,-->0,1,0,--0,0,1,1,2,2,3,4,4,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--  
0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--  
R34)  
0,0,1,1,2,2,3,5,-->0,1,0,--0,0,2,1,--0,0,1,1,2,2,3,5,5,--0,0,1,1,2,3,--0,0,1,1,2,4,  
--0,0,1,1,2,5,--  
R35)  
0,0,1,1,2,2,3,6,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,3,6,6,--0,0,1,2,--0,0,1,  
3,--  
R36)  
0,0,1,1,2,2,3,7,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,3,7,7,--0,1,--  
R37)  
0,0,1,1,2,2,4,4,-->0,1,0,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,  
2,2,6,--  
R38) 0,0,1,1,2,2,5,5,-->0,1,0,--0,1,0,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--  
R39) 0,0,1,1,2,2,6,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,--0,0,2,--  
R40)  
0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,--0,0,1,1,2,2,3,3,4,  
6,--0,0,1,1,2,2,3,3,4,7,--0,0,1,1,2,2,3,3,4,8,--0,0,1,1,2,2,3,3,4,9,--  
R41)  
0,0,1,1,2,2,3,3,5,-->0,0,2,1,--0,0,1,1,2,2,3,3,5,5,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,  
3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--  
R42)  
0,0,1,1,2,2,3,3,6,-->0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,3,3,6,6,--0,0,1,1,2,3,--0,0,1,  
1,2,4,--0,0,1,1,2,5,--  
R43)  
0,0,1,1,2,2,3,3,7,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,3,3,7,7,--0,0,1,2,--  
0,0,1,3,--  
R44)  
0,0,1,1,2,2,3,3,8,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,3,3,8,8,--  
0,1,--  
R45)  
0,0,1,1,2,2,3,4,4,-->0,1,0,1,--0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,  
3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--  
R46)  
0,0,1,1,2,2,3,5,5,-->0,1,0,1,--0,1,0,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,  
5,--0,0,1,1,2,2,6,--  
R47)  
0,0,1,1,2,2,3,6,6,-->0,1,0,1,--0,1,0,--0,1,0,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--  
R48) 0,0,1,1,2,2,3,7,7,-->0,1,0,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,--0,0,2,--

List of different nodes in  $T[L]$

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,1, : 0,0,2, : 0,1,0, : 0,1,1, :

LEN=4) 0,0,1,1, : 0,0,1,2, : 0,0,1,3, : 0,0,2,1, : 0,0,2,2, : 0,1,0,1, :

LEN=5) 0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, : 0,0,1,2,2, : 0,0,1,3,3, :

LEN=6) 0,0,1,1,2,2, : 0,0,1,1,2,3, : 0,0,1,1,2,4, : 0,0,1,1,2,5, : 0,0,1,1,3,3, :  
0,0,1,1,4,4, :

LEN=7) 0,0,1,1,2,2,3, : 0,0,1,1,2,2,4, : 0,0,1,1,2,2,5, : 0,0,1,1,2,2,6, :

0,0,1,1,2,3,3, : 0,0,1,1,2,4,4, : 0,0,1,1,2,5,5, :

LEN=8) 0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,3,4, : 0,0,1,1,2,2,3,5, : 0,0,1,1,2,2,3,6, :

0,0,1,1,2,2,3,7, : 0,0,1,1,2,2,4,4, : 0,0,1,1,2,2,5,5, : 0,0,1,1,2,2,6,6, :

LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,3,5, : 0,0,1,1,2,2,3,3,6, :

0,0,1,1,2,2,3,3,7, : 0,0,1,1,2,2,3,3,8, : 0,0,1,1,2,2,3,4,4, : 0,0,1,1,2,2,3,5,5, :

0,0,1,1,2,2,3,6,6, : 0,0,1,1,2,2,3,7,7, :

LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,4,5, : 0,0,1,1,2,2,3,3,4,6, :

0,0,1,1,2,2,3,3,4,7, : 0,0,1,1,2,2,3,3,4,8, : 0,0,1,1,2,2,3,3,4,9, :

0,0,1,1,2,2,3,3,5,5, : 0,0,1,1,2,2,3,3,6,6, : 0,0,1,1,2,2,3,3,7,7, :

0,0,1,1,2,2,3,3,8,8, :

Number new nodes in level n is given by : 1,2,4,6,5,6,7,8,9,10,

-----Class

495-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][110][120][201][210]]$

-----

--

Rules of  $T[L]$ :

R1) 0, -->0,0, --0,1, --

R2) 0,0, -->0,0,1, --0,0,2, --

R3) 0,1, -->0,0,1, --0,0, --0,1, --

R4) 0,0,1, -->0,0,1,1, --0,0,1,2, --0,0,1,3, --

R5) 0,0,2, -->0,0,1,2, --0,0, --0,1, --

R6) 0,0,1,1, -->0,0,1,1,2, --0,0,1,1,3, --0,0,1,1,4, --

R7) 0,0,1,2, -->0,0,1,1,2, --0,0,1,1, --0,0,1,2, --0,0,1,3, --

R8) 0,0,1,3, -->0,0,1, --0,0,1,2, --0,0, --0,1, --

R9) 0,0,1,1,2, -->0,0,1,1,2,2, --0,0,1,1,2,3, --0,0,1,1,2,4, --0,0,1,1,2,5, --

R10) 0,0,1,1,3, -->0,0,1,1,2,3, --0,0,1,1, --0,0,1,2, --0,0,1,3, --

R11) 0,0,1,1,4, -->0,0,1,2, --0,0,1,2, --0,0, --0,1, --

R12)

0,0,1,1,2,2, -->0,0,1,1,2,2,3, --0,0,1,1,2,2,4, --0,0,1,1,2,2,5, --0,0,1,1,2,2,6, --

R13)

0,0,1,1,2,3, -->0,0,1,1,2,2,3, --0,0,1,1,2,2, --0,0,1,1,2,3, --0,0,1,1,2,4, --0,0,1,1,2,5, --

R14) 0,0,1,1,2,4, -->0,0,1,1,2, --0,0,1,1,2,3, --0,0,1,1, --0,0,1,2, --0,0,1,3, --

R15) 0,0,1,1,2,5, -->0,0,1, --0,0,1,2, --0,0,1,2, --0,0, --0,1, --

R16)

0,0,1,1,2,2,3, -->0,0,1,1,2,2,3,3, --0,0,1,1,2,2,3,4, --0,0,1,1,2,2,3,5, --0,0,1,1,2,2,3,6, --0,0,1,1,2,2,3,7, --

R17)

0,0,1,1,2,2,4, -->0,0,1,1,2,2,3,4, --0,0,1,1,2,2, --0,0,1,1,2,3, --0,0,1,1,2,4, --0,0,1,

1,2,5,--  
R18) 0,0,1,1,2,2,5,-->0,0,1,1,2,3,--0,0,1,1,2,3,--0,0,1,1,--0,0,1,2,--0,0,1,3,--  
R19) 0,0,1,1,2,2,6,-->0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,--0,1,--  
R20)  
0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,  
1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--  
R21)  
0,0,1,1,2,2,3,4,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,1,1,  
2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--  
R22)  
0,0,1,1,2,2,3,5,-->0,0,1,1,2,2,3,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,--0,0,1,1,2,3,--0,  
0,1,1,2,4,--0,0,1,1,2,5,--  
R23)  
0,0,1,1,2,2,3,6,-->0,0,1,1,2,--0,0,1,1,2,3,--0,0,1,1,2,3,--0,0,1,1,--0,0,1,2,--0,0,  
1,3,--  
R24) 0,0,1,1,2,2,3,7,-->0,0,1,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,--0,1,--  
R25)  
0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,--0,0,1,1,2,2,3,3,4,  
6,--0,0,1,1,2,2,3,3,4,7,--0,0,1,1,2,2,3,3,4,8,--0,0,1,1,2,2,3,3,4,9,--  
R26)  
0,0,1,1,2,2,3,3,5,-->0,0,1,1,2,2,3,3,4,5,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,--0,0,  
1,1,2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--  
R27)  
0,0,1,1,2,2,3,3,6,-->0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,--0,0,1,1,2,3,  
--0,0,1,1,2,4,--0,0,1,1,2,5,--  
R28)  
0,0,1,1,2,2,3,3,7,-->0,0,1,1,2,3,--0,0,1,1,2,3,--0,0,1,1,2,3,--0,0,1,1,--0,0,1,2,--  
0,0,1,3,--  
R29) 0,0,1,1,2,2,3,3,8,-->0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,--0,1,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,1, : 0,0,2, :  
LEN=4) 0,0,1,1, : 0,0,1,2, : 0,0,1,3, :  
LEN=5) 0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, :  
LEN=6) 0,0,1,1,2,2, : 0,0,1,1,2,3, : 0,0,1,1,2,4, : 0,0,1,1,2,5, :  
LEN=7) 0,0,1,1,2,2,3, : 0,0,1,1,2,2,4, : 0,0,1,1,2,2,5, : 0,0,1,1,2,2,6, :  
LEN=8) 0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,3,4, : 0,0,1,1,2,2,3,5, : 0,0,1,1,2,2,3,6, :  
0,0,1,1,2,2,3,7, :  
LEN=9) 0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,3,5, : 0,0,1,1,2,2,3,3,6, :  
0,0,1,1,2,2,3,3,7, : 0,0,1,1,2,2,3,3,8, :  
LEN=10) 0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,4,5, : 0,0,1,1,2,2,3,3,4,6, :  
0,0,1,1,2,2,3,3,4,7, : 0,0,1,1,2,2,3,3,4,8, : 0,0,1,1,2,2,3,3,4,9, :  
Number new nodes in level n is given by : 1,2,2,3,3,4,4,5,5,6,

-----Class

496-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][012][021]]$

-----  
--

Rules of T[L]:

R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

R2)  $0, 0, \rightarrow 0, 0, \rightarrow$

R3)  $0, 1, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 0, : 0, 1, :$

Number new nodes in level n is given by : 1,2, DONE

-----Class

497-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][012][100]]$

--

Rules of T[L]:

R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

R2)  $0, 0, \rightarrow 0, 0, \rightarrow$

R3)  $0, 1, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 0, : 0, 1, :$

Number new nodes in level n is given by : 1,2, DONE

-----Class

498-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][012][101]]$

--

Rules of T[L]:

R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

R2)  $0, 0, \rightarrow 0, 0, \rightarrow$

R3)  $0, 1, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 0, : 0, 1, :$

Number new nodes in level n is given by : 1,2, DONE

-----Class

499-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][012][102]]$

--

Rules of T[L]:

R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

R2)  $0, 0, \rightarrow 0, 0, \rightarrow$

R3)  $0, 1, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 0, : 0, 1, :$

Number new nodes in level n is given by : 1,2, DONE

```
-----Class
500-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][011][012][110]]
-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,--
R3) 0,1,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
    Number new nodes in level n is given by : 1,2,    DONE
```

```
-----Class
501-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][011][012][120]]
-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,--
R3) 0,1,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
    Number new nodes in level n is given by : 1,2,    DONE
```

```
-----Class
502-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][011][012][201]]
-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,--
R3) 0,1,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
    Number new nodes in level n is given by : 1,2,    DONE
```

```
-----Class
503-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][011][012][210]]
-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
```

R2) 0,0,-->0,0,--  
R3) 0,1,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
Number new nodes in level n is given by : 1,2, DONE

-----Class

504-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][021][100]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

505-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][021][101]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

506-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][021][102]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

507-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][021][110]]$

```
--
Rules of T[L]:
R1) 0,-->0,0,--0,0,--
R2) 0,0,-->0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
Number new nodes in level n is given by : 1,1,  DONE
```

```
-----Class
508-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][011][021][120]]
-----
```

```
--
Rules of T[L]:
R1) 0,-->0,0,--0,0,--
R2) 0,0,-->0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
Number new nodes in level n is given by : 1,1,  DONE
```

```
-----Class
509-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][011][021][201]]
-----
```

```
--
Rules of T[L]:
R1) 0,-->0,0,--0,0,--
R2) 0,0,-->0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
Number new nodes in level n is given by : 1,1,  DONE
```

```
-----Class
510-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][011][021][210]]
-----
```

```
--
Rules of T[L]:
R1) 0,-->0,0,--0,0,--
R2) 0,0,-->0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
Number new nodes in level n is given by : 1,1,  DONE
```

```
-----Class
511-----
```



Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][100][101]]$

-----  
--  
Rules of T[L]:  
R1)  $0, -->0,0, --0,0, --$   
R2)  $0,0, -->0,0, --$   
List of different nodes in T[L]  
LEN=1)  $0, :$   
LEN=2)  $0,0, :$   
Number new nodes in level n is given by : 1,1, DONE

-----Class  
512-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][100][102]]$

-----  
--  
Rules of T[L]:  
R1)  $0, -->0,0, --0,0, --$   
R2)  $0,0, -->0,0, --$   
List of different nodes in T[L]  
LEN=1)  $0, :$   
LEN=2)  $0,0, :$   
Number new nodes in level n is given by : 1,1, DONE

-----Class  
513-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][100][110]]$

-----  
--  
Rules of T[L]:  
R1)  $0, -->0,0, --0,0, --$   
R2)  $0,0, -->0,0, --$   
List of different nodes in T[L]  
LEN=1)  $0, :$   
LEN=2)  $0,0, :$   
Number new nodes in level n is given by : 1,1, DONE

-----Class  
514-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][100][120]]$

-----  
--  
Rules of T[L]:  
R1)  $0, -->0,0, --0,0, --$   
R2)  $0,0, -->0,0, --$   
List of different nodes in T[L]  
LEN=1)  $0, :$   
LEN=2)  $0,0, :$   
Number new nodes in level n is given by : 1,1, DONE

-----Class  
515-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][100][201]]$   
-----

--  
Rules of  $T[L]$ :  
R1)  $0,-->0,0,--0,0,--$   
R2)  $0,0,-->0,0,--$   
List of different nodes in  $T[L]$   
LEN=1)  $0,:$   
LEN=2)  $0,0,:$   
Number new nodes in level n is given by : 1,1, DONE

-----Class  
516-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][100][210]]$   
-----

--  
Rules of  $T[L]$ :  
R1)  $0,-->0,0,--0,0,--$   
R2)  $0,0,-->0,0,--$   
List of different nodes in  $T[L]$   
LEN=1)  $0,:$   
LEN=2)  $0,0,:$   
Number new nodes in level n is given by : 1,1, DONE

-----Class  
517-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][101][102]]$   
-----

--  
Rules of  $T[L]$ :  
R1)  $0,-->0,0,--0,0,--$   
R2)  $0,0,-->0,0,--$   
List of different nodes in  $T[L]$   
LEN=1)  $0,:$   
LEN=2)  $0,0,:$   
Number new nodes in level n is given by : 1,1, DONE

-----Class  
518-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][101][110]]$   
-----

--  
Rules of  $T[L]$ :  
R1)  $0,-->0,0,--0,0,--$   
R2)  $0,0,-->0,0,--$   
List of different nodes in  $T[L]$   
LEN=1)  $0,:$   
LEN=2)  $0,0,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

519-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][101][120]]$

-----

--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

520-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][101][201]]$

-----

--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

521-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][101][210]]$

-----

--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

522-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][102][110]]$

-----

--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in  $T[L]$

LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

523-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][011][102][120]]

--

Rules of T[L]:

R1) 0,-->0,0,--0,0,--

R2) 0,0,-->0,0,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, :

Number new nodes in level n is given by : 1,1, DONE

-----Class

524-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][011][102][201]]

--

Rules of T[L]:

R1) 0,-->0,0,--0,0,--

R2) 0,0,-->0,0,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, :

Number new nodes in level n is given by : 1,1, DONE

-----Class

525-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][011][102][210]]

--

Rules of T[L]:

R1) 0,-->0,0,--0,0,--

R2) 0,0,-->0,0,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, :

Number new nodes in level n is given by : 1,1, DONE

-----Class

526-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][011][110][120]]

--

Rules of T[L]:

R1) 0,-->0,0,--0,0,--

R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class

527-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][110][201]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class

528-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][110][210]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class

529-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][120][201]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class

530-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][120][210]]$

--

Rules of T[L]:

R1)  $0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow$

R2)  $0, 0, \rightarrow 0, 0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 0, :$

Number new nodes in level n is given by : 1,1, DONE

-----Class

531-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][201][210]]$

--

Rules of T[L]:

R1)  $0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow$

R2)  $0, 0, \rightarrow 0, 0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 0, :$

Number new nodes in level n is given by : 1,1, DONE

-----Class

532-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][021][100]]$

--

Rules of T[L]:

R1)  $0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow$

R2)  $0, 0, \rightarrow 0, 0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 0, :$

Number new nodes in level n is given by : 1,1, DONE

-----Class

533-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][021][101]]$

--

Rules of T[L]:

R1)  $0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow$

R2)  $0, 0, \rightarrow 0, 0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 0, :$

Number new nodes in level n is given by : 1,1, DONE

-----Class

534-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][021][102]]$

```

-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,0,--
R2) 0,0,-->0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
  Number new nodes in level n is given by : 1,1,  DONE

-----Class
535-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][012][021][110]]
-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,0,--
R2) 0,0,-->0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
  Number new nodes in level n is given by : 1,1,  DONE

-----Class
536-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][012][021][120]]
-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,0,--
R2) 0,0,-->0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
  Number new nodes in level n is given by : 1,1,  DONE

-----Class
537-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][012][021][201]]
-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,0,--
R2) 0,0,-->0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
  Number new nodes in level n is given by : 1,1,  DONE

-----Class

```

538-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][021][210]]$

-----  
--  
Rules of  $T[L]$ :  
R1)  $0,-->0,0,--0,0,--$   
R2)  $0,0,-->0,0,--$   
List of different nodes in  $T[L]$   
LEN=1)  $0,:$   
LEN=2)  $0,0,:$   
Number new nodes in level n is given by : 1,1, DONE

-----Class

539-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][100][101]]$

-----  
--  
Rules of  $T[L]$ :  
R1)  $0,-->0,0,--0,0,--$   
R2)  $0,0,-->0,0,--$   
List of different nodes in  $T[L]$   
LEN=1)  $0,:$   
LEN=2)  $0,0,:$   
Number new nodes in level n is given by : 1,1, DONE

-----Class

540-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][100][102]]$

-----  
--  
Rules of  $T[L]$ :  
R1)  $0,-->0,0,--0,0,--$   
R2)  $0,0,-->0,0,--$   
List of different nodes in  $T[L]$   
LEN=1)  $0,:$   
LEN=2)  $0,0,:$   
Number new nodes in level n is given by : 1,1, DONE

-----Class

541-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][100][110]]$

-----  
--  
Rules of  $T[L]$ :  
R1)  $0,-->0,0,--0,0,--$   
R2)  $0,0,-->0,0,--$   
List of different nodes in  $T[L]$   
LEN=1)  $0,:$   
LEN=2)  $0,0,:$   
Number new nodes in level n is given by : 1,1, DONE



-----Class

542-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][100][120]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

543-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][100][201]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

544-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][100][210]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

545-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][101][102]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class

546-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][010][012][101][110]]

--

Rules of T[L]:

R1) 0,-->0,0,--0,0,--

R2) 0,0,-->0,0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

Number new nodes in level n is given by : 1,1, DONE

-----Class

547-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][010][012][101][120]]

--

Rules of T[L]:

R1) 0,-->0,0,--0,0,--

R2) 0,0,-->0,0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

Number new nodes in level n is given by : 1,1, DONE

-----Class

548-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][010][012][101][201]]

--

Rules of T[L]:

R1) 0,-->0,0,--0,0,--

R2) 0,0,-->0,0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

Number new nodes in level n is given by : 1,1, DONE

-----Class

549-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][010][012][101][210]]

--

Rules of T[L]:

R1) 0,-->0,0,--0,0,--

R2) 0,0,-->0,0,--

List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

550-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][012][102][110]]

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

551-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][012][102][120]]

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

552-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][012][102][201]]

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

553-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][012][102][210]]

--  
Rules of T[L]:

R1) 0,-->0,0,--0,0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class

554-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][110][120]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class

555-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][110][201]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class

556-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][110][210]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class

557-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][120][201]]$

```
--
Rules of T[L]:
R1) 0,-->0,0,--0,0,--
R2) 0,0,-->0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
  Number new nodes in level n is given by : 1,1,  DONE
```

-----Class

```
558-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][012][120][210]]
-----
```

```
--
Rules of T[L]:
R1) 0,-->0,0,--0,0,--
R2) 0,0,-->0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
  Number new nodes in level n is given by : 1,1,  DONE
```

-----Class

```
559-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][012][201][210]]
-----
```

```
--
Rules of T[L]:
R1) 0,-->0,0,--0,0,--
R2) 0,0,-->0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
  Number new nodes in level n is given by : 1,1,  DONE
```

-----Class

```
560-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][021][100][101]]
-----
```

```
--
Rules of T[L]:
R1) 0,-->0,0,--0,0,--
R2) 0,0,-->0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
  Number new nodes in level n is given by : 1,1,  DONE
```

-----Class

```
561-----
```

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][100][102]]$

--

Rules of T[L]:

R1)  $0,-->0,0,--0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in T[L]

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

562-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][100][110]]$

--

Rules of T[L]:

R1)  $0,-->0,0,--0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in T[L]

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

563-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][100][120]]$

--

Rules of T[L]:

R1)  $0,-->0,0,--0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in T[L]

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

564-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][100][201]]$

--

Rules of T[L]:

R1)  $0,-->0,0,--0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in T[L]

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

565-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][100][210]]$

--  
Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

566-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][101][102]]$

--  
Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

567-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][101][110]]$

--  
Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

568-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][101][120]]$

--  
Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

569-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][101][201]]$

-----

--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

570-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][101][210]]$

-----

--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

571-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][102][110]]$

-----

--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

572-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][102][120]]$

-----

--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in  $T[L]$



LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

573-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][021][102][201]]

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, :

Number new nodes in level n is given by : 1,1, DONE

-----Class

574-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][021][102][210]]

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, :

Number new nodes in level n is given by : 1,1, DONE

-----Class

575-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][021][110][120]]

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, :

Number new nodes in level n is given by : 1,1, DONE

-----Class

576-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][021][110][201]]

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class

577-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][110][210]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class

578-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][120][201]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class

579-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][120][210]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class

580-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][201][210]]$

--

Rules of T[L]:

R1)  $0, \rightarrow 0, 0, \rightarrow 0, \rightarrow$

R2)  $0, 0, \rightarrow 0, 0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 0, :$

Number new nodes in level n is given by : 1,1, DONE

-----Class

581-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][100][101][102]]$

--

Rules of T[L]:

R1)  $0, \rightarrow 0, 0, \rightarrow 0, \rightarrow$

R2)  $0, 0, \rightarrow 0, 0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 0, :$

Number new nodes in level n is given by : 1,1, DONE

-----Class

582-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][100][101][110]]$

--

Rules of T[L]:

R1)  $0, \rightarrow 0, 0, \rightarrow 0, \rightarrow$

R2)  $0, 0, \rightarrow 0, 0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 0, :$

Number new nodes in level n is given by : 1,1, DONE

-----Class

583-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][100][101][120]]$

--

Rules of T[L]:

R1)  $0, \rightarrow 0, 0, \rightarrow 0, \rightarrow$

R2)  $0, 0, \rightarrow 0, 0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 0, :$

Number new nodes in level n is given by : 1,1, DONE

-----Class

584-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][100][101][201]]$

```

-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,--
R2) 0,0,-->0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
    Number new nodes in level n is given by : 1,1,    DONE

-----Class
585-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][100][101][210]]
-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,--
R2) 0,0,-->0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
    Number new nodes in level n is given by : 1,1,    DONE

-----Class
586-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][100][102][110]]
-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,--
R2) 0,0,-->0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
    Number new nodes in level n is given by : 1,1,    DONE

-----Class
587-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][100][102][120]]
-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,--
R2) 0,0,-->0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
    Number new nodes in level n is given by : 1,1,    DONE

-----Class

```

588-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][100][102][201]]$

-----  
--  
Rules of T[L]:  
R1)  $0,-->0,0,--0,--$   
R2)  $0,0,-->0,0,--$   
List of different nodes in T[L]  
LEN=1)  $0,:$   
LEN=2)  $0,0,:$   
Number new nodes in level n is given by : 1,1, DONE

-----Class  
589-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][100][102][210]]$

-----  
--  
Rules of T[L]:  
R1)  $0,-->0,0,--0,--$   
R2)  $0,0,-->0,0,--$   
List of different nodes in T[L]  
LEN=1)  $0,:$   
LEN=2)  $0,0,:$   
Number new nodes in level n is given by : 1,1, DONE

-----Class  
590-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][100][110][120]]$

-----  
--  
Rules of T[L]:  
R1)  $0,-->0,0,--0,--$   
R2)  $0,0,-->0,0,--$   
List of different nodes in T[L]  
LEN=1)  $0,:$   
LEN=2)  $0,0,:$   
Number new nodes in level n is given by : 1,1, DONE

-----Class  
591-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][100][110][201]]$

-----  
--  
Rules of T[L]:  
R1)  $0,-->0,0,--0,--$   
R2)  $0,0,-->0,0,--$   
List of different nodes in T[L]  
LEN=1)  $0,:$   
LEN=2)  $0,0,:$   
Number new nodes in level n is given by : 1,1, DONE

-----Class

592-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][100][110][210]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

593-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][100][120][201]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

594-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][100][120][210]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

595-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][100][201][210]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class

596-----

Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][101][102][110]]

-----

--  
Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

Number new nodes in level n is given by : 1,1, DONE

-----Class

597-----

Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][101][102][120]]

-----

--  
Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

Number new nodes in level n is given by : 1,1, DONE

-----Class

598-----

Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][101][102][201]]

-----

--  
Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

Number new nodes in level n is given by : 1,1, DONE

-----Class

599-----

Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][101][102][210]]

-----

--  
Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,--

List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

600-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][101][110][120]]

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

601-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][101][110][201]]

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

602-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][101][110][210]]

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

603-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][101][120][201]]

-----  
--  
Rules of T[L]:



R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class

604-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][101][120][210]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class

605-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][101][201][210]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class

606-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][102][110][120]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class

607-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][102][110][201]]$

```
--
Rules of T[L]:
R1) 0,-->0,0,--0,--
R2) 0,0,-->0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
Number new nodes in level n is given by : 1,1,  DONE
```

```
-----Class
608-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][102][110][210]]
-----
```

```
--
Rules of T[L]:
R1) 0,-->0,0,--0,--
R2) 0,0,-->0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
Number new nodes in level n is given by : 1,1,  DONE
```

```
-----Class
609-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][102][120][201]]
-----
```

```
--
Rules of T[L]:
R1) 0,-->0,0,--0,--
R2) 0,0,-->0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
Number new nodes in level n is given by : 1,1,  DONE
```

```
-----Class
610-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][102][120][210]]
-----
```

```
--
Rules of T[L]:
R1) 0,-->0,0,--0,--
R2) 0,0,-->0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
Number new nodes in level n is given by : 1,1,  DONE
```

```
-----Class
611-----
```

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][102][201][210]]$

-----  
--  
Rules of T[L]:  
R1)  $0,-->0,0,--0,--$   
R2)  $0,0,-->0,0,--$   
List of different nodes in T[L]  
LEN=1)  $0,:$   
LEN=2)  $0,0,:$   
Number new nodes in level n is given by : 1,1, DONE

-----Class  
612-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][110][120][201]]$

-----  
--  
Rules of T[L]:  
R1)  $0,-->0,0,--0,--$   
R2)  $0,0,-->0,0,--$   
List of different nodes in T[L]  
LEN=1)  $0,:$   
LEN=2)  $0,0,:$   
Number new nodes in level n is given by : 1,1, DONE

-----Class  
613-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][110][120][210]]$

-----  
--  
Rules of T[L]:  
R1)  $0,-->0,0,--0,--$   
R2)  $0,0,-->0,0,--$   
List of different nodes in T[L]  
LEN=1)  $0,:$   
LEN=2)  $0,0,:$   
Number new nodes in level n is given by : 1,1, DONE

-----Class  
614-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][110][201][210]]$

-----  
--  
Rules of T[L]:  
R1)  $0,-->0,0,--0,--$   
R2)  $0,0,-->0,0,--$   
List of different nodes in T[L]  
LEN=1)  $0,:$   
LEN=2)  $0,0,:$   
Number new nodes in level n is given by : 1,1, DONE

-----Class

615-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][120][201][210]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level  $n$  is given by : 1,1, DONE

-----Class

616-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][021][100]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,1,--$

R2)  $0,0,-->0,0,--$

R3)  $0,1,-->0,1,0,--$

R4)  $0,1,0,-->$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,: 0,1,:$

LEN=3)  $0,1,0,:$

Number new nodes in level  $n$  is given by : 1,2,1, DONE

-----Class

617-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][021][101]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level  $n$  is given by : 1,1, DONE

-----Class

618-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][021][102]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

619-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][011][012][021][110]]

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

620-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][011][012][021][120]]

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

621-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][011][012][021][201]]

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

622-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][011][012][021][210]]

--  
Rules of T[L]:

R1) 0,-->0,0,--0,0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

623-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][100][101]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,1,0,--  
R4) 0,1,0,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,0, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

624-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][100][102]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,1,0,--  
R4) 0,1,0,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,0, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

625-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][100][110]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,1,0,--  
R4) 0,1,0,-->  
List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,0, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

626-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][100][120]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,1,0,--  
R4) 0,1,0,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,0, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

627-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][100][201]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,1,0,--  
R4) 0,1,0,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,0, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

628-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][100][210]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,1,0,--  
R4) 0,1,0,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :

LEN=3) 0,1,0,:  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

629-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][011][012][101][102]]

-----

--  
Rules of T[L]:

R1) 0,-->0,0,--0,0,--

R2) 0,0,-->0,0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

Number new nodes in level n is given by : 1,1, DONE

-----Class

630-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][011][012][101][110]]

-----

--  
Rules of T[L]:

R1) 0,-->0,0,--0,0,--

R2) 0,0,-->0,0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

Number new nodes in level n is given by : 1,1, DONE

-----Class

631-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][011][012][101][120]]

-----

--  
Rules of T[L]:

R1) 0,-->0,0,--0,0,--

R2) 0,0,-->0,0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

Number new nodes in level n is given by : 1,1, DONE

-----Class

632-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][011][012][101][201]]

-----

--  
Rules of T[L]:

R1) 0,-->0,0,--0,0,--

R2) 0,0,-->0,0,--



List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

633-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][011][012][101][210]]

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

634-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][011][012][102][110]]

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

635-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][011][012][102][120]]

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

636-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][011][012][102][201]]

--  
Rules of T[L]:

R1) 0,-->0,0,--0,0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class

637-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][102][210]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class

638-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][110][120]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class

639-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][110][201]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class

640-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][110][210]]$

```
--
Rules of T[L]:
R1) 0,-->0,0,--0,0,--
R2) 0,0,-->0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
Number new nodes in level n is given by : 1,1,  DONE
```

```
-----Class
641-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][011][012][120][201]]
-----
```

```
--
Rules of T[L]:
R1) 0,-->0,0,--0,0,--
R2) 0,0,-->0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
Number new nodes in level n is given by : 1,1,  DONE
```

```
-----Class
642-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][011][012][120][210]]
-----
```

```
--
Rules of T[L]:
R1) 0,-->0,0,--0,0,--
R2) 0,0,-->0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
Number new nodes in level n is given by : 1,1,  DONE
```

```
-----Class
643-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][011][012][201][210]]
-----
```

```
--
Rules of T[L]:
R1) 0,-->0,0,--0,0,--
R2) 0,0,-->0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
Number new nodes in level n is given by : 1,1,  DONE
```

```
-----Class
644-----
```

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][100][101]]$

--

Rules of T[L]:

R1)  $0, -->0,0,--0,1,--$

R2)  $0,0,-->0,0,--$

R3)  $0,1,-->0,1,0,--0,1,--$

R4)  $0,1,0,-->$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0,0, : 0,1, :$

LEN=3)  $0,1,0, :$

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

645-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][100][102]]$

--

Rules of T[L]:

R1)  $0, -->0,0,--0,1,--$

R2)  $0,0,-->0,0,--$

R3)  $0,1,-->0,1,0,--0,1,--$

R4)  $0,1,0,-->$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0,0, : 0,1, :$

LEN=3)  $0,1,0, :$

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

646-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][100][110]]$

--

Rules of T[L]:

R1)  $0, -->0,0,--0,1,--$

R2)  $0,0,-->0,0,--$

R3)  $0,1,-->0,1,0,--0,1,--$

R4)  $0,1,0,-->$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0,0, : 0,1, :$

LEN=3)  $0,1,0, :$

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

647-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][100][120]]$

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,--
R3) 0,1,-->0,1,0,--0,0,--
R4) 0,1,0,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,1,0,:
Number new nodes in level n is given by : 1,2,1,  DONE

```

-----Class

648-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][100][201]]$

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,--
R3) 0,1,-->0,1,0,--0,1,--
R4) 0,1,0,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,1,0,:
Number new nodes in level n is given by : 1,2,1,  DONE

```

-----Class

649-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][100][210]]$

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,--
R3) 0,1,-->0,1,0,--0,1,--
R4) 0,1,0,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,1,0,:
Number new nodes in level n is given by : 1,2,1,  DONE

```

-----Class

650-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][101][102]]$

```

--
Rules of T[L]:

```

R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class

651-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][101][110]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class

652-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][101][120]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,0,--0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
Number new nodes in level n is given by : 1,2, DONE

-----Class

653-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][101][201]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class

654-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][101][210]]$

```

-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,--
R2) 0,0,-->0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
    Number new nodes in level n is given by : 1,1,    DONE

-----Class
655-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][011][021][102][110]]
-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,--
R2) 0,0,-->0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
    Number new nodes in level n is given by : 1,1,    DONE

-----Class
656-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][011][021][102][120]]
-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,--
R3) 0,1,-->0,0,--0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
    Number new nodes in level n is given by : 1,2,    DONE

-----Class
657-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][011][021][102][201]]
-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,--
R2) 0,0,-->0,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
    Number new nodes in level n is given by : 1,1,    DONE

```

-----Class

658-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][102][210]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level  $n$  is given by : 1,1, DONE

-----Class

659-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][110][120]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,1,--$

R2)  $0,0,-->0,0,--$

R3)  $0,1,-->0,0,--0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,: 0,1,:$

Number new nodes in level  $n$  is given by : 1,2, DONE

-----Class

660-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][110][201]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level  $n$  is given by : 1,1, DONE

-----Class

661-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][110][210]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$



LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class

662-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][011][021][120][201]]

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,0,--0,0,--  
List of different nodes in T[L]

LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
Number new nodes in level n is given by : 1,2, DONE

-----Class

663-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][011][021][120][210]]

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,0,--0,0,--  
List of different nodes in T[L]

LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
Number new nodes in level n is given by : 1,2, DONE

-----Class

664-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][011][021][201][210]]

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]

LEN=1) 0,:  
LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class

665-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][011][100][101][102]]

-----  
--  
Rules of T[L]:

```
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,--
R3) 0,1,-->0,1,0,--0,1,--
R4) 0,1,0,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,1,0,:
Number new nodes in level n is given by : 1,2,1,  DONE
```

-----Class

```
666-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][011][100][101][110]]
-----
```

```
--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,--
R3) 0,1,-->0,1,0,--0,1,--
R4) 0,1,0,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,1,0,:
Number new nodes in level n is given by : 1,2,1,  DONE
```

-----Class

```
667-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][011][100][101][120]]
-----
```

```
--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,--
R3) 0,1,-->0,1,0,--0,0,--
R4) 0,1,0,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,1,0,:
Number new nodes in level n is given by : 1,2,1,  DONE
```

-----Class

```
668-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][011][100][101][201]]
-----
```

```
--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,--
```

R3) 0,1,-->0,1,0,--0,1,--  
R4) 0,1,0,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,0, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

669-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][100][101][210]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,1,0,--0,1,--  
R4) 0,1,0,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,0, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

670-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][100][102][110]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,1,0,--0,1,--  
R4) 0,1,0,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,0, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

671-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][100][102][120]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,1,0,--0,0,--  
R4) 0,1,0,-->

List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,0, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

672-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][100][102][201]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,1,0,--0,1,--  
R4) 0,1,0,-->

List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,0, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

673-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][100][102][210]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,1,0,--0,1,--  
R4) 0,1,0,-->

List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,0, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

674-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][100][110][120]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,1,0,--0,0,--  
R4) 0,1,0,-->

List of different nodes in T[L]  
LEN=1) 0, :

LEN=2) 0,0,: 0,1,:  
LEN=3) 0,1,0,:  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

675-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][100][110][201]]$

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,--
- R3) 0,1,-->0,1,0,--0,1,--
- R4) 0,1,0,-->

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,: 0,1,:
- LEN=3) 0,1,0,:

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

676-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][100][110][210]]$

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,--
- R3) 0,1,-->0,1,0,--0,1,--
- R4) 0,1,0,-->

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,: 0,1,:
- LEN=3) 0,1,0,:

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

677-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][100][120][201]]$

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,--
- R3) 0,1,-->0,1,0,--0,0,--
- R4) 0,1,0,-->

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,: 0,1,:
- LEN=3) 0,1,0,:

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

678-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][100][120][210]]$

-----

--

Rules of T[L]:

R1)  $0, \rightarrow 0,0, \rightarrow 0,1, \rightarrow$

R2)  $0,0, \rightarrow 0,0, \rightarrow$

R3)  $0,1, \rightarrow 0,1,0, \rightarrow 0,0, \rightarrow$

R4)  $0,1,0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0,0, : 0,1, :$

LEN=3)  $0,1,0, :$

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

679-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][100][201][210]]$

-----

--

Rules of T[L]:

R1)  $0, \rightarrow 0,0, \rightarrow 0,1, \rightarrow$

R2)  $0,0, \rightarrow 0,0, \rightarrow$

R3)  $0,1, \rightarrow 0,1,0, \rightarrow 0,1, \rightarrow$

R4)  $0,1,0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0,0, : 0,1, :$

LEN=3)  $0,1,0, :$

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

680-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][101][102][110]]$

-----

--

Rules of T[L]:

R1)  $0, \rightarrow 0,0, \rightarrow 0, \rightarrow$

R2)  $0,0, \rightarrow 0,0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0,0, :$

Number new nodes in level n is given by : 1,1, DONE

-----Class

681-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][101][102][120]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,0,--0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
Number new nodes in level n is given by : 1,2, DONE

-----Class  
682-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][101][102][201]]$   
-----

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class  
683-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][101][102][210]]$   
-----

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class  
684-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][101][110][120]]$   
-----

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,0,--0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
Number new nodes in level n is given by : 1,2, DONE

-----Class

685-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][101][110][201]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

686-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][101][110][210]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

687-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][101][120][201]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,1,--$

R2)  $0,0,-->0,0,--$

R3)  $0,1,-->0,0,--0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,: 0,1,:$

Number new nodes in level n is given by : 1,2, DONE

-----Class

688-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][101][120][210]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,1,--$

R2)  $0,0,-->0,0,--$

R3)  $0,1,-->0,0,--0,0,--$



List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
Number new nodes in level n is given by : 1,2, DONE

-----Class

689-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][101][201][210]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

690-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][102][110][120]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,0,--0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
Number new nodes in level n is given by : 1,2, DONE

-----Class

691-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][102][110][201]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

692-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][102][110][210]]$

--

Rules of T[L]:

R1)  $0, \rightarrow 0, 0, \rightarrow 0, \rightarrow$

R2)  $0, 0, \rightarrow 0, 0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 0, :$

Number new nodes in level n is given by : 1,1, DONE

-----Class

693-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][102][120][201]]$

--

Rules of T[L]:

R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

R2)  $0, 0, \rightarrow 0, 0, \rightarrow$

R3)  $0, 1, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 0, : 0, 1, :$

Number new nodes in level n is given by : 1,2, DONE

-----Class

694-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][102][120][210]]$

--

Rules of T[L]:

R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

R2)  $0, 0, \rightarrow 0, 0, \rightarrow$

R3)  $0, 1, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 0, : 0, 1, :$

Number new nodes in level n is given by : 1,2, DONE

-----Class

695-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][102][201][210]]$

--

Rules of T[L]:

R1)  $0, \rightarrow 0, 0, \rightarrow 0, \rightarrow$

R2)  $0, 0, \rightarrow 0, 0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 0, :$

Number new nodes in level n is given by : 1,1, DONE

-----Class

696-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][110][120][201]]$

-----  
--  
Rules of T[L]:

R1)  $0,-->0,0,--0,1,--$

R2)  $0,0,-->0,0,--$

R3)  $0,1,-->0,0,--0,0,--$

List of different nodes in T[L]

LEN=1)  $0,:$

LEN=2)  $0,0,: 0,1,:$

Number new nodes in level n is given by : 1,2, DONE

-----Class

697-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][110][120][210]]$

-----  
--  
Rules of T[L]:

R1)  $0,-->0,0,--0,1,--$

R2)  $0,0,-->0,0,--$

R3)  $0,1,-->0,0,--0,0,--$

List of different nodes in T[L]

LEN=1)  $0,:$

LEN=2)  $0,0,: 0,1,:$

Number new nodes in level n is given by : 1,2, DONE

-----Class

698-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][110][201][210]]$

-----  
--  
Rules of T[L]:

R1)  $0,-->0,0,--0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in T[L]

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

699-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][120][201][210]]$

-----  
--  
Rules of T[L]:

R1)  $0,-->0,0,--0,1,--$

R2)  $0,0,-->0,0,--$

R3)  $0,1,-->0,0,--0,0,--$

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
Number new nodes in level n is given by : 1,2, DONE

-----Class

700-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][100][101]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,1,0,--0,1,--  
R4) 0,1,0,-->

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,0, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

701-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][100][102]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,1,0,--0,1,--  
R4) 0,1,0,-->

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,0, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

702-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][100][110]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,1,0,--0,0,--  
R4) 0,1,0,-->

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,0, :

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

703-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][100][120]]$

-----

--

Rules of T[L]:

R1)  $0, \rightarrow 0,0, \rightarrow 0,1, \rightarrow$

R2)  $0,0, \rightarrow 0,0, \rightarrow$

R3)  $0,1, \rightarrow 0,1,0, \rightarrow 0,1, \rightarrow$

R4)  $0,1,0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0,0, : 0,1, :$

LEN=3)  $0,1,0, :$

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

704-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][100][201]]$

-----

--

Rules of T[L]:

R1)  $0, \rightarrow 0,0, \rightarrow 0,1, \rightarrow$

R2)  $0,0, \rightarrow 0,0, \rightarrow$

R3)  $0,1, \rightarrow 0,1,0, \rightarrow 0,1, \rightarrow$

R4)  $0,1,0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0,0, : 0,1, :$

LEN=3)  $0,1,0, :$

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

705-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][100][210]]$

-----

--

Rules of T[L]:

R1)  $0, \rightarrow 0,0, \rightarrow 0,1, \rightarrow$

R2)  $0,0, \rightarrow 0,0, \rightarrow$

R3)  $0,1, \rightarrow 0,1,0, \rightarrow 0,1, \rightarrow$

R4)  $0,1,0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0,0, : 0,1, :$

LEN=3)  $0,1,0, :$

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

706-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][101][102]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

707-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][101][110]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,1,--$

R2)  $0,0,-->0,0,--$

R3)  $0,1,-->0,0,--0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,: 0,1,:$

Number new nodes in level n is given by : 1,2, DONE

-----Class

708-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][101][120]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

709-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][101][201]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class

710-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][012][021][101][210]]

-----

--  
Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

Number new nodes in level n is given by : 1,1, DONE

-----Class

711-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][012][021][102][110]]

-----

--  
Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,--

R3) 0,1,-->0,0,--0,0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

Number new nodes in level n is given by : 1,2, DONE

-----Class

712-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][012][021][102][120]]

-----

--  
Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

Number new nodes in level n is given by : 1,1, DONE

-----Class

713-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][012][021][102][201]]

-----

--  
Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

714-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][102][210]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

715-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][110][120]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,0,--0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
Number new nodes in level n is given by : 1,2, DONE

-----Class

716-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][110][201]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,0,--0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
Number new nodes in level n is given by : 1,2, DONE

-----Class

717-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][110][210]]$



-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,0,--0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
Number new nodes in level n is given by : 1,2, DONE

-----Class  
718-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][120][201]]$   
-----

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class  
719-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][120][210]]$   
-----

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class  
720-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][201][210]]$   
-----

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

```

-----Class
721-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][012][100][101][102]]
-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,--
R3) 0,1,-->0,1,0,--0,1,--
R4) 0,1,0,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,1,0,:
Number new nodes in level n is given by : 1,2,1,  DONE

```

```

-----Class
722-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][012][100][101][110]]
-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,--
R3) 0,1,-->0,1,0,--0,0,--
R4) 0,1,0,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,1,0,:
Number new nodes in level n is given by : 1,2,1,  DONE

```

```

-----Class
723-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][012][100][101][120]]
-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,--
R3) 0,1,-->0,1,0,--0,1,--
R4) 0,1,0,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,1,0,:
Number new nodes in level n is given by : 1,2,1,  DONE

```

```

-----Class
724-----

```

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][100][101][201]]$

--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,1,--$

R2)  $0,0,-->0,0,--$

R3)  $0,1,-->0,1,0,--0,1,--$

R4)  $0,1,0,-->$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,: 0,1,:$

LEN=3)  $0,1,0,:$

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

725-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][100][101][210]]$

--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,1,--$

R2)  $0,0,-->0,0,--$

R3)  $0,1,-->0,1,0,--0,1,--$

R4)  $0,1,0,-->$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,: 0,1,:$

LEN=3)  $0,1,0,:$

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

726-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][100][102][110]]$

--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,1,--$

R2)  $0,0,-->0,0,--$

R3)  $0,1,-->0,1,0,--0,0,--$

R4)  $0,1,0,-->$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,: 0,1,:$

LEN=3)  $0,1,0,:$

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

727-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][100][102][120]]$

```
--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,--
R3) 0,1,-->0,1,0,--0,1,--
R4) 0,1,0,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,1,0,:
Number new nodes in level n is given by : 1,2,1,  DONE
```

-----Class

728-----
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][100][102][201]]$

```
--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,--
R3) 0,1,-->0,1,0,--0,1,--
R4) 0,1,0,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,1,0,:
Number new nodes in level n is given by : 1,2,1,  DONE
```

-----Class

729-----
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][100][102][210]]$

```
--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,--
R3) 0,1,-->0,1,0,--0,1,--
R4) 0,1,0,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,1,0,:
Number new nodes in level n is given by : 1,2,1,  DONE
```

-----Class

730-----
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][100][110][120]]$

```
--
Rules of T[L]:
```

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,1,0,--0,0,--  
R4) 0,1,0,-->  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
LEN=3) 0,1,0,:  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

731-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][100][110][201]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,1,0,--0,0,--  
R4) 0,1,0,-->  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
LEN=3) 0,1,0,:  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

732-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][100][110][210]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,1,0,--0,0,--  
R4) 0,1,0,-->  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
LEN=3) 0,1,0,:  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

733-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][100][120][201]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--

R3) 0,1,-->0,1,0,--0,1,--  
R4) 0,1,0,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,0, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

734-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][100][120][210]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,1,0,--0,1,--  
R4) 0,1,0,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,0, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

735-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][100][201][210]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,1,0,--0,1,--  
R4) 0,1,0,-->  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,0, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

736-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][101][102][110]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,0,--0,0,--  
List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
Number new nodes in level n is given by : 1,2, DONE

-----Class

737-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][101][102][120]]$

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, :

Number new nodes in level n is given by : 1,1, DONE

-----Class

738-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][101][102][201]]$

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, :

Number new nodes in level n is given by : 1,1, DONE

-----Class

739-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][101][102][210]]$

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, :

Number new nodes in level n is given by : 1,1, DONE

-----Class

740-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][101][110][120]]$

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,--  
R3) 0,1,-->0,0,--0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
Number new nodes in level n is given by : 1,2, DONE

-----Class

741-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][101][110][201]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,0,--0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
Number new nodes in level n is given by : 1,2, DONE

-----Class

742-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][101][110][210]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,0,--0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
Number new nodes in level n is given by : 1,2, DONE

-----Class

743-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][101][120][201]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

744-----



Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][101][120][210]]$

--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

745-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][101][201][210]]$

--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

746-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][102][110][120]]$

--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,1,--$

R2)  $0,0,-->0,0,--$

R3)  $0,1,-->0,0,--0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,: 0,1,:$

Number new nodes in level n is given by : 1,2, DONE

-----Class

747-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][102][110][201]]$

--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,1,--$

R2)  $0,0,-->0,0,--$

R3)  $0,1,-->0,0,--0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,: 0,1,:$

Number new nodes in level n is given by : 1,2, DONE

-----Class

748-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][102][110][210]]$

-----

--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,1,--$

R2)  $0,0,-->0,0,--$

R3)  $0,1,-->0,0,--0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,: 0,1,:$

Number new nodes in level n is given by : 1,2, DONE

-----Class

749-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][102][120][201]]$

-----

--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

750-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][102][120][210]]$

-----

--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,:$

Number new nodes in level n is given by : 1,1, DONE

-----Class

751-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][102][201][210]]$

-----

--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,--$

R2)  $0,0,-->0,0,--$

List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
Number new nodes in level n is given by : 1,1, DONE

-----Class

752-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][110][120][201]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,0,--0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
Number new nodes in level n is given by : 1,2, DONE

-----Class

753-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][110][120][210]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,0,--0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
Number new nodes in level n is given by : 1,2, DONE

-----Class

754-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][110][201][210]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,0,--0,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
Number new nodes in level n is given by : 1,2, DONE

-----Class

755-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][120][201][210]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
Number new nodes in level n is given by : 1,1, DONE

-----Class  
756-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][100][101][102]]$   
-----

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,1,0,--0,1,1,--0,1,--  
R4) 0,1,0,-->  
R5) 0,1,1,-->0,1,0,--0,1,1,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
LEN=3) 0,1,0,: 0,1,1,:  
Number new nodes in level n is given by : 1,2,2, DONE

-----Class  
757-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][100][101][110]]$   
-----

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,1,0,--0,0,--0,1,--  
R4) 0,1,0,-->  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
LEN=3) 0,1,0,:  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class  
758-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][100][101][120]]$   
-----

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,--  
 R3) 0,1,-->0,1,0,--0,1,1,--0,1,2,--  
 R4) 0,1,0,-->  
 R5) 0,1,1,-->0,1,0,--0,1,1,--  
 R6) 0,1,2,-->0,0,--0,1,2,--  
 List of different nodes in T[L]  
 LEN=1) 0,:  
 LEN=2) 0,0,: 0,1,:  
 LEN=3) 0,1,0,: 0,1,1,: 0,1,2,:  
 Number new nodes in level n is given by : 1,2,3,    DONE

-----Class

759-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][100][101][201]]$

--  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,--  
 R3) 0,1,-->0,1,0,--0,1,1,--0,1,--  
 R4) 0,1,0,-->  
 R5) 0,1,1,-->0,1,0,--0,1,1,--  
 List of different nodes in T[L]  
 LEN=1) 0,:  
 LEN=2) 0,0,: 0,1,:  
 LEN=3) 0,1,0,: 0,1,1,:  
 Number new nodes in level n is given by : 1,2,2,    DONE

-----Class

760-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][100][101][210]]$

--  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,--  
 R3) 0,1,-->0,1,0,--0,1,1,--0,1,--  
 R4) 0,1,0,-->  
 R5) 0,1,1,-->0,1,0,--0,1,1,--  
 List of different nodes in T[L]  
 LEN=1) 0,:  
 LEN=2) 0,0,: 0,1,:  
 LEN=3) 0,1,0,: 0,1,1,:  
 Number new nodes in level n is given by : 1,2,2,    DONE

-----Class

761-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][100][102][110]]$

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,--

R3) 0,1,-->0,1,0,--0,0,--0,1,--

R4) 0,1,0,-->

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,1,0,:

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

762-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][100][102][120]]$

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,--

R3) 0,1,-->0,1,0,--0,1,1,--0,1,2,--

R4) 0,1,0,-->

R5) 0,1,1,-->0,1,0,--0,1,1,--

R6) 0,1,2,-->0,0,--0,1,2,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,1,0,: 0,1,1,: 0,1,2,:

Number new nodes in level n is given by : 1,2,3, DONE

-----Class

763-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][100][102][201]]$

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,--

R3) 0,1,-->0,1,0,--0,1,1,--0,1,--

R4) 0,1,0,-->

R5) 0,1,1,-->0,1,0,--0,1,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,1,0,: 0,1,1,:

Number new nodes in level n is given by : 1,2,2, DONE

-----Class

764-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][100][102][210]]$

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,--
R3) 0,1,-->0,1,0,--0,1,1,--0,1,--
R4) 0,1,0,-->
R5) 0,1,1,-->0,1,0,--0,1,1,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,1,0,: 0,1,1,:
Number new nodes in level n is given by : 1,2,2,   DONE

```

-----Class

```

765-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][021][100][110][120]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,--
R3) 0,1,-->0,1,0,--0,0,--0,1,2,--
R4) 0,1,0,-->
R5) 0,1,2,-->0,0,--0,1,2,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,1,0,: 0,1,2,:
Number new nodes in level n is given by : 1,2,2,   DONE

```

-----Class

```

766-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][021][100][110][201]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,--
R3) 0,1,-->0,1,0,--0,0,--0,1,--
R4) 0,1,0,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,1,0,:
Number new nodes in level n is given by : 1,2,1,   DONE

```

-----Class

```

767-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][021][100][110][210]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,--
R3) 0,1,-->0,1,0,--0,0,--0,1,--
R4) 0,1,0,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,1,0,:
Number new nodes in level n is given by : 1,2,1,   DONE

```

-----Class

```

768-----
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding L=[[001][021][100][120][201]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,--
R3) 0,1,-->0,1,0,--0,1,1,--0,1,2,--
R4) 0,1,0,-->
R5) 0,1,1,-->0,1,0,--0,1,1,--
R6) 0,1,2,-->0,0,--0,1,2,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,1,0,: 0,1,1,: 0,1,2,:
Number new nodes in level n is given by : 1,2,3,   DONE

```

-----Class

```

769-----
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding L=[[001][021][100][120][210]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,--
R3) 0,1,-->0,1,0,--0,1,1,--0,1,2,--
R4) 0,1,0,-->
R5) 0,1,1,-->0,1,0,--0,1,1,--
R6) 0,1,2,-->0,0,--0,1,2,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,1,0,: 0,1,1,: 0,1,2,:
Number new nodes in level n is given by : 1,2,3,   DONE

```

-----Class

```

770-----

```



Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][100][201][210]]$

--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,1,--$

R2)  $0,0,-->0,0,--$

R3)  $0,1,-->0,1,0,--0,1,1,--0,1,--$

R4)  $0,1,0,-->$

R5)  $0,1,1,-->0,1,0,--0,1,1,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,: 0,1,:$

LEN=3)  $0,1,0,: 0,1,1,:$

Number new nodes in level n is given by : 1,2,2, DONE

-----Class

771-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][101][102][110]]$

--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,1,--$

R2)  $0,0,-->0,0,--$

R3)  $0,1,-->0,0,--0,0,--0,1,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,: 0,1,:$

Number new nodes in level n is given by : 1,2, DONE

-----Class

772-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][101][102][120]]$

--

Rules of  $T[L]$ :

R1)  $0,-->0,0,--0,1,--$

R2)  $0,0,-->0,0,--$

R3)  $0,1,-->0,0,--0,1,1,--0,1,1,--$

R4)  $0,1,1,-->0,0,--0,1,1,--$

List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,: 0,1,:$

LEN=3)  $0,1,1,:$

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

773-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][101][102][201]]$

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,--

R3) 0,1,-->0,0,--0,1,1,--0,1,--

R4) 0,1,1,-->0,0,--0,1,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,1,1,:

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

774-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][101][102][210]]$

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,--

R3) 0,1,-->0,0,--0,1,1,--0,1,--

R4) 0,1,1,-->0,0,--0,1,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,1,1,:

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

775-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][101][110][120]]$

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,--

R3) 0,1,-->0,0,--0,0,--0,1,2,--

R4) 0,1,2,-->0,0,--0,1,2,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,1,2,:

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

776-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][101][110][201]]$

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,--  
R3) 0,1,-->0,0,--0,0,--0,1,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
Number new nodes in level n is given by : 1,2, DONE

-----Class

777-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][101][110][210]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,0,--0,0,--0,1,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
Number new nodes in level n is given by : 1,2, DONE

-----Class

778-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][101][120][201]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,0,--0,1,1,--0,1,1,--  
R4) 0,1,1,-->0,0,--0,1,1,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,1, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

779-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][101][120][210]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,0,--0,1,1,--0,1,1,--  
R4) 0,1,1,-->0,0,--0,1,1,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :

LEN=3) 0,1,1,:  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

780-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][021][101][201][210]]

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,0,--0,1,1,--0,1,--  
R4) 0,1,1,-->0,0,--0,1,1,--  
List of different nodes in T[L]

LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
LEN=3) 0,1,1,:  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

781-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][021][102][110][120]]

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,0,--0,0,--0,1,2,--  
R4) 0,1,2,-->0,0,--0,1,2,--  
List of different nodes in T[L]

LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
LEN=3) 0,1,2,:  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

782-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][021][102][110][201]]

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,0,--0,0,--0,1,--  
List of different nodes in T[L]

LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
Number new nodes in level n is given by : 1,2, DONE

-----Class

783-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][102][110][210]]$

-----  
--  
Rules of  $T[L]$ :

- R1)  $0,-->0,0,--0,1,--$
  - R2)  $0,0,-->0,0,--$
  - R3)  $0,1,-->0,0,--0,0,--0,1,--$
- List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,: 0,1,:$

Number new nodes in level n is given by : 1,2,    DONE

-----Class

784-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][102][120][201]]$

-----  
--  
Rules of  $T[L]$ :

- R1)  $0,-->0,0,--0,1,--$
  - R2)  $0,0,-->0,0,--$
  - R3)  $0,1,-->0,0,--0,1,1,--0,1,1,--$
  - R4)  $0,1,1,-->0,0,--0,1,1,--$
- List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,: 0,1,:$

LEN=3)  $0,1,1,:$

Number new nodes in level n is given by : 1,2,1,    DONE

-----Class

785-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][102][120][210]]$

-----  
--  
Rules of  $T[L]$ :

- R1)  $0,-->0,0,--0,1,--$
  - R2)  $0,0,-->0,0,--$
  - R3)  $0,1,-->0,0,--0,1,1,--0,1,1,--$
  - R4)  $0,1,1,-->0,0,--0,1,1,--$
- List of different nodes in  $T[L]$

LEN=1)  $0,:$

LEN=2)  $0,0,: 0,1,:$

LEN=3)  $0,1,1,:$

Number new nodes in level n is given by : 1,2,1,    DONE

-----Class

786-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][102][201][210]]$

-----  
--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,--

R3) 0,1,-->0,0,--0,1,1,--0,1,--

R4) 0,1,1,-->0,0,--0,1,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,1,1,:

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

787-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding L=[[001][021][110][120][201]]

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,--

R3) 0,1,-->0,0,--0,0,--0,1,2,--

R4) 0,1,2,-->0,0,--0,1,2,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,1,2,:

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

788-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding L=[[001][021][110][120][210]]

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,--

R3) 0,1,-->0,0,--0,0,--0,1,2,--

R4) 0,1,2,-->0,0,--0,1,2,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,1,2,:

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

789-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding L=[[001][021][110][201][210]]

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,--  
R3) 0,1,-->0,0,--0,0,--0,1,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
Number new nodes in level n is given by : 1,2, DONE

-----Class

790-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][120][201][210]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,0,--0,1,1,--0,1,1,--  
R4) 0,1,1,-->0,0,--0,1,1,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,1, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

791-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][100][101][102][110]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,1,0,--0,0,--0,1,2,--  
R4) 0,1,0,-->  
R5) 0,1,2,-->0,1,0,--0,1,0,--0,0,--0,1,2,3,--  
R6) 0,1,2,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,--  
R7) 0,1,2,3,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,--  
R8) 0,1,2,3,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,6,--  
R9) 0,1,2,3,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,6,7,--  
R10) 0,1,2,3,4,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,6,7,8,--  
R11) 0,1,2,3,4,5,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,6,7,8,9,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,0, : 0,1,2, :

LEN=4) 0,1,2,3, :  
 LEN=5) 0,1,2,3,4, :  
 LEN=6) 0,1,2,3,4,5, :  
 LEN=7) 0,1,2,3,4,5,6, :  
 LEN=8) 0,1,2,3,4,5,6,7, :  
 LEN=9) 0,1,2,3,4,5,6,7,8, :  
 LEN=10) 0,1,2,3,4,5,6,7,8,9, :  
 Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class

792-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][100][101][102][120]]$

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,--
- R3) 0,1,-->0,1,0,--0,1,1,--0,1,--
- R4) 0,1,0,-->
- R5) 0,1,1,-->0,1,0,--0,1,1,--

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, : 0,1, :
- LEN=3) 0,1,0, : 0,1,1, :

Number new nodes in level n is given by : 1,2,2, DONE

-----Class

793-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][100][101][102][201]]$

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,--
- R3) 0,1,-->0,1,0,--0,1,1,--0,1,2,--
- R4) 0,1,0,-->
- R5) 0,1,1,-->0,1,0,--0,1,1,--
- R6) 0,1,2,-->0,1,0,--0,1,2,1,--0,1,2,2,--0,1,2,3,--
- R7) 0,1,2,1,-->0,1,0,--
- R8) 0,1,2,2,-->0,1,0,--0,1,2,1,--0,1,2,2,--
- R9) 0,1,2,3,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,1,2,3,3,--0,1,2,3,4,--
- R10) 0,1,2,3,2,-->0,1,0,--0,1,2,1,--
- R11) 0,1,2,3,3,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,1,2,3,3,--

R12)

0,1,2,3,4,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,1,2,3,4,3,--0,1,2,3,4,4,--0,1,2,3,4,5,

R13) 0,1,2,3,4,3,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--

R14) 0,1,2,3,4,4,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,1,2,3,4,3,--0,1,2,3,4,4,--

R15)

0,1,2,3,4,5,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,1,2,3,4,3,--0,1,2,3,4,5,4,--0,1,2,3,



4,5,5,--0,1,2,3,4,5,6,--  
R16) 0,1,2,3,4,5,4,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,1,2,3,4,3,--  
R17)  
0,1,2,3,4,5,5,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,1,2,3,4,3,--0,1,2,3,4,5,4,--0,1,2,  
3,4,5,5,--  
R18)  
0,1,2,3,4,5,6,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,1,2,3,4,3,--0,1,2,3,4,5,4,--0,1,2,  
3,4,5,6,5,--0,1,2,3,4,5,6,6,--0,1,2,3,4,5,6,7,--  
R19)  
0,1,2,3,4,5,6,5,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,1,2,3,4,3,--0,1,2,3,4,5,4,--  
R20)  
0,1,2,3,4,5,6,6,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,1,2,3,4,3,--0,1,2,3,4,5,4,--0,1,  
2,3,4,5,6,5,--0,1,2,3,4,5,6,6,--  
R21)  
0,1,2,3,4,5,6,7,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,1,2,3,4,3,--0,1,2,3,4,5,4,--0,1,  
2,3,4,5,6,5,--0,1,2,3,4,5,6,7,6,--0,1,2,3,4,5,6,7,7,--0,1,2,3,4,5,6,7,8,--  
R22)  
0,1,2,3,4,5,6,7,6,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,1,2,3,4,3,--0,1,2,3,4,5,4,--0,  
1,2,3,4,5,6,5,--  
R23)  
0,1,2,3,4,5,6,7,7,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,1,2,3,4,3,--0,1,2,3,4,5,4,--0,  
1,2,3,4,5,6,5,--0,1,2,3,4,5,6,7,6,--0,1,2,3,4,5,6,7,7,--  
R24)  
0,1,2,3,4,5,6,7,8,-->0,1,0,--0,1,2,1,--0,1,2,3,2,--0,1,2,3,4,3,--0,1,2,3,4,5,4,--0,  
1,2,3,4,5,6,5,--0,1,2,3,4,5,6,7,6,--0,1,2,3,4,5,6,7,8,7,--0,1,2,3,4,5,6,7,8,8,--0,1,  
,2,3,4,5,6,7,8,9,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,0, : 0,1,1, : 0,1,2, :  
LEN=4) 0,1,2,1, : 0,1,2,2, : 0,1,2,3, :  
LEN=5) 0,1,2,3,2, : 0,1,2,3,3, : 0,1,2,3,4, :  
LEN=6) 0,1,2,3,4,3, : 0,1,2,3,4,4, : 0,1,2,3,4,5, :  
LEN=7) 0,1,2,3,4,5,4, : 0,1,2,3,4,5,5, : 0,1,2,3,4,5,6, :  
LEN=8) 0,1,2,3,4,5,6,5, : 0,1,2,3,4,5,6,6, : 0,1,2,3,4,5,6,7, :  
LEN=9) 0,1,2,3,4,5,6,7,6, : 0,1,2,3,4,5,6,7,7, : 0,1,2,3,4,5,6,7,8, :  
LEN=10) 0,1,2,3,4,5,6,7,8,7, : 0,1,2,3,4,5,6,7,8,8, : 0,1,2,3,4,5,6,7,8,9, :  
Number new nodes in level n is given by : 1,2,3,3,3,3,3,3,3,3,

-----Class

794-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][100][101][102][210]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,--
- R3) 0,1,-->0,1,0,--0,1,1,--0,1,2,--
- R4) 0,1,0,-->
- R5) 0,1,1,-->0,1,0,--0,1,1,--

R6) 0,1,2,-->0,1,0,--0,1,0,--0,1,2,2,--0,1,2,3,--  
R7) 0,1,2,2,-->0,1,0,--0,1,0,--0,1,2,2,--  
R8) 0,1,2,3,-->0,1,0,--0,1,0,--0,1,0,--0,1,2,3,3,--0,1,2,3,4,--  
R9) 0,1,2,3,3,-->0,1,0,--0,1,0,--0,1,0,--0,1,2,3,3,--  
R10) 0,1,2,3,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,3,4,4,--0,1,2,3,4,5,--  
R11) 0,1,2,3,4,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,3,4,4,--  
R12)  
0,1,2,3,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,3,4,5,5,--0,1,2,3,4,5,  
6,--  
R13) 0,1,2,3,4,5,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,3,4,5,5,--  
R14)  
0,1,2,3,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,3,4,5,6,6,--  
0,1,2,3,4,5,6,7,--  
R15)  
0,1,2,3,4,5,6,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,3,4,5,6,6,  
--  
R16)  
0,1,2,3,4,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,3,  
4,5,6,7,7,--0,1,2,3,4,5,6,7,8,--  
R17)  
0,1,2,3,4,5,6,7,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,  
3,4,5,6,7,7,--  
R18)  
0,1,2,3,4,5,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,  
--0,1,2,3,4,5,6,7,8,8,--0,1,2,3,4,5,6,7,8,9,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,0, : 0,1,1, : 0,1,2, :  
LEN=4) 0,1,2,2, : 0,1,2,3, :  
LEN=5) 0,1,2,3,3, : 0,1,2,3,4, :  
LEN=6) 0,1,2,3,4,4, : 0,1,2,3,4,5, :  
LEN=7) 0,1,2,3,4,5,5, : 0,1,2,3,4,5,6, :  
LEN=8) 0,1,2,3,4,5,6,6, : 0,1,2,3,4,5,6,7, :  
LEN=9) 0,1,2,3,4,5,6,7,7, : 0,1,2,3,4,5,6,7,8, :  
LEN=10) 0,1,2,3,4,5,6,7,8,8, : 0,1,2,3,4,5,6,7,8,9, :  
Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

-----Class

795-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][100][101][110][120]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,1,0,--0,0,--0,1,--  
R4) 0,1,0,-->

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0,: 0,1,:  
LEN=3) 0,1,0,:  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

796-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][100][101][110][201]]$

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,--

R3) 0,1,-->0,1,0,--0,0,--0,1,2,--

R4) 0,1,0,-->

R5) 0,1,2,-->0,1,0,--0,1,0,--0,0,--0,1,2,3,--

R6) 0,1,2,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,--

R7) 0,1,2,3,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,--

R8) 0,1,2,3,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,6,--

R9)

0,1,2,3,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,6,7,--

R10)

0,1,2,3,4,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,6,7,8,--

R11)

0,1,2,3,4,5,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,6,7,8,9,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,1,0,: 0,1,2,:

LEN=4) 0,1,2,3,:

LEN=5) 0,1,2,3,4,:

LEN=6) 0,1,2,3,4,5,:

LEN=7) 0,1,2,3,4,5,6,:

LEN=8) 0,1,2,3,4,5,6,7,:

LEN=9) 0,1,2,3,4,5,6,7,8,:

LEN=10) 0,1,2,3,4,5,6,7,8,9,:

Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class

797-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][100][101][110][210]]$

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,--

R3) 0,1,-->0,1,0,--0,0,--0,1,2,--

R4) 0,1,0,-->

R5) 0,1,2,-->0,1,0,--0,1,0,--0,0,--0,1,2,3,--  
R6) 0,1,2,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,--  
R7) 0,1,2,3,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,--  
R8) 0,1,2,3,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,6,--  
R9) 0,1,2,3,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,6,7,--  
R10) 0,1,2,3,4,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,6,7,8,--  
R11) 0,1,2,3,4,5,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,6,7,8,9,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,0, : 0,1,2, :  
LEN=4) 0,1,2,3, :  
LEN=5) 0,1,2,3,4, :  
LEN=6) 0,1,2,3,4,5, :  
LEN=7) 0,1,2,3,4,5,6, :  
LEN=8) 0,1,2,3,4,5,6,7, :  
LEN=9) 0,1,2,3,4,5,6,7,8, :  
LEN=10) 0,1,2,3,4,5,6,7,8,9, :  
Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class  
798-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][100][101][120][201]]$   
-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,1,0,--0,1,1,--0,1,--  
R4) 0,1,0,-->  
R5) 0,1,1,-->0,1,0,--0,1,1,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,0, : 0,1,1, :  
Number new nodes in level n is given by : 1,2,2, DONE

-----Class  
799-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][100][101][120][210]]$   
-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,--  
 R3) 0,1,-->0,1,0,--0,1,1,--0,1,--  
 R4) 0,1,0,-->  
 R5) 0,1,1,-->0,1,0,--0,1,1,--  
 List of different nodes in T[L]  
 LEN=1) 0,:  
 LEN=2) 0,0,: 0,1,:  
 LEN=3) 0,1,0,: 0,1,1,:  
 Number new nodes in level n is given by : 1,2,2, DONE

-----Class

800-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][100][101][201][210]]$

--  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,--  
 R3) 0,1,-->0,1,0,--0,1,1,--0,1,2,--  
 R4) 0,1,0,-->  
 R5) 0,1,1,-->0,1,0,--0,1,1,--  
 R6) 0,1,2,-->0,1,0,--0,1,0,--0,1,2,2,--0,1,2,3,--  
 R7) 0,1,2,2,-->0,1,0,--0,1,0,--0,1,2,2,--  
 R8) 0,1,2,3,-->0,1,0,--0,1,0,--0,1,0,--0,1,2,3,3,--0,1,2,3,4,--  
 R9) 0,1,2,3,3,-->0,1,0,--0,1,0,--0,1,0,--0,1,2,3,3,--  
 R10) 0,1,2,3,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,3,4,4,--0,1,2,3,4,5,--  
 R11) 0,1,2,3,4,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,3,4,4,--  
 R12)  
 0,1,2,3,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,3,4,5,5,--0,1,2,3,4,5,  
 6,--  
 R13) 0,1,2,3,4,5,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,3,4,5,5,--  
 R14)  
 0,1,2,3,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,3,4,5,6,6,--  
 0,1,2,3,4,5,6,7,--  
 R15)  
 0,1,2,3,4,5,6,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,3,4,5,6,6,  
 --  
 R16)  
 0,1,2,3,4,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,3,  
 4,5,6,7,7,--0,1,2,3,4,5,6,7,8,--  
 R17)  
 0,1,2,3,4,5,6,7,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,  
 3,4,5,6,7,7,--  
 R18)  
 0,1,2,3,4,5,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,  
 --0,1,2,3,4,5,6,7,8,8,--0,1,2,3,4,5,6,7,8,9,--  
 List of different nodes in T[L]  
 LEN=1) 0,:  
 LEN=2) 0,0,: 0,1,:  
 LEN=3) 0,1,0,: 0,1,1,: 0,1,2,:

LEN=4) 0,1,2,2,: 0,1,2,3,:  
 LEN=5) 0,1,2,3,3,: 0,1,2,3,4,:  
 LEN=6) 0,1,2,3,4,4,: 0,1,2,3,4,5,:  
 LEN=7) 0,1,2,3,4,5,5,: 0,1,2,3,4,5,6,:  
 LEN=8) 0,1,2,3,4,5,6,6,: 0,1,2,3,4,5,6,7,:  
 LEN=9) 0,1,2,3,4,5,6,7,7,: 0,1,2,3,4,5,6,7,8,:  
 LEN=10) 0,1,2,3,4,5,6,7,8,8,: 0,1,2,3,4,5,6,7,8,9,:  
 Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

-----Class

801-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][100][102][110][120]]$

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,--
- R3) 0,1,-->0,1,0,--0,0,--0,1,--
- R4) 0,1,0,-->

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,: 0,1,:
- LEN=3) 0,1,0,:

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

802-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][100][102][110][201]]$

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,--
- R3) 0,1,-->0,1,0,--0,0,--0,1,2,--
- R4) 0,1,0,-->
- R5) 0,1,2,-->0,1,0,--0,1,0,--0,0,--0,1,2,3,--
- R6) 0,1,2,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,--
- R7) 0,1,2,3,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,--
- R8) 0,1,2,3,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,6,--
- R9) 0,1,2,3,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,6,7,--
- R10) 0,1,2,3,4,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,6,7,8,--
- R11) 0,1,2,3,4,5,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,6,7,8,9,--

List of different nodes in T[L]

- LEN=1) 0,:

LEN=2) 0,0,: 0,1,:  
 LEN=3) 0,1,0,: 0,1,2,:  
 LEN=4) 0,1,2,3,:  
 LEN=5) 0,1,2,3,4,:  
 LEN=6) 0,1,2,3,4,5,:  
 LEN=7) 0,1,2,3,4,5,6,:  
 LEN=8) 0,1,2,3,4,5,6,7,:  
 LEN=9) 0,1,2,3,4,5,6,7,8,:  
 LEN=10) 0,1,2,3,4,5,6,7,8,9,:  
 Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class

803-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][100][102][110][210]]$

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,--
- R3) 0,1,-->0,1,0,--0,0,--0,1,2,--
- R4) 0,1,0,-->
- R5) 0,1,2,-->0,1,0,--0,1,0,--0,0,--0,1,2,3,--
- R6) 0,1,2,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,--
- R7) 0,1,2,3,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,--
- R8) 0,1,2,3,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,6,--
- R9) 0,1,2,3,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,6,7,--
- R10) 0,1,2,3,4,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,6,7,8,--
- R11) 0,1,2,3,4,5,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,6,7,8,9,--

List of different nodes in T[L]

LEN=1) 0,:  
 LEN=2) 0,0,: 0,1,:  
 LEN=3) 0,1,0,: 0,1,2,:  
 LEN=4) 0,1,2,3,:  
 LEN=5) 0,1,2,3,4,:  
 LEN=6) 0,1,2,3,4,5,:  
 LEN=7) 0,1,2,3,4,5,6,:  
 LEN=8) 0,1,2,3,4,5,6,7,:  
 LEN=9) 0,1,2,3,4,5,6,7,8,:  
 LEN=10) 0,1,2,3,4,5,6,7,8,9,:  
 Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class

804-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][100][102][120][201]]$

```

-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,--
R3) 0,1,-->0,1,0,--0,1,1,--0,1,--
R4) 0,1,0,-->
R5) 0,1,1,-->0,1,0,--0,1,1,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,1,0,: 0,1,1,:
Number new nodes in level n is given by : 1,2,2,   DONE

```

-----Class

```

805-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][100][102][120][210]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,--
R3) 0,1,-->0,1,0,--0,1,1,--0,1,--
R4) 0,1,0,-->
R5) 0,1,1,-->0,1,0,--0,1,1,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,1,0,: 0,1,1,:
Number new nodes in level n is given by : 1,2,2,   DONE

```

-----Class

```

806-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][100][102][201][210]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,--
R3) 0,1,-->0,1,0,--0,1,1,--0,1,2,--
R4) 0,1,0,-->
R5) 0,1,1,-->0,1,0,--0,1,1,--
R6) 0,1,2,-->0,1,0,--0,1,0,--0,1,2,2,--0,1,2,3,--
R7) 0,1,2,2,-->0,1,0,--0,1,0,--0,1,2,2,--
R8) 0,1,2,3,-->0,1,0,--0,1,0,--0,1,0,--0,1,2,3,3,--0,1,2,3,4,--
R9) 0,1,2,3,3,-->0,1,0,--0,1,0,--0,1,0,--0,1,2,3,3,--
R10) 0,1,2,3,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,3,4,4,--0,1,2,3,4,5,--
R11) 0,1,2,3,4,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,3,4,4,--
R12)
0,1,2,3,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,3,4,5,5,--0,1,2,3,4,5,

```



6,--  
R13) 0,1,2,3,4,5,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,3,4,5,5,--  
R14)  
0,1,2,3,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,3,4,5,6,6,--  
0,1,2,3,4,5,6,7,--  
R15)  
0,1,2,3,4,5,6,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,3,4,5,6,6,  
--  
R16)  
0,1,2,3,4,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,3,  
4,5,6,7,7,--0,1,2,3,4,5,6,7,8,--  
R17)  
0,1,2,3,4,5,6,7,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,  
3,4,5,6,7,7,--  
R18)  
0,1,2,3,4,5,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,  
--0,1,2,3,4,5,6,7,8,8,--0,1,2,3,4,5,6,7,8,9,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,0, : 0,1,1, : 0,1,2, :  
LEN=4) 0,1,2,2, : 0,1,2,3, :  
LEN=5) 0,1,2,3,3, : 0,1,2,3,4, :  
LEN=6) 0,1,2,3,4,4, : 0,1,2,3,4,5, :  
LEN=7) 0,1,2,3,4,5,5, : 0,1,2,3,4,5,6, :  
LEN=8) 0,1,2,3,4,5,6,6, : 0,1,2,3,4,5,6,7, :  
LEN=9) 0,1,2,3,4,5,6,7,7, : 0,1,2,3,4,5,6,7,8, :  
LEN=10) 0,1,2,3,4,5,6,7,8,8, : 0,1,2,3,4,5,6,7,8,9, :  
Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,2,

-----Class

807-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][100][110][120][201]]$   
-----

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,1,0,--0,0,--0,1,--  
R4) 0,1,0,-->

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,1,0, :  
Number new nodes in level n is given by : 1,2,1, DONE

-----Class

808-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][100][110][120][210]]$   
-----

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,--
R3) 0,1,-->0,1,0,--0,0,--0,1,--
R4) 0,1,0,-->
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,1,0,:
Number new nodes in level n is given by : 1,2,1,   DONE

```

-----Class

809-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][100][110][201][210]]$

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,--
R3) 0,1,-->0,1,0,--0,0,--0,1,2,--
R4) 0,1,0,-->
R5) 0,1,2,-->0,1,0,--0,1,0,--0,0,--0,1,2,3,--
R6) 0,1,2,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,--
R7) 0,1,2,3,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,--
R8) 0,1,2,3,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,6,--
R9)
0,1,2,3,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,
6,7,--
R10)
0,1,2,3,4,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,
1,2,3,4,5,6,7,8,--
R11)
0,1,2,3,4,5,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,
--0,0,--0,1,2,3,4,5,6,7,8,9,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,1,0,: 0,1,2,:
LEN=4) 0,1,2,3,:
LEN=5) 0,1,2,3,4,:
LEN=6) 0,1,2,3,4,5,:
LEN=7) 0,1,2,3,4,5,6,:
LEN=8) 0,1,2,3,4,5,6,7,:
LEN=9) 0,1,2,3,4,5,6,7,8,:
LEN=10) 0,1,2,3,4,5,6,7,8,9,:
Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

```

-----Class

810-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][100][120][201][210]]$

-----  
--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,--

R3) 0,1,-->0,1,0,--0,1,1,--0,1,--

R4) 0,1,0,-->

R5) 0,1,1,-->0,1,0,--0,1,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,1,0,: 0,1,1,:

Number new nodes in level n is given by : 1,2,2, DONE

-----Class

811-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][101][102][110][120]]$

-----  
--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,--

R3) 0,1,-->0,0,--0,0,--0,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

Number new nodes in level n is given by : 1,2, DONE

-----Class

812-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][101][102][110][201]]$

-----  
--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,--

R3) 0,1,-->0,0,--0,0,--0,1,2,--

R4) 0,1,2,-->0,0,--0,0,--0,0,--0,1,2,3,--

R5) 0,1,2,3,-->0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,--

R6) 0,1,2,3,4,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,--

R7) 0,1,2,3,4,5,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,--

R8) 0,1,2,3,4,5,6,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,7,--

R9)

0,1,2,3,4,5,6,7,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,7,

8,--

R10)

0,1,2,3,4,5,6,7,8,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,

4,5,6,7,8,9,--

List of different nodes in T[L]

LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,1,2, :  
 LEN=4) 0,1,2,3, :  
 LEN=5) 0,1,2,3,4, :  
 LEN=6) 0,1,2,3,4,5, :  
 LEN=7) 0,1,2,3,4,5,6, :  
 LEN=8) 0,1,2,3,4,5,6,7, :  
 LEN=9) 0,1,2,3,4,5,6,7,8, :  
 LEN=10) 0,1,2,3,4,5,6,7,8,9, :  
 Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class

813-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][101][102][110][210]]$

Rules of  $T[L]$ :  
 R1) 0, -->0,0, --0,1, --  
 R2) 0,0, -->0,0, --  
 R3) 0,1, -->0,0, --0,0, --0,1,2, --  
 R4) 0,1,2, -->0,0, --0,0, --0,0, --0,1,2,3, --  
 R5) 0,1,2,3, -->0,0, --0,0, --0,0, --0,0, --0,1,2,3,4, --  
 R6) 0,1,2,3,4, -->0,0, --0,0, --0,0, --0,0, --0,0, --0,1,2,3,4,5, --  
 R7) 0,1,2,3,4,5, -->0,0, --0,0, --0,0, --0,0, --0,0, --0,0, --0,1,2,3,4,5,6, --  
 R8) 0,1,2,3,4,5,6, -->0,0, --0,0, --0,0, --0,0, --0,0, --0,0, --0,0, --0,1,2,3,4,5,6,7, --  
 R9) 0,1,2,3,4,5,6,7, -->0,0, --0,0, --0,0, --0,0, --0,0, --0,0, --0,0, --0,0, --0,0, --0,1,2,3,4,5,6,7,8, --  
 R10) 0,1,2,3,4,5,6,7,8, -->0,0, --0,0, --0,0, --0,0, --0,0, --0,0, --0,0, --0,0, --0,0, --0,0, --0,0, --0,1,2,3,4,5,6,7,8,9, --

List of different nodes in  $T[L]$

LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,1,2, :  
 LEN=4) 0,1,2,3, :  
 LEN=5) 0,1,2,3,4, :  
 LEN=6) 0,1,2,3,4,5, :  
 LEN=7) 0,1,2,3,4,5,6, :  
 LEN=8) 0,1,2,3,4,5,6,7, :  
 LEN=9) 0,1,2,3,4,5,6,7,8, :  
 LEN=10) 0,1,2,3,4,5,6,7,8,9, :  
 Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class

814-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][101][102][120][201]]$

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,--
- R3) 0,1,-->0,0,--0,1,1,--0,1,--
- R4) 0,1,1,-->0,0,--0,1,1,--

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,: 0,1,:
- LEN=3) 0,1,1,:

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

815-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding L=[[001][101][102][120][210]]

--  
Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,--
- R3) 0,1,-->0,0,--0,1,1,--0,1,--
- R4) 0,1,1,-->0,0,--0,1,1,--

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,: 0,1,:
- LEN=3) 0,1,1,:

Number new nodes in level n is given by : 1,2,1, DONE

-----Class

816-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding L=[[001][101][102][201][210]]

--  
Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,--
- R3) 0,1,-->0,0,--0,1,1,--0,1,2,--
- R4) 0,1,1,-->0,0,--0,1,1,--
- R5) 0,1,2,-->0,0,--0,0,--0,1,2,2,--0,1,2,3,--
- R6) 0,1,2,2,-->0,0,--0,0,--0,1,2,2,--
- R7) 0,1,2,3,-->0,0,--0,0,--0,0,--0,1,2,3,3,--0,1,2,3,4,--
- R8) 0,1,2,3,3,-->0,0,--0,0,--0,0,--0,1,2,3,3,--
- R9) 0,1,2,3,4,-->0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,4,--0,1,2,3,4,5,--
- R10) 0,1,2,3,4,4,-->0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,4,--
- R11) 0,1,2,3,4,5,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,5,--0,1,2,3,4,5,6,--
- R12) 0,1,2,3,4,5,5,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,5,--
- R13) 0,1,2,3,4,5,6,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,6,--0,1,2,3,4,5,6,7,--
- R14) 0,1,2,3,4,5,6,6,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,6,--
- R15)

0,1,2,3,4,5,6,7,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,7,7,--0,  
1,2,3,4,5,6,7,8,--

R16)

0,1,2,3,4,5,6,7,7,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,7,7,--

R17)

0,1,2,3,4,5,6,7,8,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,  
7,8,8,--0,1,2,3,4,5,6,7,8,9,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,1,1,: 0,1,2,:

LEN=4) 0,1,2,2,: 0,1,2,3,:

LEN=5) 0,1,2,3,3,: 0,1,2,3,4,:

LEN=6) 0,1,2,3,4,4,: 0,1,2,3,4,5,:

LEN=7) 0,1,2,3,4,5,5,: 0,1,2,3,4,5,6,:

LEN=8) 0,1,2,3,4,5,6,6,: 0,1,2,3,4,5,6,7,:

LEN=9) 0,1,2,3,4,5,6,7,7,: 0,1,2,3,4,5,6,7,8,:

LEN=10) 0,1,2,3,4,5,6,7,8,8,: 0,1,2,3,4,5,6,7,8,9,:

Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

817-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][101][110][120][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,--

R3) 0,1,-->0,0,--0,0,--0,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

Number new nodes in level n is given by : 1,2, DONE

-----Class

818-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][101][110][120][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,--

R3) 0,1,-->0,0,--0,0,--0,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

Number new nodes in level n is given by : 1,2, DONE

-----Class

819-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][101][110][201][210]]$

--

Rules of  $T[L]$ :

R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

R2)  $0, 0, \rightarrow 0, 0, \rightarrow$

R3)  $0, 1, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, \rightarrow$

R4)  $0, 1, 2, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, \rightarrow$

R5)  $0, 1, 2, 3, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, \rightarrow$

R6)  $0, 1, 2, 3, 4, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 5, \rightarrow$

R7)  $0, 1, 2, 3, 4, 5, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 5, 6, \rightarrow$

R8)  $0, 1, 2, 3, 4, 5, 6, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 5, 6, 7, \rightarrow$

R9)

$0, 1, 2, 3, 4, 5, 6, 7, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3, 4, 5, 6, 7,$

$8, \rightarrow$

R10)

$0, 1, 2, 3, 4, 5, 6, 7, 8, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow 0, 1, 2, 3,$

$4, 5, 6, 7, 8, 9, \rightarrow$

List of different nodes in  $T[L]$

LEN=1)  $0, :$

LEN=2)  $0, 0, : 0, 1, :$

LEN=3)  $0, 1, 2, :$

LEN=4)  $0, 1, 2, 3, :$

LEN=5)  $0, 1, 2, 3, 4, :$

LEN=6)  $0, 1, 2, 3, 4, 5, :$

LEN=7)  $0, 1, 2, 3, 4, 5, 6, :$

LEN=8)  $0, 1, 2, 3, 4, 5, 6, 7, :$

LEN=9)  $0, 1, 2, 3, 4, 5, 6, 7, 8, :$

LEN=10)  $0, 1, 2, 3, 4, 5, 6, 7, 8, 9, :$

Number new nodes in level n is given by :  $1, 2, 1, 1, 1, 1, 1, 1, 1, 1, 1,$

-----Class

820-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][101][120][201][210]]$

--

Rules of  $T[L]$ :

R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

R2)  $0, 0, \rightarrow 0, 0, \rightarrow$

R3)  $0, 1, \rightarrow 0, 0, \rightarrow 0, 1, 1, \rightarrow 0, 1, \rightarrow$

R4)  $0, 1, 1, \rightarrow 0, 0, \rightarrow 0, 1, 1, \rightarrow$

List of different nodes in  $T[L]$

LEN=1)  $0, :$

LEN=2)  $0, 0, : 0, 1, :$

LEN=3)  $0, 1, 1, :$

Number new nodes in level n is given by :  $1, 2, 1, \quad \text{DONE}$

-----Class

821-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][102][110][120][201]]$

-----  
--  
Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,--

R3) 0,1,-->0,0,--0,0,--0,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

Number new nodes in level n is given by : 1,2, DONE

-----Class

822-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][102][110][120][210]]$

-----  
--  
Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,--

R3) 0,1,-->0,0,--0,0,--0,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

Number new nodes in level n is given by : 1,2, DONE

-----Class

823-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][102][110][201][210]]$

-----  
--  
Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,--

R3) 0,1,-->0,0,--0,0,--0,1,2,--

R4) 0,1,2,-->0,0,--0,0,--0,0,--0,1,2,3,--

R5) 0,1,2,3,-->0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,--

R6) 0,1,2,3,4,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,--

R7) 0,1,2,3,4,5,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,--

R8) 0,1,2,3,4,5,6,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,7,--

R9)

0,1,2,3,4,5,6,7,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,7,8,--

R10)

0,1,2,3,4,5,6,7,8,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,7,8,9,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,1,2,:

LEN=4) 0,1,2,3,:



LEN=5) 0,1,2,3,4, :  
 LEN=6) 0,1,2,3,4,5, :  
 LEN=7) 0,1,2,3,4,5,6, :  
 LEN=8) 0,1,2,3,4,5,6,7, :  
 LEN=9) 0,1,2,3,4,5,6,7,8, :  
 LEN=10) 0,1,2,3,4,5,6,7,8,9, :  
 Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class

824-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][102][120][201][210]]$

--  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,--  
 R3) 0,1,-->0,0,--0,1,1,--0,1,--  
 R4) 0,1,1,-->0,0,--0,1,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,1,1, :  
 Number new nodes in level n is given by : 1,2,1, DONE

-----Class

825-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][110][120][201][210]]$

--  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,--  
 R3) 0,1,-->0,0,--0,0,--0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 Number new nodes in level n is given by : 1,2, DONE

-----Class

826-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][021][100]]$

--  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,1,--0,1,--  
 R3) 0,1,-->  
 R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--  
 R5) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--  
 R6) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--

R7) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R8) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R9)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,  
 1,--  
 R10)  
 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,  
 --0,1,--0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, :  
 LEN=4) 0,0,0,0, :  
 LEN=5) 0,0,0,0,0, :  
 LEN=6) 0,0,0,0,0,0, :  
 LEN=7) 0,0,0,0,0,0,0, :  
 LEN=8) 0,0,0,0,0,0,0,0, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, :  
 Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class  
 827-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][021][101]]$   
 -----

Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,1,--0,1,--  
 R3) 0,1,-->  
 R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--  
 R5) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--  
 R6) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R7) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R8) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R9)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,  
 1,--  
 R10)  
 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,  
 --0,1,--0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, :  
 LEN=4) 0,0,0,0, :  
 LEN=5) 0,0,0,0,0, :  
 LEN=6) 0,0,0,0,0,0, :  
 LEN=7) 0,0,0,0,0,0,0, :  
 LEN=8) 0,0,0,0,0,0,0,0, :

LEN=9) 0,0,0,0,0,0,0,0,0,0,  
LEN=10) 0,0,0,0,0,0,0,0,0,0,0,  
Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class  
828-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][021][102]]$

--  
Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,1,--
- R3) 0,1,-->
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--
- R5) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--
- R6) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R7) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R8) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R9)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,  
1,--
- R10)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,  
--0,1,--0,1,--

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,: 0,1,:
- LEN=3) 0,0,0,:
- LEN=4) 0,0,0,0,:
- LEN=5) 0,0,0,0,0,:
- LEN=6) 0,0,0,0,0,0,:
- LEN=7) 0,0,0,0,0,0,0,:
- LEN=8) 0,0,0,0,0,0,0,0,:
- LEN=9) 0,0,0,0,0,0,0,0,0,:
- LEN=10) 0,0,0,0,0,0,0,0,0,0,0,:
- Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class  
829-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][021][110]]$

--  
Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,1,--
- R3) 0,1,-->
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--
- R5) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--
- R6) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R7) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

R8) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R9) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
1,--  
R10) 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
--0,1,--0,1,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, :  
LEN=4) 0,0,0,0, :  
LEN=5) 0,0,0,0,0, :  
LEN=6) 0,0,0,0,0,0, :  
LEN=7) 0,0,0,0,0,0,0, :  
LEN=8) 0,0,0,0,0,0,0,0, :  
LEN=9) 0,0,0,0,0,0,0,0,0, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, :  
Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class

830-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][021][120]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,1,--0,1,--  
R3) 0,1,-->  
R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--  
R5) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--  
R6) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R7) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R8) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R9) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
1,--  
R10) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
--0,1,--0,1,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, :  
LEN=4) 0,0,0,0, :  
LEN=5) 0,0,0,0,0, :  
LEN=6) 0,0,0,0,0,0, :  
LEN=7) 0,0,0,0,0,0,0, :  
LEN=8) 0,0,0,0,0,0,0,0, :  
LEN=9) 0,0,0,0,0,0,0,0,0, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, :

LEN=10) 0,0,0,0,0,0,0,0,0,0,0,0,  
 Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,1,

-----Class

831-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][021][201]]$

-----

Rules of T[L]:

- R1) 0, -->0,0,--0,1,--
- R2) 0,0, -->0,0,0,--0,1,--0,1,--
- R3) 0,1,-->
- R4) 0,0,0, -->0,0,0,0,--0,1,--0,1,--0,1,--
- R5) 0,0,0,0, -->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--
- R6) 0,0,0,0,0, -->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R7) 0,0,0,0,0,0, -->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R8) 0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R9) 0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R10) 0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

List of different nodes in T[L]

- LEN=1) 0,:
  - LEN=2) 0,0,: 0,1,:
  - LEN=3) 0,0,0,:
  - LEN=4) 0,0,0,0,:
  - LEN=5) 0,0,0,0,0,:
  - LEN=6) 0,0,0,0,0,0,:
  - LEN=7) 0,0,0,0,0,0,0,:
  - LEN=8) 0,0,0,0,0,0,0,0,:
  - LEN=9) 0,0,0,0,0,0,0,0,0,:
  - LEN=10) 0,0,0,0,0,0,0,0,0,0,0,0,:
- Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,1,

-----Class

832-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][021][210]]$

-----

Rules of T[L]:

- R1) 0, -->0,0,--0,1,--
- R2) 0,0, -->0,0,0,--0,1,--0,1,--
- R3) 0,1,-->
- R4) 0,0,0, -->0,0,0,0,--0,1,--0,1,--0,1,--
- R5) 0,0,0,0, -->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--
- R6) 0,0,0,0,0, -->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R7) 0,0,0,0,0,0, -->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R8) 0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

```

R9)
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,
1,--
R10)
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,
--0,1,--0,1,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,0,0,:
LEN=4) 0,0,0,0,:
LEN=5) 0,0,0,0,0,:
LEN=6) 0,0,0,0,0,0,:
LEN=7) 0,0,0,0,0,0,0,:
LEN=8) 0,0,0,0,0,0,0,0,:
LEN=9) 0,0,0,0,0,0,0,0,0,:
LEN=10) 0,0,0,0,0,0,0,0,0,0,:
Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

```

-----Class

```

833-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[010][011][012][100][101]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
R3) 0,1,-->
R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--
R5) 0,0,2,-->0,1,--
R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
R7) 0,0,0,3,-->0,1,--0,0,2,--
R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--
R9) 0,0,0,0,4,-->0,1,--0,0,2,--0,0,0,3,--
R10)
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--0,
0,0,0,0,0,6,--
R11) 0,0,0,0,0,5,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
R12)
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,
--0,0,0,0,6,--0,0,0,0,7,--
R13) 0,0,0,0,0,0,6,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--
R14)
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,
0,5,--0,0,0,0,6,--0,0,0,0,7,--0,0,0,0,0,8,--
R15)
0,0,0,0,0,0,0,7,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--0,0,0,0,0,6,
--
R16)
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,

```

0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9  
,--

R17)

0,0,0,0,0,0,0,8,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,  
6,--0,0,0,0,0,0,7,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,3,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

834-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][100][102]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,1,--

R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R7) 0,0,0,3,-->0,1,--0,0,2,--

R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R9) 0,0,0,0,4,-->0,1,--0,0,2,--0,0,0,3,--

R10)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--

R11) 0,0,0,0,0,5,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R12)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R13) 0,0,0,0,0,0,6,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R14)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R15)

0,0,0,0,0,0,0,7,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,  
--

R16)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9

,--  
R17)  
0,0,0,0,0,0,0,0,8,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,: 0,1,:
- LEN=3) 0,0,0,: 0,0,2,:
- LEN=4) 0,0,0,0,: 0,0,0,3,:
- LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:
- LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:
- LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:
- LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:
- LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:
- LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

835-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][100][110]]$

-----

--  
Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
- R3) 0,1,-->
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--
- R5) 0,0,2,-->0,1,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R7) 0,0,0,3,-->0,1,--0,0,2,--
- R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
- R9) 0,0,0,0,4,-->0,1,--0,0,2,--0,0,0,3,--
- R10)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--
- R11) 0,0,0,0,0,5,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R12)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--
- R13) 0,0,0,0,0,0,6,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
- R14)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--
- R15)  
0,0,0,0,0,0,0,7,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--
- R16)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

,--



R17)  
0,0,0,0,0,0,0,0,8,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

List of different nodes in T[L]

- LEN=1) 0,:
  - LEN=2) 0,0,: 0,1,:
  - LEN=3) 0,0,0,: 0,0,2,:
  - LEN=4) 0,0,0,0,: 0,0,0,3,:
  - LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:
  - LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:
  - LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:
  - LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:
  - LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:
  - LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:
- Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

836-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][100][120]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
- R3) 0,1,-->
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--
- R5) 0,0,2,-->0,1,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R7) 0,0,0,3,-->0,1,--0,0,2,--
- R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
- R9) 0,0,0,0,4,-->0,1,--0,0,2,--0,0,0,3,--
- R10)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--
- R11) 0,0,0,0,0,5,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R12)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--
- R13) 0,0,0,0,0,0,6,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
- R14)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--
- R15)  
0,0,0,0,0,0,0,7,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--
- R16)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--
- R17)

0,0,0,0,0,0,0,0,8,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,3,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,

-----Class

837-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][100][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,1,--

R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R7) 0,0,0,3,-->0,1,--0,0,2,--

R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R9) 0,0,0,0,4,-->0,1,--0,0,2,--0,0,0,3,--

R10)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--

R11) 0,0,0,0,0,5,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R12)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R13) 0,0,0,0,0,0,6,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R14)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R15)

0,0,0,0,0,0,0,7,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--

--

R16)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R17)

0,0,0,0,0,0,0,0,8,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,9,--

6,--0,0,0,0,0,0,0,7,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,3,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,

-----Class

838-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][100][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,1,--

R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R7) 0,0,0,3,-->0,1,--0,1,--

R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R9) 0,0,0,0,4,-->0,1,--0,1,--0,1,--

R10)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--

R11) 0,0,0,0,0,5,-->0,1,--0,1,--0,1,--0,1,--

R12)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R13) 0,0,0,0,0,0,6,-->0,1,--0,1,--0,1,--0,1,--0,1,--

R14)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R15) 0,0,0,0,0,0,0,7,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

R16)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,

--

R17) 0,0,0,0,0,0,0,0,8,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,:

LEN=4) 0,0,0,0, : 0,0,0,3, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,4, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

839-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][101][102]]$

-----

--  
 Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,0, --0,1, --0,0,2, --
- R3) 0,1, -->
- R4) 0,0,0, -->0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --
- R5) 0,0,2, -->0,1, --
- R6) 0,0,0,0, -->0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --
- R7) 0,0,0,3, -->0,1, --0,0,2, --
- R8) 0,0,0,0,0, -->0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --
- R9) 0,0,0,0,4, -->0,1, --0,0,2, --0,0,0,3, --
- R10) 0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --
- R11) 0,0,0,0,0,5, -->0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --
- R12) 0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --
- R13) 0,0,0,0,0,0,6, -->0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --
- R14) 0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,0,8, --
- R15) 0,0,0,0,0,0,0,7, -->0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,0,6, --
- R16) 0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,5, --0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,0,8, --0,0,0,0,0,0,0,0,9, --
- R17) 0,0,0,0,0,0,0,0,8, -->0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, : 0,1, :
- LEN=3) 0,0,0, : 0,0,2, :
- LEN=4) 0,0,0,0, : 0,0,0,3, :

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:  
 LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:  
 LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:  
 LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

840-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][101][110]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
- R3) 0,1,-->
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--
- R5) 0,0,2,-->0,1,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R7) 0,0,0,3,-->0,1,--0,0,2,--
- R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
- R9) 0,0,0,0,4,-->0,1,--0,0,2,--0,0,0,3,--
- R10) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--
- R11) 0,0,0,0,0,5,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R12) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--
- R13) 0,0,0,0,0,0,6,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
- R14) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--
- R15) 0,0,0,0,0,0,0,7,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--
- R16) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--
- R17) 0,0,0,0,0,0,0,0,8,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,: 0,1,:
- LEN=3) 0,0,0,: 0,0,2,:
- LEN=4) 0,0,0,0,: 0,0,0,3,:
- LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,

-----Class

841-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][101][120]]$

-----

--

Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,0, --0,1, --0,0,2, --
- R3) 0,1, -->
- R4) 0,0,0, -->0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --
- R5) 0,0,2, -->0,1, --
- R6) 0,0,0,0, -->0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --
- R7) 0,0,0,3, -->0,1, --0,0,2, --
- R8) 0,0,0,0,0, -->0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --
- R9) 0,0,0,0,4, -->0,1, --0,0,2, --0,0,0,3, --
- R10) 0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --
- R11) 0,0,0,0,0,5, -->0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --
- R12) 0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --0,0,0,0,0,0,7, --
- R13) 0,0,0,0,0,0,6, -->0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --
- R14) 0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --0,0,0,0,0,0,7, --0,0,0,0,0,0,0,8, --
- R15) 0,0,0,0,0,0,0,7, -->0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,0,6, --
- R16) 0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,5, --0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,0,8, --0,0,0,0,0,0,0,0,9, --
- R17) 0,0,0,0,0,0,0,0,8, -->0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, : 0,1, :
- LEN=3) 0,0,0, : 0,0,2, :
- LEN=4) 0,0,0,0, : 0,0,0,3, :
- LEN=5) 0,0,0,0,0, : 0,0,0,0,4, :
- LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, :

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:  
 LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,

-----Class

842-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][101][201]]$

-----

--  
 Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
- R3) 0,1,-->
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--
- R5) 0,0,2,-->0,1,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R7) 0,0,0,3,-->0,1,--0,0,2,--
- R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
- R9) 0,0,0,0,4,-->0,1,--0,0,2,--0,0,0,3,--
- R10) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--
- R11) 0,0,0,0,0,5,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R12) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--
- R13) 0,0,0,0,0,0,6,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
- R14) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--
- R15) 0,0,0,0,0,0,0,7,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--
- R16) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--
- R17) 0,0,0,0,0,0,0,0,8,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,: 0,1,:
- LEN=3) 0,0,0,: 0,0,2,:
- LEN=4) 0,0,0,0,: 0,0,0,3,:
- LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:
- LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:
- LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,

-----Class

843-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][101][210]]$   
 -----

- Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,1,--0,0,2,--  
 R3) 0,1,-->  
 R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--  
 R5) 0,0,2,-->0,1,--  
 R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--  
 R7) 0,0,0,3,-->0,1,--0,1,--  
 R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
 R9) 0,0,0,0,4,-->0,1,--0,1,--0,1,--  
 R10)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
 0,0,0,0,0,6,--  
 R11) 0,0,0,0,0,5,-->0,1,--0,1,--0,1,--0,1,--  
 R12)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
 --0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
 R13) 0,0,0,0,0,0,6,-->0,1,--0,1,--0,1,--0,1,--0,1,--  
 R14)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
 0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--  
 R15) 0,0,0,0,0,0,0,7,-->0,1,--0,1,--0,1,--0,1,--0,1,--  
 R16)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
 0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--0,0,0,0,0,0,9,  
 ,--  
 R17) 0,0,0,0,0,0,0,0,8,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

List of different nodes in T[L]

- LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,2, :  
 LEN=4) 0,0,0,0, : 0,0,0,3, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,4, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,



-----Class

844-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][102][110]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0, -->0,0, --0,1, --$

R2)  $0,0, -->0,0,0, --0,1, --0,0,2, --$

R3)  $0,1, -->$

R4)  $0,0,0, -->0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --$

R5)  $0,0,2, -->0,1, --$

R6)  $0,0,0,0, -->0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --$

R7)  $0,0,0,3, -->0,1, --0,0,2, --$

R8)  $0,0,0,0,0, -->0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --$

R9)  $0,0,0,0,4, -->0,1, --0,0,2, --0,0,0,3, --$

R10)

$0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --$

R11)  $0,0,0,0,0,5, -->0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --$

R12)

$0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --$

R13)  $0,0,0,0,0,0,6, -->0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --$

R14)

$0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,0,8, --$

R15)

$0,0,0,0,0,0,0,7, -->0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,0,6, --$

--

R16)

$0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,0,0,6, --0,0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,0,0,8, --0,0,0,0,0,0,0,0,0,9, --$

--

R17)

$0,0,0,0,0,0,0,0,8, -->0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --$

List of different nodes in  $T[L]$

LEN=1)  $0, :$

LEN=2)  $0,0, : 0,1, :$

LEN=3)  $0,0,0, : 0,0,2, :$

LEN=4)  $0,0,0,0, : 0,0,0,3, :$

LEN=5)  $0,0,0,0,0, : 0,0,0,0,4, :$

LEN=6)  $0,0,0,0,0,0, : 0,0,0,0,0,5, :$

LEN=7)  $0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :$

LEN=8)  $0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :$

LEN=9)  $0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :$

LEN=10)  $0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :$

Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][102][120]]$

-----  
 --

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
- R3) 0,1,-->
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--
- R5) 0,0,2,-->0,1,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R7) 0,0,0,3,-->0,1,--0,0,2,--
- R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
- R9) 0,0,0,0,4,-->0,1,--0,0,2,--0,0,0,3,--
- R10) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--
- R11) 0,0,0,0,0,5,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R12) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--
- R13) 0,0,0,0,0,0,6,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
- R14) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--
- R15) 0,0,0,0,0,0,0,7,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--
- R16) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,9,--
- R17) 0,0,0,0,0,0,0,0,8,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--

List of different nodes in T[L]

- LEN=1) 0,:
  - LEN=2) 0,0,: 0,1,:
  - LEN=3) 0,0,0,: 0,0,2,:
  - LEN=4) 0,0,0,0,: 0,0,0,3,:
  - LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:
  - LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:
  - LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:
  - LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:
  - LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:
  - LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:
- Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][102][201]]$

--

Rules of  $T[L]$ :

R1)  $0, -->0,0, --0,1, --$

R2)  $0,0, -->0,0,0, --0,1, --0,0,2, --$

R3)  $0,1, -->$

R4)  $0,0,0, -->0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --$

R5)  $0,0,2, -->0,1, --$

R6)  $0,0,0,0, -->0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --$

R7)  $0,0,0,3, -->0,1, --0,0,2, --$

R8)  $0,0,0,0,0, -->0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --$

R9)  $0,0,0,0,4, -->0,1, --0,0,2, --0,0,0,3, --$

R10)

$0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --$

R11)  $0,0,0,0,0,5, -->0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --$

R12)

$0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --0,0,0,0,0,0,7, --$

R13)  $0,0,0,0,0,0,6, -->0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --$

R14)

$0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,8, --$

R15)

$0,0,0,0,0,0,0,7, -->0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,0,6, --$

R16)

$0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,8, --0,0,0,0,0,0,0,9, --$

R17)

$0,0,0,0,0,0,0,0,8, -->0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --0,0,0,0,0,0,7, --$

List of different nodes in  $T[L]$

LEN=1)  $0, :$

LEN=2)  $0,0, : 0,1, :$

LEN=3)  $0,0,0, : 0,0,2, :$

LEN=4)  $0,0,0,0, : 0,0,0,3, :$

LEN=5)  $0,0,0,0,0, : 0,0,0,0,4, :$

LEN=6)  $0,0,0,0,0,0, : 0,0,0,0,0,5, :$

LEN=7)  $0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :$

LEN=8)  $0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :$

LEN=9)  $0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :$

LEN=10)  $0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :$

Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

847-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][102][210]]$

-----  
--  
Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,1,--

R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R7) 0,0,0,3,-->0,1,--0,1,--

R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R9) 0,0,0,0,4,-->0,1,--0,1,--0,1,--

R10)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--

R11) 0,0,0,0,0,5,-->0,1,--0,1,--0,1,--0,1,--

R12)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,7,--

R13) 0,0,0,0,0,0,6,-->0,1,--0,1,--0,1,--0,1,--0,1,--

R14)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,7,--0,0,0,0,0,8,--

R15) 0,0,0,0,0,0,0,7,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

R16)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--0,0,0,0,6,--0,0,0,0,7,--0,0,0,0,8,--0,0,0,0,9,--

R17) 0,0,0,0,0,0,0,0,8,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,3,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

848-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][110][120]]$

-----  
--  
Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->  
 R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--  
 R5) 0,0,2,-->0,1,--  
 R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--  
 R7) 0,0,0,3,-->0,1,--0,0,2,--  
 R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
 R9) 0,0,0,0,4,-->0,1,--0,0,2,--0,0,0,3,--  
 R10)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
 0,0,0,0,0,6,--  
 R11) 0,0,0,0,0,5,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--  
 R12)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
 --0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
 R13) 0,0,0,0,0,0,6,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
 R14)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
 0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--  
 R15)  
 0,0,0,0,0,0,0,7,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,  
 --  
 R16)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
 0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--0,0,0,0,0,0,9  
 ,--  
 R17)  
 0,0,0,0,0,0,0,8,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,  
 6,--0,0,0,0,0,7,--

List of different nodes in T[L]

LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,2, :  
 LEN=4) 0,0,0,0, : 0,0,0,3, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,4, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,

-----Class

849-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][110][201]]$

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,1,--0,0,2,--  
 R3) 0,1,-->

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--  
 R5) 0,0,2,-->0,1,--  
 R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--  
 R7) 0,0,0,3,-->0,1,--0,0,2,--  
 R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
 R9) 0,0,0,0,4,-->0,1,--0,0,2,--0,0,0,3,--  
 R10)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
 0,0,0,0,0,6,--  
 R11) 0,0,0,0,0,5,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--  
 R12)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
 --0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
 R13) 0,0,0,0,0,0,6,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
 R14)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
 0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--  
 R15)  
 0,0,0,0,0,0,0,7,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,  
 --  
 R16)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
 0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9  
 ,--  
 R17)  
 0,0,0,0,0,0,0,0,8,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,  
 6,--0,0,0,0,0,0,7,--

List of different nodes in T[L]

LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,2, :  
 LEN=4) 0,0,0,0, : 0,0,0,3, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,4, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

850-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][110][210]]$

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,1,--0,0,2,--  
 R3) 0,1,-->  
 R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,1,--  
 R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--  
 R7) 0,0,0,3,-->0,1,--0,1,--  
 R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
 R9) 0,0,0,0,4,-->0,1,--0,1,--0,1,--  
 R10) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--  
 R11) 0,0,0,0,0,0,5,-->0,1,--0,1,--0,1,--0,1,--  
 R12) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
 R13) 0,0,0,0,0,0,6,-->0,1,--0,1,--0,1,--0,1,--0,1,--  
 R14) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--  
 R15) 0,0,0,0,0,0,0,0,7,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R16) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--  
 R17) 0,0,0,0,0,0,0,0,0,8,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,2, :  
 LEN=4) 0,0,0,0, : 0,0,0,3, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,4, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,

-----Class

851-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][120][201]]$

--  
 Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,1,--0,0,2,--  
 R3) 0,1,-->  
 R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--  
 R5) 0,0,2,-->0,1,--  
 R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--  
 R7) 0,0,0,3,-->0,1,--0,0,2,--  
 R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
 R9) 0,0,0,0,4,-->0,1,--0,0,2,--0,0,0,3,--

R10)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--  
R11) 0,0,0,0,0,5,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--  
R12)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R13) 0,0,0,0,0,0,6,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
R14)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--  
R15)  
0,0,0,0,0,0,7,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,  
--  
R16)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--0,0,0,0,0,0,9  
,--  
R17)  
0,0,0,0,0,0,0,8,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,  
6,--0,0,0,0,0,7,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,2, :  
LEN=4) 0,0,0,0, : 0,0,0,3, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,4, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :  
Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,

-----Class  
852-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][120][210]]$   
-----

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,1,--0,0,2,--  
R3) 0,1,-->  
R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--  
R5) 0,0,2,-->0,1,--  
R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--  
R7) 0,0,0,3,-->0,1,--0,1,--  
R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
R9) 0,0,0,0,4,-->0,1,--0,1,--0,1,--  
R10)



$0,0,0,0,0,0, \rightarrow 0,0,0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,0,5, \rightarrow 0,0,0,0,0,6, \rightarrow$   
R11)  $0,0,0,0,0,5, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow$   
R12)  
 $0,0,0,0,0,0,0, \rightarrow 0,0,0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,0,5, \rightarrow 0,0,0,0,0,6, \rightarrow 0,0,0,0,0,0,7, \rightarrow$   
R13)  $0,0,0,0,0,0,6, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow$   
R14)  
 $0,0,0,0,0,0,0,0, \rightarrow 0,0,0,0,0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,0,5, \rightarrow 0,0,0,0,0,0,6, \rightarrow 0,0,0,0,0,0,0,7, \rightarrow 0,0,0,0,0,0,0,0,8, \rightarrow$   
R15)  $0,0,0,0,0,0,0,7, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow$   
R16)  
 $0,0,0,0,0,0,0,0,0, \rightarrow 0,0,0,0,0,0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,0,5, \rightarrow 0,0,0,0,0,0,6, \rightarrow 0,0,0,0,0,0,0,7, \rightarrow 0,0,0,0,0,0,0,0,8, \rightarrow 0,0,0,0,0,0,0,0,0,9, \rightarrow$   
R17)  $0,0,0,0,0,0,0,0,8, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow$

List of different nodes in  $T[L]$

LEN=1)  $0, :$   
LEN=2)  $0,0, : 0,1, :$   
LEN=3)  $0,0,0, : 0,0,2, :$   
LEN=4)  $0,0,0,0, : 0,0,0,3, :$   
LEN=5)  $0,0,0,0,0, : 0,0,0,0,4, :$   
LEN=6)  $0,0,0,0,0,0, : 0,0,0,0,0,5, :$   
LEN=7)  $0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :$   
LEN=8)  $0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :$   
LEN=9)  $0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :$   
LEN=10)  $0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :$   
Number new nodes in level n is given by :  $1,2,2,2,2,2,2,2,2,2,2,$

-----Class

853-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][201][210]]$

--

Rules of  $T[L]$ :

R1)  $0, \rightarrow 0,0, \rightarrow 0,1, \rightarrow$   
R2)  $0,0, \rightarrow 0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow$   
R3)  $0,1, \rightarrow$   
R4)  $0,0,0, \rightarrow 0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow$   
R5)  $0,0,2, \rightarrow 0,1, \rightarrow$   
R6)  $0,0,0,0, \rightarrow 0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow$   
R7)  $0,0,0,3, \rightarrow 0,1, \rightarrow 0,1, \rightarrow$   
R8)  $0,0,0,0,0, \rightarrow 0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,0,5, \rightarrow$   
R9)  $0,0,0,0,4, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow$   
R10)  
 $0,0,0,0,0,0, \rightarrow 0,0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,0,5, \rightarrow 0,0,0,0,0,6, \rightarrow$   
R11)  $0,0,0,0,0,5, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow$   
R12)  
 $0,0,0,0,0,0,0, \rightarrow 0,0,0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,0,5, \rightarrow$

```

--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--
R13) 0,0,0,0,0,0,6,-->0,1,--0,1,--0,1,--0,1,--0,1,--
R14)
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,
0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--
R15) 0,0,0,0,0,0,7,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
R16)
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,
0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--0,0,0,0,0,0,9
,--
R17) 0,0,0,0,0,0,0,8,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

```

List of different nodes in T[L]

```

LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,0,0,: 0,0,2,:
LEN=4) 0,0,0,0,: 0,0,0,3,:
LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:
LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:
LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:
LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:
LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:
LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:
Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

```

-----Class

854-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][100][101]]$

-----

--

Rules of T[L]:

```

R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
R3) 0,1,-->0,1,--
R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
R5) 0,0,1,-->0,0,1,--0,1,--
R6) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
R7) 0,0,0,1,-->0,0,0,1,--0,0,1,--0,1,--
R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--
R9) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
R10)
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--
0,0,1,--0,1,--
R11) 0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
R12)
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--
0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
R13)
0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--
R14)
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,

```

0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R15)  
 0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,  
 0,1,--0,0,1,--0,1,--  
 R16)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
 --0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,  
 ,--  
 R17)  
 0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,  
 0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,1, :  
 LEN=4) 0,0,0,0, : 0,0,0,1, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,1, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

855-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][100][102]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
- R5) 0,0,1,-->0,0,1,--0,1,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R7) 0,0,0,1,-->0,0,0,1,--0,0,1,--0,1,--
- R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R9) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R10)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R11) 0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R12)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--
- R13)  
 0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R14)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,1,--0,1,--

0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R15)  
0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,  
0,1,--0,0,1,--0,1,--  
R16)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--0,1,  
,--  
R17)  
0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,  
0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, :  
LEN=4) 0,0,0,0, : 0,0,0,1, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,1, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :  
Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

856-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][100][110]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,0,1,--0,1,--  
R3) 0,1,-->0,1,--  
R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--  
R5) 0,0,1,-->0,0,1,--0,1,--  
R6) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R7) 0,0,0,1,-->0,0,0,1,--0,0,1,--0,1,--  
R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--  
R9) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R10)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
0,0,1,--0,1,--  
R11) 0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R12)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R13)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--0,1,--  
R14)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,

0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R15)  
 0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,  
 0,1,--0,0,1,--0,1,--  
 R16)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
 --0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,  
 ,--  
 R17)  
 0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,  
 0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,1, :  
 LEN=4) 0,0,0,0, : 0,0,0,1, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,1, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

857-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][100][120]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
- R5) 0,0,1,-->0,0,1,--0,1,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R7) 0,0,0,1,-->0,0,0,1,--0,0,1,--0,1,--
- R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--
- R9) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R10)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
 0,0,1,--0,1,--
- R11) 0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R12)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
 0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R13)  
 0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--
- R14)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,

0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R15)  
 0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,  
 0,1,--0,0,1,--0,1,--  
 R16)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
 --0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,  
 ,--  
 R17)  
 0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,  
 0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,1, :  
 LEN=4) 0,0,0,0, : 0,0,0,1, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,1, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

858-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][100][201]]$

-----

--  
 Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
- R5) 0,0,1,-->0,0,1,--0,1,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R7) 0,0,0,1,-->0,0,0,1,--0,0,1,--0,1,--
- R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--
- R9) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R10)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
 0,0,1,--0,1,--
- R11) 0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R12)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
 0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R13)  
 0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--
- R14)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,

0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R15)  
 0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,  
 0,1,--0,0,1,--0,1,--  
 R16)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,  
 --0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--0,1,  
 ,--  
 R17)  
 0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,  
 0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,1, :  
 LEN=4) 0,0,0,0, : 0,0,0,1, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,1, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

859-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][100][210]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
- R5) 0,0,1,-->0,0,1,--0,1,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R7) 0,0,0,1,-->0,0,0,1,--0,0,1,--0,1,--
- R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--
- R9) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R10)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
 0,0,1,--0,1,--
- R11) 0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R12)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
 0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R13)  
 0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--
- R14)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,

0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R15)  
 0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,  
 0,1,--0,0,1,--0,1,--  
 R16)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
 --0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,  
 ,--  
 R17)  
 0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,  
 0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,1, :  
 LEN=4) 0,0,0,0, : 0,0,0,1, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,1, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

860-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][101][102]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,0,1,--0,1,--  
 R3) 0,1,-->0,1,--  
 R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--  
 R5) 0,0,1,-->0,0,1,--0,1,--  
 R6) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R7) 0,0,0,1,-->0,0,0,1,--0,0,1,--0,1,--  
 R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R9) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R10)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
 0,0,1,--0,1,--  
 R11) 0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R12)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
 0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R13)  
 0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R14)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,



0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R15)  
0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,  
0,1,--0,0,1,--0,1,--  
R16)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--0,1,  
,--  
R17)  
0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,  
0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, :  
LEN=4) 0,0,0,0, : 0,0,0,1, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,1, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :  
Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

861-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][101][110]]$

-----

--  
Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
- R5) 0,0,1,-->0,0,1,--0,1,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R7) 0,0,0,1,-->0,0,0,1,--0,0,1,--0,1,--
- R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--
- R9) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R10)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
0,0,1,--0,1,--
- R11) 0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R12)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R13)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--
- R14)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,

0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R15)  
 0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,  
 0,1,--0,0,1,--0,1,--  
 R16)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
 --0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--0,1,  
 ,--  
 R17)  
 0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,  
 0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,1, :  
 LEN=4) 0,0,0,0, : 0,0,0,1, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,1, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

862-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][101][120]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
- R5) 0,0,1,-->0,0,1,--0,1,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R7) 0,0,0,1,-->0,0,0,1,--0,0,1,--0,1,--
- R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--
- R9) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R10)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
 0,0,1,--0,1,--
- R11) 0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R12)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
 0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R13)  
 0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R14)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,

0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R15)  
0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,  
0,1,--0,0,1,--0,1,--  
R16)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--0,1,  
,--  
R17)  
0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,  
0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, :  
LEN=4) 0,0,0,0, : 0,0,0,1, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,1, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :  
Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

863-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][101][201]]$

-----

--  
Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
- R5) 0,0,1,-->0,0,1,--0,1,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R7) 0,0,0,1,-->0,0,0,1,--0,0,1,--0,1,--
- R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--
- R9) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R10)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
0,0,1,--0,1,--
- R11) 0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R12)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R13)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R14)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,

0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R15)  
 0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,  
 0,1,--0,0,1,--0,1,--  
 R16)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
 --0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,  
 ,--  
 R17)  
 0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,  
 0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,1, :  
 LEN=4) 0,0,0,0, : 0,0,0,1, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,1, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

864-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][101][210]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
- R5) 0,0,1,-->0,0,1,--0,1,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R7) 0,0,0,1,-->0,0,0,1,--0,0,1,--0,1,--
- R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--
- R9) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R10)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
 0,0,1,--0,1,--
- R11) 0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R12)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
 0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R13)  
 0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--
- R14)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,

0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R15)  
 0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,  
 0,1,--0,0,1,--0,1,--  
 R16)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
 --0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--0,1,  
 ,--  
 R17)  
 0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,  
 0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,1, :  
 LEN=4) 0,0,0,0, : 0,0,0,1, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,1, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

865-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][102][110]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
- R5) 0,0,1,-->0,0,1,--0,1,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R7) 0,0,0,1,-->0,0,0,1,--0,0,1,--0,1,--
- R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--
- R9) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R10)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
 0,0,1,--0,1,--
- R11) 0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R12)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
 0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R13)  
 0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--
- R14)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,

0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R15)  
 0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,  
 0,1,--0,0,1,--0,1,--  
 R16)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
 --0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--0,1,  
 ,--  
 R17)  
 0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,  
 0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,1, :  
 LEN=4) 0,0,0,0, : 0,0,0,1, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,1, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

866-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][102][120]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
- R5) 0,0,1,-->0,0,1,--0,1,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R7) 0,0,0,1,-->0,0,0,1,--0,0,1,--0,1,--
- R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--
- R9) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R10)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
 0,0,1,--0,1,--
- R11) 0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R12)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
 0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R13)  
 0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--
- R14)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,

0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R15)  
 0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,  
 0,1,--0,0,1,--0,1,--  
 R16)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
 --0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--0,1,  
 ,--  
 R17)  
 0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,  
 0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,1, :  
 LEN=4) 0,0,0,0, : 0,0,0,1, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,1, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

867-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][102][201]]$

-----

--  
 Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
- R5) 0,0,1,-->0,0,1,--0,1,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R7) 0,0,0,1,-->0,0,0,1,--0,0,1,--0,1,--
- R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--
- R9) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R10)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
 0,0,1,--0,1,--
- R11) 0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R12)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
 0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R13)  
 0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--
- R14)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,

0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R15)  
 0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,  
 0,1,--0,0,1,--0,1,--  
 R16)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,  
 --0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--0,1,  
 ,--  
 R17)  
 0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,  
 0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,1, :  
 LEN=4) 0,0,0,0, : 0,0,0,1, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,1, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

868-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][102][210]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
- R5) 0,0,1,-->0,0,1,--0,1,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R7) 0,0,0,1,-->0,0,0,1,--0,0,1,--0,1,--
- R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--
- R9) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R10)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
 0,0,1,--0,1,--
- R11) 0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R12)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
 0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R13)  
 0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--
- R14)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,



0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R15)  
 0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,  
 0,1,--0,0,1,--0,1,--  
 R16)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
 --0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,  
 ,--  
 R17)  
 0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,  
 0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,1, :  
 LEN=4) 0,0,0,0, : 0,0,0,1, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,1, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

869-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][110][120]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
- R5) 0,0,1,-->0,0,1,--0,1,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R7) 0,0,0,1,-->0,0,0,1,--0,0,1,--0,1,--
- R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--
- R9) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R10)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
 0,0,1,--0,1,--
- R11) 0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R12)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
 0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R13)  
 0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--
- R14)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,

0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R15)  
 0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,  
 0,1,--0,0,1,--0,1,--  
 R16)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
 --0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--0,1,  
 ,--  
 R17)  
 0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,  
 0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,1, :  
 LEN=4) 0,0,0,0, : 0,0,0,1, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,1, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

870-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][110][201]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
- R5) 0,0,1,-->0,0,1,--0,1,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R7) 0,0,0,1,-->0,0,0,1,--0,0,1,--0,1,--
- R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--
- R9) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R10)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
 0,0,1,--0,1,--
- R11) 0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R12)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
 0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R13)  
 0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--
- R14)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,

0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R15)  
 0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,  
 0,1,--0,0,1,--0,1,--  
 R16)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
 --0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--0,1,  
 ,--  
 R17)  
 0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,  
 0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,1, :  
 LEN=4) 0,0,0,0, : 0,0,0,1, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,1, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

871-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][110][210]]$

-----

--  
 Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
- R5) 0,0,1,-->0,0,1,--0,1,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R7) 0,0,0,1,-->0,0,0,1,--0,0,1,--0,1,--
- R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--
- R9) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R10)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
 0,0,1,--0,1,--
- R11) 0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R12)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
 0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R13)  
 0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--
- R14)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,

0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R15)  
 0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,  
 0,1,--0,0,1,--0,1,--  
 R16)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
 --0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,  
 ,--  
 R17)  
 0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,  
 0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,1, :  
 LEN=4) 0,0,0,0, : 0,0,0,1, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,1, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

872-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][120][201]]$

-----

--  
 Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
- R5) 0,0,1,-->0,0,1,--0,1,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R7) 0,0,0,1,-->0,0,0,1,--0,0,1,--0,1,--
- R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--
- R9) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R10)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
 0,0,1,--0,1,--
- R11) 0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R12)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
 0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R13)  
 0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--
- R14)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,

0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R15)  
 0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,  
 0,1,--0,0,1,--0,1,--  
 R16)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
 --0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,  
 ,--  
 R17)  
 0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,  
 0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,1, :  
 LEN=4) 0,0,0,0, : 0,0,0,1, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,1, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

873-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][120][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,0,1,--0,1,--  
 R3) 0,1,-->0,1,--  
 R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--  
 R5) 0,0,1,-->0,0,1,--0,1,--  
 R6) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R7) 0,0,0,1,-->0,0,0,1,--0,0,1,--0,1,--  
 R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R9) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R10)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
 0,0,1,--0,1,--  
 R11) 0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R12)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
 0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R13)  
 0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R14)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,

0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R15)  
 0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,  
 0,1,--0,0,1,--0,1,--  
 R16)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
 --0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,0,1,--0,1,--0,1,  
 ,--  
 R17)  
 0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,  
 0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,1, :  
 LEN=4) 0,0,0,0, : 0,0,0,1, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,1, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

874-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][201][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,0,1,--0,1,--  
 R3) 0,1,-->0,1,--  
 R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--  
 R5) 0,0,1,-->0,0,1,--0,1,--  
 R6) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R7) 0,0,0,1,-->0,0,0,1,--0,0,1,--0,1,--  
 R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--  
 R9) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R10)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
 0,0,1,--0,1,--  
 R11) 0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R12)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
 0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R13)  
 0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--  
 R14)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,

0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R15)  
 0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,  
 0,1,--0,0,1,--0,1,--  
 R16)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
 --0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--0,1,  
 ,--  
 R17)  
 0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,  
 0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,1, :  
 LEN=4) 0,0,0,0, : 0,0,0,1, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,1, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class  
 875-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][100][101][102]]$   
 -----

--  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--  
 R3) 0,1,-->0,1,--  
 R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
 R5) 0,0,1,-->0,0,1,--0,0,2,--  
 R6) 0,0,2,-->0,0,2,1,--0,0,2,--  
 R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
 R8) 0,0,0,1,-->0,0,0,1,--0,0,0,2,--0,0,0,3,--  
 R9) 0,0,0,2,-->0,0,2,1,--0,0,0,2,--0,0,0,2,4,--  
 R10) 0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,3,--  
 R11) 0,0,2,1,-->  
 R12)  
 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
 0,0,0,0,0,5,--  
 R13) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
 R14) 0,0,0,0,2,-->0,0,2,1,--0,0,0,0,2,--0,0,0,0,2,4,--0,0,0,0,2,5,--  
 R15) 0,0,0,0,3,-->0,0,0,3,1,--0,0,0,0,3,1,--0,0,0,0,3,--0,0,0,0,3,5,--  
 R16) 0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,4,--  
 R17) 0,0,0,2,4,-->0,0,2,1,--0,0,0,3,1,--0,0,0,2,4,--  
 R18) 0,0,0,3,1,-->0,0,2,1,--

R19)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R20)

0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R21)

0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,2,--0,0,0,0,0,2,4,--0,0,0,0,0,2,5,--0,0,0,0,0,2,6,--

R22)

0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,3,--0,0,0,0,0,3,5,--0,0,0,0,0,3,6,--

R23)

0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,4,--0,0,0,0,0,4,6,--

R24)

0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--0,0,0,0,0,5,--

R25) 0,0,0,0,2,4,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,2,4,--0,0,0,0,2,4,6,--

R26) 0,0,0,0,2,5,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,2,5,--

R27) 0,0,0,0,3,5,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,3,5,--

R28) 0,0,0,0,4,1,-->0,0,0,3,1,--0,0,0,3,1,--

R29) 0,0,0,0,4,2,-->0,0,2,1,--0,0,0,3,1,--

R30)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R31)

0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R32)

0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,2,4,--0,0,0,0,0,0,2,5,--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,2,7,--

R33)

0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,3,5,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,7,--

R34)

0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,0,4,--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,7,--

R35)

0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--0,0,0,0,0,5,--0,0,0,0,0,5,7,--

R36)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,--

R37)

0,0,0,0,0,2,4,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,0,2,4,--0,0,0,0,0,2,4,6,--0,0,0,0,0,2,4,7,--

R38)

0,0,0,0,0,2,5,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,2,5,--0,0,0,0,0,2,5,7,--



R39)

0,0,0,0,0,2,6,-->0,0,2,1,--0,0,0,0,0,5,2,--0,0,0,0,0,2,6,4,--0,0,0,0,0,5,2,--0,0,0,0,0,2,6,--

R40)

0,0,0,0,0,3,5,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,0,3,5,--0,0,0,0,0,3,5,7,--

R41)

0,0,0,0,0,3,6,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,5,3,--0,0,0,0,0,5,3,--0,0,0,0,0,3,6,--

R42)

0,0,0,0,0,4,6,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,5,1,--0,0,0,0,0,4,6,--

R43) 0,0,0,0,0,5,1,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--

R44) 0,0,0,0,0,5,2,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--

R45) 0,0,0,0,0,5,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--

R46) 0,0,0,0,2,4,6,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,4,2,--0,0,0,0,2,4,6,--

R47)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R48)

0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R49)

0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,2,4,--0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,2,8,--

R50)

0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,3,5,--0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,3,8,--

R51)

0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,4,8,--

R52)

0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,5,8,--

R53)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,6,--0,0,0,0,0,0,6,8,--

R54)

0,0,0,0,0,0,7,-->0,0,0,0,0,0,7,1,--0,0,0,0,0,0,7,2,--0,0,0,0,0,0,7,3,--0,0,0,0,0,0,7,4,--0,0,0,0,0,0,7,5,--0,0,0,0,0,0,7,1,--0,0,0,0,0,0,7,7,--

R55)

0,0,0,0,0,0,2,4,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,0,0,2,4,--0,0,0,0,0,0,2,4,6,--0,0,0,0,0,0,2,4,7,--0,0,0,0,0,0,2,4,8,--

R56)

0,0,0,0,0,0,2,5,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,0,2,5,--0,0,0,0,0,0,2,5,7,--0,0,0,0,0,0,2,5,8,--

R57)

0,0,0,0,0,0,2,6,-->0,0,2,1,--0,0,0,0,0,5,2,--0,0,0,0,0,2,6,4,--0,0,0,0,0,5,2,--0,0,0,0,0,2,6,--0,0,0,0,0,0,2,6,8,--

R58)

0,0,0,0,0,0,2,7,-->0,0,2,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,2,7,4,--0,0,0,0,0,0,2,7,  
5,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,2,7,--

R59)

0,0,0,0,0,0,3,5,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,0,0,3,5,--0,0,0,0,  
0,0,3,5,7,--0,0,0,0,0,0,3,5,8,--

R60)

0,0,0,0,0,0,3,6,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,5,3,--0,0,0,0,0,5,3,--0,0,0,0,  
0,0,3,6,--0,0,0,0,0,0,3,6,8,--

R61)

0,0,0,0,0,0,3,7,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,6,3,--0,0,0,0,0,0,3,7,5,--0,  
0,0,0,0,0,6,3,--0,0,0,0,0,0,3,7,--

R62)

0,0,0,0,0,0,4,6,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,5,1,--0,0,0,  
0,0,0,4,6,--0,0,0,0,0,0,4,6,8,--

R63)

0,0,0,0,0,0,4,7,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,6,4,--0,0,  
0,0,0,0,6,4,--0,0,0,0,0,0,4,7,--

R64)

0,0,0,0,0,0,5,7,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--  
0,0,0,0,0,6,1,--0,0,0,0,0,0,5,7,--

R65)

0,0,0,0,0,0,6,1,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--  
R66)

0,0,0,0,0,0,6,2,-->0,0,2,1,--0,0,0,0,0,5,2,--0,0,0,0,0,2,6,4,--0,0,0,0,0,5,2,--

R67) 0,0,0,0,0,0,6,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,5,3,--0,0,0,0,0,5,3,--

R68) 0,0,0,0,0,0,6,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,5,1,--

R69)

0,0,0,0,0,2,4,6,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,4,2,--0,0,0,0,0,2,4,6,--0,0,0,0,0,  
2,4,6,8,--

R70)

0,0,0,0,0,2,4,7,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,0,2,6,4,--0,0,0,0,0,2,6,4,--0,0,0,  
0,0,2,4,7,--

R71)

0,0,0,0,0,2,5,7,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,5,2,--0,0,0,0,0,  
2,5,7,--

R72) 0,0,0,0,0,2,6,4,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,4,2,--

R73)

0,0,0,0,0,3,5,7,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,0,5,3,--0,0,0,0,0,  
3,5,7,--

R74)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R75)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,  
0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,  
0,0,0,0,8,--

R76)

0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,2,4,--0,0,0,0,0,

0,0,0,2,5,--0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,2,8,--0,0,0,0,0,0,0,2,9,--

R77)

0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,3,5,--0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,3,8,--0,0,0,0,0,0,0,3,9,--

R78)

0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,4,8,--0,0,0,0,0,0,0,4,9,--

R79)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,5,8,--0,0,0,0,0,0,0,5,9,--

R80)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,6,--0,0,0,0,0,0,6,8,--0,0,0,0,0,0,6,9,--

R81)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,7,1,--0,0,0,0,0,0,7,2,--0,0,0,0,0,0,7,3,--0,0,0,0,0,0,7,4,--0,0,0,0,0,0,7,5,--0,0,0,0,0,0,7,1,--0,0,0,0,0,0,7,7,--0,0,0,0,0,0,7,9,--

R82)

0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,8,1,--0,0,0,0,0,0,8,2,--0,0,0,0,0,0,8,3,--0,0,0,0,0,0,8,4,--0,0,0,0,0,0,8,5,--0,0,0,0,0,0,8,6,--0,0,0,0,0,0,8,1,--0,0,0,0,0,0,8,8,--

R83)

0,0,0,0,0,0,0,2,4,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,0,0,2,4,--0,0,0,0,0,0,2,4,6,--0,0,0,0,0,0,2,4,7,--0,0,0,0,0,0,2,4,8,--0,0,0,0,0,0,2,4,9,--

R84)

0,0,0,0,0,0,0,2,5,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,0,2,5,--0,0,0,0,0,0,2,5,7,--0,0,0,0,0,0,2,5,8,--0,0,0,0,0,0,2,5,9,--

R85)

0,0,0,0,0,0,0,2,6,-->0,0,2,1,--0,0,0,0,0,5,2,--0,0,0,0,0,2,6,4,--0,0,0,0,0,5,2,--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,2,6,8,--0,0,0,0,0,0,2,6,9,--

R86)

0,0,0,0,0,0,0,2,7,-->0,0,2,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,2,7,4,--0,0,0,0,0,0,2,7,5,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,2,7,--0,0,0,0,0,0,2,7,9,--

R87)

0,0,0,0,0,0,0,2,8,-->0,0,2,1,--0,0,0,0,0,0,0,7,2,--0,0,0,0,0,0,0,2,8,4,--0,0,0,0,0,0,2,8,5,--0,0,0,0,0,0,2,8,6,--0,0,0,0,0,0,7,2,--0,0,0,0,0,0,2,8,--

R88)

0,0,0,0,0,0,0,3,5,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,0,0,3,5,--0,0,0,0,0,0,3,5,7,--0,0,0,0,0,0,3,5,8,--0,0,0,0,0,0,3,5,9,--

R89)

0,0,0,0,0,0,0,3,6,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,5,3,--0,0,0,0,0,5,3,--0,0,0,0,0,3,6,--0,0,0,0,0,0,3,6,8,--0,0,0,0,0,0,3,6,9,--

R90)

0,0,0,0,0,0,0,3,7,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,3,7,5,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,3,7,--0,0,0,0,0,0,3,7,9,--

R91)

0,0,0,0,0,0,0,3,8,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,0,7,3,--0,0,0,0,0,0,0,3,8,  
5,--0,0,0,0,0,0,0,3,8,6,--0,0,0,0,0,0,0,7,3,--0,0,0,0,0,0,0,3,8,--

R92)

0,0,0,0,0,0,0,4,6,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,5,1,--0,0,  
0,0,0,0,0,4,6,--0,0,0,0,0,0,4,6,8,--0,0,0,0,0,0,4,6,9,--

R93)

0,0,0,0,0,0,0,4,7,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,0,6,4,--0,  
0,0,0,0,0,6,4,--0,0,0,0,0,0,4,7,--0,0,0,0,0,0,4,7,9,--

R94)

0,0,0,0,0,0,0,4,8,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,0,0,7,4,--  
0,0,0,0,0,0,4,8,6,--0,0,0,0,0,0,7,4,--0,0,0,0,0,0,4,8,--

R95)

0,0,0,0,0,0,0,5,7,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,  
--0,0,0,0,0,6,1,--0,0,0,0,0,0,5,7,--0,0,0,0,0,0,5,7,9,--

R96)

0,0,0,0,0,0,0,5,8,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,  
--0,0,0,0,0,0,7,5,--0,0,0,0,0,0,7,5,--0,0,0,0,0,0,5,8,--

R97)

0,0,0,0,0,0,0,6,8,-->0,0,0,0,0,6,1,--0,0,0,0,0,6,2,--0,0,0,0,0,6,3,--0,0,0,0,  
0,0,6,4,--0,0,0,0,0,6,1,--0,0,0,0,0,0,7,1,--0,0,0,0,0,0,6,8,--

R98)

0,0,0,0,0,0,0,7,1,-->0,0,0,0,0,6,1,--0,0,0,0,0,6,2,--0,0,0,0,0,6,3,--0,0,0,0,  
0,0,6,4,--0,0,0,0,0,6,1,--

R99)

0,0,0,0,0,0,0,7,2,-->0,0,2,1,--0,0,0,0,0,6,2,--0,0,0,0,0,2,7,4,--0,0,0,0,0,0,2,  
7,5,--0,0,0,0,0,6,2,--

R100)

0,0,0,0,0,0,0,7,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,6,3,--0,0,0,0,0,3,7,5,--  
0,0,0,0,0,6,3,--

R101)

0,0,0,0,0,0,0,7,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,6,4,--0,  
0,0,0,0,6,4,--

R102)

0,0,0,0,0,0,0,7,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,  
--0,0,0,0,0,6,1,--

R103)

0,0,0,0,0,0,2,4,6,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,4,2,--0,0,0,0,0,2,4,6,--0,0,0,  
0,0,0,2,4,6,8,--0,0,0,0,0,2,4,6,9,--

R104)

0,0,0,0,0,0,2,4,7,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,0,2,6,4,--0,0,0,0,0,2,6,4,--0,0,  
0,0,0,0,2,4,7,--0,0,0,0,0,2,4,7,9,--

R105)

0,0,0,0,0,0,2,4,8,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,0,2,7,4,--0,0,0,0,0,2,4,8,6,  
--0,0,0,0,0,2,7,4,--0,0,0,0,0,2,4,8,--

R106)

0,0,0,0,0,0,2,5,7,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,5,2,--0,0,0,0,  
0,0,2,5,7,--0,0,0,0,0,2,5,7,9,--

R107)

0,0,0,0,0,0,2,5,8,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,2,7,5,--0,0,

0,0,0,0,2,7,5,--0,0,0,0,0,2,5,8,--  
 R108)  
 0,0,0,0,0,2,6,8,-->0,0,2,1,--0,0,0,0,0,5,2,--0,0,0,0,0,2,6,4,--0,0,0,0,0,5,2,--0,  
 0,0,0,0,0,6,2,--0,0,0,0,0,2,6,8,--  
 R109)  
 0,0,0,0,0,2,7,4,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,0,2,6,4,--0,0,0,0,0,2,6,4,--  
 R110) 0,0,0,0,0,2,7,5,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,5,2,--  
 R111)  
 0,0,0,0,0,3,5,7,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,0,5,3,--0,0,0,0,  
 0,0,3,5,7,--0,0,0,0,0,3,5,7,9,--  
 R112)  
 0,0,0,0,0,3,5,8,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,0,3,7,5,--0,0,  
 0,0,0,0,3,7,5,--0,0,0,0,0,3,5,8,--  
 R113)  
 0,0,0,0,0,3,6,8,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,5,3,--0,0,0,0,0,5,3,--0,0,0,  
 0,0,0,6,3,--0,0,0,0,0,3,6,8,--  
 R114) 0,0,0,0,0,3,7,5,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,0,5,3,--  
 R115)  
 0,0,0,0,0,4,6,8,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,5,1,--0,0,  
 0,0,0,0,6,4,--0,0,0,0,0,4,6,8,--  
 R116)  
 0,0,0,0,0,2,4,6,8,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,4,2,--0,0,0,0,0,2,6,4,--0,0,0,0,  
 0,2,4,6,8,--

List of different nodes in T[L]

LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,1, : 0,0,2, :  
 LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,2, : 0,0,0,3, : 0,0,2,1, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,2,4, :  
 0,0,0,3,1, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, :  
 0,0,0,0,0,5, : 0,0,0,0,2,4, : 0,0,0,0,2,5, : 0,0,0,0,3,5, : 0,0,0,0,4,1, : 0,0,0,0,4,2, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,2,4, : 0,0,0,0,0,2,5, :  
 0,0,0,0,0,2,6, : 0,0,0,0,0,3,5, : 0,0,0,0,0,3,6, : 0,0,0,0,0,4,6, : 0,0,0,0,0,5,1, :  
 0,0,0,0,0,5,2, : 0,0,0,0,0,5,3, : 0,0,0,0,2,4,6, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :  
 0,0,0,0,0,0,2,4, : 0,0,0,0,0,0,2,5, : 0,0,0,0,0,0,2,6, : 0,0,0,0,0,0,2,7, :  
 0,0,0,0,0,0,3,5, : 0,0,0,0,0,0,3,6, : 0,0,0,0,0,0,3,7, : 0,0,0,0,0,0,4,6, :  
 0,0,0,0,0,0,4,7, : 0,0,0,0,0,0,5,7, : 0,0,0,0,0,0,6,1, : 0,0,0,0,0,0,6,2, :  
 0,0,0,0,0,0,6,3, : 0,0,0,0,0,0,6,4, : 0,0,0,0,0,2,4,6, : 0,0,0,0,0,2,4,7, :  
 0,0,0,0,0,2,5,7, : 0,0,0,0,0,2,6,4, : 0,0,0,0,0,3,5,7, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, :  
 0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,2,4, : 0,0,0,0,0,0,0,2,5, :  
 0,0,0,0,0,0,0,2,6, : 0,0,0,0,0,0,0,2,7, : 0,0,0,0,0,0,0,2,8, : 0,0,0,0,0,0,0,3,5, :  
 0,0,0,0,0,0,0,3,6, : 0,0,0,0,0,0,0,3,7, : 0,0,0,0,0,0,0,3,8, : 0,0,0,0,0,0,0,4,6, :  
 0,0,0,0,0,0,0,4,7, : 0,0,0,0,0,0,0,4,8, : 0,0,0,0,0,0,0,5,7, : 0,0,0,0,0,0,0,5,8, :

0,0,0,0,0,0,0,6,8, : 0,0,0,0,0,0,0,7,1, : 0,0,0,0,0,0,0,7,2, : 0,0,0,0,0,0,0,7,3, :  
 0,0,0,0,0,0,0,7,4, : 0,0,0,0,0,0,0,7,5, : 0,0,0,0,0,0,2,4,6, : 0,0,0,0,0,0,2,4,7, :  
 0,0,0,0,0,0,2,4,8, : 0,0,0,0,0,0,2,5,7, : 0,0,0,0,0,0,2,5,8, : 0,0,0,0,0,0,2,6,8, :  
 0,0,0,0,0,0,2,7,4, : 0,0,0,0,0,0,2,7,5, : 0,0,0,0,0,0,3,5,7, : 0,0,0,0,0,0,3,5,8, :  
 0,0,0,0,0,0,3,6,8, : 0,0,0,0,0,0,3,7,5, : 0,0,0,0,0,0,4,6,8, : 0,0,0,0,0,2,4,6,8, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, :  
 0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :  
 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,2,4, : 0,0,0,0,0,0,0,0,2,5, :  
 0,0,0,0,0,0,0,0,2,6, : 0,0,0,0,0,0,0,0,2,7, : 0,0,0,0,0,0,0,0,2,8, :  
 0,0,0,0,0,0,0,0,2,9, : 0,0,0,0,0,0,0,0,3,5, : 0,0,0,0,0,0,0,0,3,6, :  
 0,0,0,0,0,0,0,0,3,7, : 0,0,0,0,0,0,0,0,3,8, : 0,0,0,0,0,0,0,0,3,9, :  
 0,0,0,0,0,0,0,0,4,6, : 0,0,0,0,0,0,0,0,4,7, : 0,0,0,0,0,0,0,0,4,8, :  
 0,0,0,0,0,0,0,0,4,9, : 0,0,0,0,0,0,0,0,5,7, : 0,0,0,0,0,0,0,0,5,8, :  
 0,0,0,0,0,0,0,0,5,9, : 0,0,0,0,0,0,0,0,6,8, : 0,0,0,0,0,0,0,0,6,9, :  
 0,0,0,0,0,0,0,0,7,9, : 0,0,0,0,0,0,0,0,8,1, : 0,0,0,0,0,0,0,0,8,2, :  
 0,0,0,0,0,0,0,0,8,3, : 0,0,0,0,0,0,0,0,8,4, : 0,0,0,0,0,0,0,0,8,5, :  
 0,0,0,0,0,0,0,0,8,6, : 0,0,0,0,0,0,0,2,4,6, : 0,0,0,0,0,0,0,2,4,7, :  
 0,0,0,0,0,0,0,2,4,8, : 0,0,0,0,0,0,0,2,4,9, : 0,0,0,0,0,0,0,2,5,7, :  
 0,0,0,0,0,0,0,2,5,8, : 0,0,0,0,0,0,0,2,5,9, : 0,0,0,0,0,0,0,2,6,8, :  
 0,0,0,0,0,0,0,2,6,9, : 0,0,0,0,0,0,0,2,7,9, : 0,0,0,0,0,0,0,2,8,4, :  
 0,0,0,0,0,0,0,2,8,5, : 0,0,0,0,0,0,0,2,8,6, : 0,0,0,0,0,0,0,3,5,7, :  
 0,0,0,0,0,0,0,3,5,8, : 0,0,0,0,0,0,0,3,5,9, : 0,0,0,0,0,0,0,3,6,8, :  
 0,0,0,0,0,0,0,3,6,9, : 0,0,0,0,0,0,0,3,7,9, : 0,0,0,0,0,0,0,3,8,5, :  
 0,0,0,0,0,0,0,3,8,6, : 0,0,0,0,0,0,0,4,6,8, : 0,0,0,0,0,0,0,4,6,9, :  
 0,0,0,0,0,0,0,4,7,9, : 0,0,0,0,0,0,0,4,8,6, : 0,0,0,0,0,0,0,5,7,9, :  
 0,0,0,0,0,0,2,4,6,8, : 0,0,0,0,0,0,2,4,6,9, : 0,0,0,0,0,0,2,4,7,9, :  
 0,0,0,0,0,0,2,4,8,6, : 0,0,0,0,0,0,2,5,7,9, : 0,0,0,0,0,0,3,5,7,9, :  
 Number new nodes in level n is given by : 1,2,3,5,7,11,17,27,43,69,

-----Class

876-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][100][101][110]]$

-----

--

Rules of  $T[L]$ :

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,0, --0,0,1, --0,0,1, --
- R3) 0,1, -->0,1, --
- R4) 0,0,0, -->0,0,0,0, --0,0,0,1, --0,0,0,1, --0,0,0,1, --
- R5) 0,0,1, -->0,0,1, --0,0,1, --
- R6) 0,0,0,0, -->0,0,0,0,0, --0,0,0,0,1, --0,0,0,0,1, --0,0,0,0,1, --0,0,0,0,1, --
- R7) 0,0,0,1, -->0,0,0,1, --0,0,0,1, --0,0,0,1, --
- R8) 0,0,0,0,0, -->0,0,0,0,0,0, --0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,0,1, --
- R9) 0,0,0,0,1, -->0,0,0,0,1, --0,0,0,0,1, --0,0,0,0,1, --0,0,0,0,1, --
- R10) 0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,0,0,0,0,0,1, --0,0,0,0,0,0,1, --0,0,0,0,0,0,1, --0,0,0,0,0,0,1, --0,0,0,0,0,0,1, --0,0,0,0,0,0,1, --

R11)  
0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,1,--  
--

R12)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,  
0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--

R13)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,  
0,0,0,0,0,1,--0,0,0,0,0,1,--

R14)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,  
0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,  
,0,0,0,0,1,--0,0,0,0,0,0,0,1,--

R15)  
0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,  
0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--

R16)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,  
1,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,  
,0,0,1,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,--

R17)  
0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,  
0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,  
,0,0,0,0,0,1,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,0, : 0,0,1, :

LEN=4) 0,0,0,0, : 0,0,0,1, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,1, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :

Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

877-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][100][101][120]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--

R3) 0,1,-->0,1,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R5) 0,0,1,-->0,0,1,--0,0,2,--

R6) 0,0,2,-->0,0,1,--0,1,--

R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R8) 0,0,0,1,-->0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R9) 0,0,0,2,-->0,0,0,1,--0,0,1,--0,0,2,--  
R10) 0,0,0,3,-->0,0,0,2,--0,0,0,2,--0,1,--  
R11)  
0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--  
R12) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R13) 0,0,0,0,2,-->0,0,0,0,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R14) 0,0,0,0,3,-->0,0,0,0,2,--0,0,0,0,2,--0,0,1,--0,0,2,--  
R15) 0,0,0,0,4,-->0,0,0,0,3,--0,0,0,0,4,2,--0,0,0,0,3,--0,1,--  
R16)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R17)  
0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,  
--  
R18) 0,0,0,0,0,2,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R19) 0,0,0,0,0,3,-->0,0,0,0,0,2,--0,0,0,0,0,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R20) 0,0,0,0,0,4,-->0,0,0,0,0,3,--0,0,0,0,0,4,2,--0,0,0,0,0,3,--0,0,1,--0,0,2,--  
R21)  
0,0,0,0,0,5,-->0,0,0,0,0,4,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,4,--0,1,--  
R22) 0,0,0,0,4,2,-->0,0,0,0,2,--0,0,0,1,--0,0,1,--0,0,2,--  
R23)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R24)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,  
0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R25)  
0,0,0,0,0,0,2,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,  
0,4,--0,0,0,0,0,5,--  
R26)  
0,0,0,0,0,0,3,-->0,0,0,0,0,0,2,--0,0,0,0,0,0,2,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,  
--0,0,0,0,4,--  
R27)  
0,0,0,0,0,0,4,-->0,0,0,0,0,0,3,--0,0,0,0,0,0,4,2,--0,0,0,0,0,0,3,--0,0,0,1,--0,0,0,  
2,--0,0,0,3,--  
R28)  
0,0,0,0,0,0,5,-->0,0,0,0,0,0,4,--0,0,0,0,0,0,5,2,--0,0,0,0,0,0,5,3,--0,0,0,0,0,0,4,  
--0,0,1,--0,0,2,--  
R29)  
0,0,0,0,0,0,6,-->0,0,0,0,0,0,5,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,6,  
4,--0,0,0,0,0,5,--0,1,--  
R30) 0,0,0,0,0,4,2,-->0,0,0,0,0,2,--0,0,0,0,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R31) 0,0,0,0,0,5,2,-->0,0,0,0,0,3,--0,0,0,0,2,--0,0,0,0,2,--0,0,1,--0,0,2,--  
R32) 0,0,0,0,0,5,3,-->0,0,0,0,0,4,2,--0,0,0,0,0,4,2,--0,0,0,1,--0,0,1,--0,0,2,--  
R33)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--



R34)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R35)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--

R36)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--

R37)

0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R38)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,2,--0,0,0,0,0,0,0,5,3,--0,0,0,0,0,0,0,4,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R39)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,2,--0,0,0,0,0,0,0,6,3,--0,0,0,0,0,0,0,6,4,--0,0,0,0,0,0,0,5,--0,0,1,--0,0,2,--

R40)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,2,--0,0,0,0,0,0,0,7,3,--0,0,0,0,0,0,0,7,4,--0,0,0,0,0,0,0,7,5,--0,0,0,0,0,0,0,6,--0,1,--

R41)

0,0,0,0,0,0,0,4,2,-->0,0,0,0,0,0,0,2,--0,0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R42)

0,0,0,0,0,0,0,5,2,-->0,0,0,0,0,0,0,3,--0,0,0,0,0,0,2,--0,0,0,0,0,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R43)

0,0,0,0,0,0,0,5,3,-->0,0,0,0,0,0,0,4,2,--0,0,0,0,0,0,0,4,2,--0,0,0,0,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R44)

0,0,0,0,0,0,0,6,2,-->0,0,0,0,0,0,0,4,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,2,--0,0,0,0,0,0,3,--0,0,1,--0,0,2,--

R45)

0,0,0,0,0,0,0,6,3,-->0,0,0,0,0,0,0,5,2,--0,0,0,0,0,0,0,5,2,--0,0,0,0,2,--0,0,0,0,2,--0,0,1,--0,0,2,--

R46)

0,0,0,0,0,0,0,6,4,-->0,0,0,0,0,0,0,5,3,--0,0,0,0,0,0,0,6,4,2,--0,0,0,0,0,0,0,5,3,--0,0,0,1,--0,0,1,--0,0,2,--

R47)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,9,--

R48)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R49)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

-

R50)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R51)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--

R52)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,2,--0,0,0,0,0,0,0,0,5,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--

R53)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,2,--0,0,0,0,0,0,0,0,6,3,--0,0,0,0,0,0,0,0,6,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--

R54)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,2,--0,0,0,0,0,0,0,0,7,3,--0,0,0,0,0,0,0,0,7,4,--0,0,0,0,0,0,0,0,7,5,--0,0,0,0,0,0,0,0,6,--0,0,1,--0,0,2,--

R55)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,2,--0,0,0,0,0,0,0,0,8,3,--0,0,0,0,0,0,0,0,8,4,--0,0,0,0,0,0,0,0,8,5,--0,0,0,0,0,0,0,0,8,6,--0,0,0,0,0,0,0,0,7,--0,1,--

R56)

0,0,0,0,0,0,0,0,4,2,-->0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--

R57)

0,0,0,0,0,0,0,0,5,2,-->0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,2,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R58)

0,0,0,0,0,0,0,0,5,3,-->0,0,0,0,0,0,0,0,4,2,--0,0,0,0,0,0,0,0,4,2,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--

R59)

0,0,0,0,0,0,0,0,6,2,-->0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--

R60)

0,0,0,0,0,0,0,0,6,3,-->0,0,0,0,0,0,0,0,5,2,--0,0,0,0,0,0,0,0,5,2,--0,0,0,0,0,0,2,--0,0,0,0,0,0,2,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--

R61)

0,0,0,0,0,0,0,0,6,4,-->0,0,0,0,0,0,0,0,5,3,--0,0,0,0,0,0,0,0,6,4,2,--0,0,0,0,0,0,0,0,5,3,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--

R62)

0,0,0,0,0,0,0,0,7,2,-->0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,2,--0,0,0,0,0,0,0,5,3,--0,0,0,0,0,0,0,4,--0,0,0,0,1,--0,0,0,0,2,--

R63)

0,0,0,0,0,0,0,0,7,3,-->0,0,0,0,0,0,0,0,6,2,--0,0,0,0,0,0,0,0,6,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,2,--0,0,0,0,0,0,3,--0,0,0,0,1,--0,0,0,0,2,--

R64)

0,0,0,0,0,0,0,0,7,4,-->0,0,0,0,0,0,0,0,6,3,--0,0,0,0,0,0,0,0,7,4,2,--0,0,0,0,0,0,0,0,6,3,--0,0,0,0,0,2,--0,0,0,0,0,2,--0,0,0,0,1,--0,0,0,0,2,--

R65)

0,0,0,0,0,0,0,0,7,5,-->0,0,0,0,0,0,0,0,6,4,--0,0,0,0,0,0,0,0,7,5,2,--0,0,0,0,0,0,0,0,7,5,3,--0,0,0,0,0,0,0,0,6,4,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--

R66)

0,0,0,0,0,0,6,4,2,-->0,0,0,0,0,0,4,2,--0,0,0,0,0,2,--0,0,0,0,1,--0,0,0,1,--0,0,0,2,  
--0,0,0,3,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,:

0,0,0,0,0,5,: 0,0,0,0,4,2,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,:

0,0,0,0,0,0,4,: 0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,: 0,0,0,0,0,4,2,: 0,0,0,0,0,5,2,:

0,0,0,0,0,5,3,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:

0,0,0,0,0,0,4,2,: 0,0,0,0,0,0,5,2,: 0,0,0,0,0,0,5,3,: 0,0,0,0,0,0,6,2,:

0,0,0,0,0,0,6,3,: 0,0,0,0,0,0,6,4,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,:

0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,4,2,: 0,0,0,0,0,0,0,5,2,:

0,0,0,0,0,0,0,5,3,: 0,0,0,0,0,0,0,6,2,: 0,0,0,0,0,0,0,6,3,: 0,0,0,0,0,0,0,6,4,:

0,0,0,0,0,0,0,7,2,: 0,0,0,0,0,0,0,7,3,: 0,0,0,0,0,0,0,7,4,: 0,0,0,0,0,0,0,7,5,:

0,0,0,0,0,0,6,4,2,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,:

0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,:

0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,0,4,2,: 0,0,0,0,0,0,0,0,5,2,:

0,0,0,0,0,0,0,0,5,3,: 0,0,0,0,0,0,0,0,6,2,: 0,0,0,0,0,0,0,0,6,3,:

0,0,0,0,0,0,0,0,6,4,: 0,0,0,0,0,0,0,0,7,2,: 0,0,0,0,0,0,0,0,7,3,:

0,0,0,0,0,0,0,0,7,4,: 0,0,0,0,0,0,0,0,7,5,: 0,0,0,0,0,0,0,0,8,2,:

0,0,0,0,0,0,0,0,8,3,: 0,0,0,0,0,0,0,0,8,4,: 0,0,0,0,0,0,0,0,8,5,:

0,0,0,0,0,0,0,0,8,6,: 0,0,0,0,0,0,0,6,4,2,: 0,0,0,0,0,0,0,7,4,2,:

0,0,0,0,0,0,0,7,5,2,: 0,0,0,0,0,0,0,7,5,3,:

Number new nodes in level n is given by : 1,2,3,4,5,7,10,14,20,29,

-----Class

878-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][100][101][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,0,1,--

R3) 0,1,-->0,1,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,1,--0,0,0,3,--

R5) 0,0,1,-->0,0,1,--0,0,1,--

R6) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,3,--0,0,0,0,4,--

R7) 0,0,0,1,-->0,0,0,1,--0,0,0,1,--0,0,0,3,--

R8) 0,0,0,3,-->0,0,1,--0,0,0,1,--0,0,0,3,--

R9)

0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--

R10) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,3,--0,0,0,0,4,--

R11) 0,0,0,0,3,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,3,--0,0,0,0,4,--

R12) 0,0,0,0,4,-->0,0,1,--0,0,0,1,--0,0,0,0,3,--0,0,0,0,4,--

R13)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R14)

0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,  
--

R15)

0,0,0,0,0,3,-->0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R16)

0,0,0,0,0,4,-->0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R17) 0,0,0,0,0,5,-->0,0,1,--0,0,0,1,--0,0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--

R18)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R19)

0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,  
0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R20)

0,0,0,0,0,0,3,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,  
0,0,0,0,5,--0,0,0,0,0,0,6,--

R21)

0,0,0,0,0,0,4,-->0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,  
0,0,5,--0,0,0,0,0,0,6,--

R22)

0,0,0,0,0,0,5,-->0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,  
--0,0,0,0,0,0,6,--

R23)

0,0,0,0,0,0,6,-->0,0,1,--0,0,0,1,--0,0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,  
0,0,0,6,--

R24)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R25)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,  
0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R26)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,  
0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R27)

0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,  
--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R28)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,

0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R29)

0,0,0,0,0,0,6,-->0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R30)

0,0,0,0,0,0,0,7,-->0,0,1,--0,0,0,1,--0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R31)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,9,--

R32)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R33)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R34)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R35)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R36)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R37)

0,0,0,0,0,0,0,0,7,-->0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R38)

0,0,0,0,0,0,0,0,8,-->0,0,1,--0,0,0,1,--0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,:

LEN=4) 0,0,0,0,: 0,0,0,1, : 0,0,0,3, :

LEN=5) 0,0,0,0,0,: 0,0,0,0,1, : 0,0,0,0,3, : 0,0,0,0,4, :

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, :

0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, :

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, :

0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,3, :

0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7, :

0,0,0,0,0,0,0,0,8, :

LEN=10) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,0,6, :  
 0,0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,0,9, :  
 Number new nodes in level n is given by : 1,2,2,3,4,5,6,7,8,9,

-----Class

879-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][100][101][210]]$   
 -----  
 --  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,0,1,--0,0,1,--  
 R3) 0,1,-->0,1,--  
 R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,1,--0,0,0,3,--  
 R5) 0,0,1,-->0,0,1,--0,0,1,--  
 R6) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,3,--0,0,0,0,4,--  
 R7) 0,0,0,1,-->0,0,0,1,--0,0,0,1,--0,0,0,3,--  
 R8) 0,0,0,3,-->0,0,0,1,--0,0,1,--0,0,0,3,--  
 R9)  
 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
 0,0,0,0,0,5,--  
 R10) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,3,--0,0,0,0,4,--  
 R11) 0,0,0,0,3,-->0,0,0,0,1,--0,0,0,1,--0,0,0,0,3,--0,0,0,0,4,--  
 R12) 0,0,0,0,4,-->0,0,0,0,3,--0,0,0,1,--0,0,1,--0,0,0,0,4,--  
 R13)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,3,--0,0,  
 0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
 R14)  
 0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,  
 --  
 R15)  
 0,0,0,0,0,3,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
 R16)  
 0,0,0,0,0,4,-->0,0,0,0,0,3,--0,0,0,0,1,--0,0,0,1,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
 R17) 0,0,0,0,0,5,-->0,0,0,0,0,4,--0,0,0,0,3,--0,0,0,1,--0,0,1,--0,0,0,0,0,5,--  
 R18)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,  
 0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
 R19)  
 0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,  
 0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
 R20)  
 0,0,0,0,0,0,3,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,  
 0,0,0,0,5,--0,0,0,0,0,0,6,--  
 R21)  
 0,0,0,0,0,0,4,-->0,0,0,0,0,0,3,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,0,4,--0,0,0,0,  
 0,0,5,--0,0,0,0,0,0,6,--  
 R22)  
 0,0,0,0,0,0,5,-->0,0,0,0,0,0,4,--0,0,0,0,0,3,--0,0,0,0,1,--0,0,0,1,--0,0,0,0,0,0,5,

--0,0,0,0,0,0,6,--

R23)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,5,--0,0,0,0,0,0,4,--0,0,0,0,0,0,3,--0,0,0,0,1,--0,0,1,--0,0,0,0,0,0,6,--

R24)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R25)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R26)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R27)

0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R28)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R29)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,3,--0,0,0,0,1,--0,0,0,1,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R30)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,4,--0,0,0,0,3,--0,0,0,1,--0,0,1,--0,0,0,0,0,0,7,--

R31)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R32)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R33)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R34)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R35)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R36)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R37)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,3,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--  
R38)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,4,--0,0,0,0,0,3,--0,0,0,0,1,--0,0,0,1,--0,0,0,0,0,0,0,0,0,8,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,3,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,3,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,3,: 0,0,0,0,0,4,: 0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,3,: 0,0,0,0,0,0,4,:

0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,4,:

0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,7,:

0,0,0,0,0,0,0,0,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,0,6,:

0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,2,3,4,5,6,7,8,9,

-----Class

880-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][100][102][110]]$

-----

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--

R3) 0,1,-->0,1,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R5) 0,0,1,-->0,0,1,--0,0,2,--

R6) 0,0,2,-->0,0,2,1,--0,0,2,--

R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R8) 0,0,0,1,-->0,0,0,1,--0,0,0,2,--0,0,0,3,--

R9) 0,0,0,2,-->0,0,2,1,--0,0,0,2,--0,0,0,2,4,--

R10) 0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,3,--

R11) 0,0,2,1,-->

R12)

0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R13) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R14) 0,0,0,0,2,-->0,0,2,1,--0,0,0,0,2,--0,0,0,0,2,4,--0,0,0,0,2,5,--

R15) 0,0,0,0,3,-->0,0,0,3,1,--0,0,0,0,3,1,--0,0,0,0,3,5,--

R16) 0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,4,--

R17) 0,0,0,2,4,-->0,0,2,1,--0,0,0,3,1,--0,0,0,2,4,--

R18) 0,0,0,3,1,-->0,0,2,1,--



R19)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R20)

0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R21)

0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,2,--0,0,0,0,0,2,4,--0,0,0,0,0,2,5,--0,0,0,0,0,2,6,--

R22)

0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,3,--0,0,0,0,0,3,5,--0,0,0,0,0,3,6,--

R23)

0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,4,--0,0,0,0,0,4,6,--

R24)

0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--0,0,0,0,0,5,--

R25) 0,0,0,0,2,4,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,2,4,--0,0,0,0,2,4,6,--

R26) 0,0,0,0,2,5,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,2,5,--

R27) 0,0,0,0,3,5,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,3,5,--

R28) 0,0,0,0,4,1,-->0,0,0,3,1,--0,0,0,3,1,--

R29) 0,0,0,0,4,2,-->0,0,2,1,--0,0,0,3,1,--

R30)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R31)

0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R32)

0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,2,4,--0,0,0,0,0,0,2,5,--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,2,7,--

R33)

0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,3,5,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,7,--

R34)

0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,0,4,--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,7,--

R35)

0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--0,0,0,0,0,5,--0,0,0,0,0,5,7,--

R36)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,--

R37)

0,0,0,0,0,2,4,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,0,2,4,--0,0,0,0,0,2,4,6,--0,0,0,0,0,2,4,7,--

R38)

0,0,0,0,0,2,5,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,2,5,--0,0,0,0,0,2,5,7,--

R39)

0,0,0,0,0,2,6,-->0,0,2,1,--0,0,0,0,0,5,2,--0,0,0,0,0,2,6,4,--0,0,0,0,0,5,2,--0,0,0,0,0,2,6,--

R40)

0,0,0,0,0,3,5,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,0,3,5,--0,0,0,0,0,3,5,7,--

R41)

0,0,0,0,0,3,6,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,5,3,--0,0,0,0,0,5,3,--0,0,0,0,0,3,6,--

R42)

0,0,0,0,0,4,6,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,5,1,--0,0,0,0,0,4,6,--

R43) 0,0,0,0,0,5,1,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--

R44) 0,0,0,0,0,5,2,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--

R45) 0,0,0,0,0,5,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--

R46) 0,0,0,0,2,4,6,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,4,2,--0,0,0,0,2,4,6,--

R47)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R48)

0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R49)

0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,2,4,--0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,2,8,--

R50)

0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,3,5,--0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,3,8,--

R51)

0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,4,8,--

R52)

0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,5,8,--

R53)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,6,--0,0,0,0,0,0,6,8,--

R54)

0,0,0,0,0,0,7,-->0,0,0,0,0,0,7,1,--0,0,0,0,0,0,7,2,--0,0,0,0,0,0,7,3,--0,0,0,0,0,0,7,4,--0,0,0,0,0,0,7,5,--0,0,0,0,0,0,7,1,--0,0,0,0,0,0,7,7,--

R55)

0,0,0,0,0,0,2,4,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,0,0,2,4,--0,0,0,0,0,0,2,4,6,--0,0,0,0,0,0,2,4,7,--0,0,0,0,0,0,2,4,8,--

R56)

0,0,0,0,0,0,2,5,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,0,2,5,--0,0,0,0,0,0,2,5,7,--0,0,0,0,0,0,2,5,8,--

R57)

0,0,0,0,0,0,2,6,-->0,0,2,1,--0,0,0,0,0,5,2,--0,0,0,0,0,2,6,4,--0,0,0,0,0,5,2,--0,0,0,0,0,2,6,--0,0,0,0,0,0,2,6,8,--

R58)

0,0,0,0,0,0,2,7,-->0,0,2,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,2,7,4,--0,0,0,0,0,0,2,7,  
5,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,2,7,--

R59)

0,0,0,0,0,0,3,5,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,0,0,3,5,--0,0,0,0,  
0,0,3,5,7,--0,0,0,0,0,0,3,5,8,--

R60)

0,0,0,0,0,0,3,6,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,5,3,--0,0,0,0,0,5,3,--0,0,0,0,  
0,0,3,6,--0,0,0,0,0,0,3,6,8,--

R61)

0,0,0,0,0,0,3,7,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,3,7,5,--0,  
0,0,0,0,0,6,3,--0,0,0,0,0,0,3,7,--

R62)

0,0,0,0,0,0,4,6,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,5,1,--0,0,0,  
0,0,0,4,6,--0,0,0,0,0,0,4,6,8,--

R63)

0,0,0,0,0,0,4,7,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,0,6,4,--0,0,  
0,0,0,0,6,4,--0,0,0,0,0,0,4,7,--

R64)

0,0,0,0,0,0,5,7,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--  
0,0,0,0,0,0,6,1,--0,0,0,0,0,0,5,7,--

R65)

0,0,0,0,0,0,6,1,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--

R66)

0,0,0,0,0,0,6,2,-->0,0,2,1,--0,0,0,0,0,5,2,--0,0,0,0,0,2,6,4,--0,0,0,0,0,5,2,--

R67) 0,0,0,0,0,0,6,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,5,3,--0,0,0,0,0,5,3,--

R68) 0,0,0,0,0,0,6,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,5,1,--

R69)

0,0,0,0,0,2,4,6,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,4,2,--0,0,0,0,0,2,4,6,--0,0,0,0,0,  
2,4,6,8,--

R70)

0,0,0,0,0,2,4,7,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,0,2,6,4,--0,0,0,0,0,2,6,4,--0,0,0,  
0,0,2,4,7,--

R71)

0,0,0,0,0,2,5,7,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,5,2,--0,0,0,0,0,  
2,5,7,--

R72) 0,0,0,0,0,2,6,4,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,4,2,--

R73)

0,0,0,0,0,3,5,7,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,0,5,3,--0,0,0,0,0,  
3,5,7,--

R74)

0,0,0,0,0,0,0,0,0,-->0,  
2,--0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
,0,0,6,--0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,9,--

R75)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,  
0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,  
,0,0,0,0,0,8,--

R76)

0,0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,2,4,--0,0,0,0,0,

0,0,0,2,5,--0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,2,8,--0,0,0,0,0,0,0,2,9,--

R77)

0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,3,5,--0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,3,8,--0,0,0,0,0,0,0,3,9,--

R78)

0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,4,8,--0,0,0,0,0,0,0,4,9,--

R79)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,5,8,--0,0,0,0,0,0,0,5,9,--

R80)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,6,--0,0,0,0,0,0,6,8,--0,0,0,0,0,0,6,9,--

R81)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,7,1,--0,0,0,0,0,0,7,2,--0,0,0,0,0,0,7,3,--0,0,0,0,0,0,7,4,--0,0,0,0,0,0,7,5,--0,0,0,0,0,0,7,1,--0,0,0,0,0,0,7,7,--0,0,0,0,0,0,7,9,--

R82)

0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,8,1,--0,0,0,0,0,0,8,2,--0,0,0,0,0,0,8,3,--0,0,0,0,0,0,8,4,--0,0,0,0,0,0,8,5,--0,0,0,0,0,0,8,6,--0,0,0,0,0,0,8,1,--0,0,0,0,0,0,8,8,--

R83)

0,0,0,0,0,0,2,4,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,0,0,2,4,--0,0,0,0,0,0,2,4,6,--0,0,0,0,0,0,2,4,7,--0,0,0,0,0,0,2,4,8,--0,0,0,0,0,0,2,4,9,--

R84)

0,0,0,0,0,0,2,5,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,0,2,5,--0,0,0,0,0,0,2,5,7,--0,0,0,0,0,0,2,5,8,--0,0,0,0,0,0,2,5,9,--

R85)

0,0,0,0,0,0,2,6,-->0,0,2,1,--0,0,0,0,0,5,2,--0,0,0,0,0,2,6,4,--0,0,0,0,0,5,2,--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,2,6,8,--0,0,0,0,0,0,2,6,9,--

R86)

0,0,0,0,0,0,2,7,-->0,0,2,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,2,7,4,--0,0,0,0,0,0,2,7,5,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,2,7,--0,0,0,0,0,0,2,7,9,--

R87)

0,0,0,0,0,0,2,8,-->0,0,2,1,--0,0,0,0,0,0,7,2,--0,0,0,0,0,0,2,8,4,--0,0,0,0,0,0,2,8,5,--0,0,0,0,0,0,2,8,6,--0,0,0,0,0,0,7,2,--0,0,0,0,0,0,2,8,--

R88)

0,0,0,0,0,0,3,5,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,0,0,3,5,--0,0,0,0,0,0,3,5,7,--0,0,0,0,0,0,3,5,8,--0,0,0,0,0,0,3,5,9,--

R89)

0,0,0,0,0,0,3,6,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,5,3,--0,0,0,0,0,5,3,--0,0,0,0,0,3,6,--0,0,0,0,0,0,3,6,8,--0,0,0,0,0,0,3,6,9,--

R90)

0,0,0,0,0,0,3,7,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,3,7,5,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,3,7,--0,0,0,0,0,0,3,7,9,--

R91)

0,0,0,0,0,0,0,3,8,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,0,7,3,--0,0,0,0,0,0,0,3,8,  
5,--0,0,0,0,0,0,0,3,8,6,--0,0,0,0,0,0,0,7,3,--0,0,0,0,0,0,0,3,8,--

R92)

0,0,0,0,0,0,0,4,6,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,5,1,--0,0,  
0,0,0,0,0,4,6,--0,0,0,0,0,0,4,6,8,--0,0,0,0,0,0,4,6,9,--

R93)

0,0,0,0,0,0,0,4,7,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,0,6,4,--0,  
0,0,0,0,0,6,4,--0,0,0,0,0,0,4,7,--0,0,0,0,0,0,4,7,9,--

R94)

0,0,0,0,0,0,0,4,8,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,0,0,7,4,--  
0,0,0,0,0,0,4,8,6,--0,0,0,0,0,0,7,4,--0,0,0,0,0,0,4,8,--

R95)

0,0,0,0,0,0,0,5,7,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,  
--0,0,0,0,0,6,1,--0,0,0,0,0,0,5,7,--0,0,0,0,0,0,5,7,9,--

R96)

0,0,0,0,0,0,0,5,8,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,  
--0,0,0,0,0,0,7,5,--0,0,0,0,0,0,7,5,--0,0,0,0,0,0,5,8,--

R97)

0,0,0,0,0,0,0,6,8,-->0,0,0,0,0,6,1,--0,0,0,0,0,6,2,--0,0,0,0,0,6,3,--0,0,0,0,  
0,0,6,4,--0,0,0,0,0,6,1,--0,0,0,0,0,0,7,1,--0,0,0,0,0,0,6,8,--

R98)

0,0,0,0,0,0,0,7,1,-->0,0,0,0,0,6,1,--0,0,0,0,0,6,2,--0,0,0,0,0,6,3,--0,0,0,0,  
0,0,6,4,--0,0,0,0,0,6,1,--

R99)

0,0,0,0,0,0,0,7,2,-->0,0,2,1,--0,0,0,0,0,6,2,--0,0,0,0,0,2,7,4,--0,0,0,0,0,0,2,  
7,5,--0,0,0,0,0,6,2,--

R100)

0,0,0,0,0,0,0,7,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,6,3,--0,0,0,0,0,3,7,5,--  
0,0,0,0,0,6,3,--

R101)

0,0,0,0,0,0,0,7,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,6,4,--0,  
0,0,0,0,6,4,--

R102)

0,0,0,0,0,0,0,7,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,  
--0,0,0,0,0,6,1,--

R103)

0,0,0,0,0,0,2,4,6,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,4,2,--0,0,0,0,0,2,4,6,--0,0,0,  
0,0,0,2,4,6,8,--0,0,0,0,0,2,4,6,9,--

R104)

0,0,0,0,0,0,2,4,7,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,0,2,6,4,--0,0,0,0,0,2,6,4,--0,0,  
0,0,0,0,2,4,7,--0,0,0,0,0,2,4,7,9,--

R105)

0,0,0,0,0,0,2,4,8,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,0,2,7,4,--0,0,0,0,0,2,4,8,6,  
--0,0,0,0,0,2,7,4,--0,0,0,0,0,2,4,8,--

R106)

0,0,0,0,0,0,2,5,7,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,5,2,--0,0,0,0,  
0,0,2,5,7,--0,0,0,0,0,2,5,7,9,--

R107)

0,0,0,0,0,0,2,5,8,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,2,7,5,--0,0,

0,0,0,0,2,7,5,--0,0,0,0,0,2,5,8,--  
 R108)  
 0,0,0,0,0,2,6,8,-->0,0,2,1,--0,0,0,0,0,5,2,--0,0,0,0,0,2,6,4,--0,0,0,0,0,5,2,--0,  
 0,0,0,0,0,6,2,--0,0,0,0,0,2,6,8,--  
 R109)  
 0,0,0,0,0,2,7,4,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,0,2,6,4,--0,0,0,0,0,2,6,4,--  
 R110) 0,0,0,0,0,2,7,5,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,5,2,--  
 R111)  
 0,0,0,0,0,3,5,7,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,0,5,3,--0,0,0,0,  
 0,0,3,5,7,--0,0,0,0,0,3,5,7,9,--  
 R112)  
 0,0,0,0,0,3,5,8,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,0,3,7,5,--0,0,  
 0,0,0,0,3,7,5,--0,0,0,0,0,3,5,8,--  
 R113)  
 0,0,0,0,0,3,6,8,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,5,3,--0,0,0,0,0,5,3,--0,0,0,  
 0,0,0,6,3,--0,0,0,0,0,3,6,8,--  
 R114) 0,0,0,0,0,3,7,5,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,0,5,3,--  
 R115)  
 0,0,0,0,0,4,6,8,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,5,1,--0,0,  
 0,0,0,0,6,4,--0,0,0,0,0,4,6,8,--  
 R116)  
 0,0,0,0,0,2,4,6,8,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,4,2,--0,0,0,0,0,2,6,4,--0,0,0,0,  
 0,2,4,6,8,--

List of different nodes in T[L]

LEN=1) 0,  
 LEN=2) 0,0,: 0,1,  
 LEN=3) 0,0,0,: 0,0,1,: 0,0,2,  
 LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,: 0,0,2,1,  
 LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,: 0,0,0,2,4,  
 0,0,0,3,1,  
 LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,  
 0,0,0,0,0,5,: 0,0,0,0,2,4,: 0,0,0,0,2,5,: 0,0,0,0,3,5,: 0,0,0,0,4,1,: 0,0,0,0,4,2,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,  
 0,0,0,0,0,0,4,: 0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,: 0,0,0,0,0,2,4,: 0,0,0,0,0,2,5,  
 0,0,0,0,0,2,6,: 0,0,0,0,0,3,5,: 0,0,0,0,0,3,6,: 0,0,0,0,0,4,6,: 0,0,0,0,0,5,1,  
 0,0,0,0,0,5,2,: 0,0,0,0,0,5,3,: 0,0,0,0,2,4,6,

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,  
 0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,  
 0,0,0,0,0,0,2,4,: 0,0,0,0,0,0,2,5,: 0,0,0,0,0,0,2,6,: 0,0,0,0,0,0,2,7,  
 0,0,0,0,0,0,3,5,: 0,0,0,0,0,0,3,6,: 0,0,0,0,0,0,3,7,: 0,0,0,0,0,0,4,6,  
 0,0,0,0,0,0,4,7,: 0,0,0,0,0,0,5,7,: 0,0,0,0,0,0,6,1,: 0,0,0,0,0,0,6,2,  
 0,0,0,0,0,0,6,3,: 0,0,0,0,0,0,6,4,: 0,0,0,0,0,2,4,6,: 0,0,0,0,0,2,4,7,  
 0,0,0,0,0,2,5,7,: 0,0,0,0,0,2,6,4,: 0,0,0,0,0,3,5,7,

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,  
 0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,  
 0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,2,4,: 0,0,0,0,0,0,0,2,5,  
 0,0,0,0,0,0,0,2,6,: 0,0,0,0,0,0,0,2,7,: 0,0,0,0,0,0,0,2,8,: 0,0,0,0,0,0,0,3,5,  
 0,0,0,0,0,0,0,3,6,: 0,0,0,0,0,0,0,3,7,: 0,0,0,0,0,0,0,3,8,: 0,0,0,0,0,0,0,4,6,  
 0,0,0,0,0,0,0,4,7,: 0,0,0,0,0,0,0,4,8,: 0,0,0,0,0,0,0,5,7,: 0,0,0,0,0,0,0,5,8,

0,0,0,0,0,0,0,6,8,: 0,0,0,0,0,0,0,7,1,: 0,0,0,0,0,0,0,7,2,: 0,0,0,0,0,0,0,7,3,:  
 0,0,0,0,0,0,0,7,4,: 0,0,0,0,0,0,0,7,5,: 0,0,0,0,0,0,2,4,6,: 0,0,0,0,0,0,2,4,7,:  
 0,0,0,0,0,0,2,4,8,: 0,0,0,0,0,0,2,5,7,: 0,0,0,0,0,0,2,5,8,: 0,0,0,0,0,0,2,6,8,:  
 0,0,0,0,0,0,2,7,4,: 0,0,0,0,0,0,2,7,5,: 0,0,0,0,0,0,3,5,7,: 0,0,0,0,0,0,3,5,8,:  
 0,0,0,0,0,0,3,6,8,: 0,0,0,0,0,0,3,7,5,: 0,0,0,0,0,0,4,6,8,: 0,0,0,0,0,2,4,6,8,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,2,:  
 0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,:  
 0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,:  
 0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,0,2,4,: 0,0,0,0,0,0,0,0,2,5,:  
 0,0,0,0,0,0,0,0,2,6,: 0,0,0,0,0,0,0,0,2,7,: 0,0,0,0,0,0,0,0,2,8,:  
 0,0,0,0,0,0,0,0,2,9,: 0,0,0,0,0,0,0,0,3,5,: 0,0,0,0,0,0,0,0,3,6,:  
 0,0,0,0,0,0,0,0,3,7,: 0,0,0,0,0,0,0,0,3,8,: 0,0,0,0,0,0,0,0,3,9,:  
 0,0,0,0,0,0,0,0,4,6,: 0,0,0,0,0,0,0,0,4,7,: 0,0,0,0,0,0,0,0,4,8,:  
 0,0,0,0,0,0,0,0,4,9,: 0,0,0,0,0,0,0,0,5,7,: 0,0,0,0,0,0,0,0,5,8,:  
 0,0,0,0,0,0,0,0,5,9,: 0,0,0,0,0,0,0,0,6,8,: 0,0,0,0,0,0,0,0,6,9,:  
 0,0,0,0,0,0,0,0,7,9,: 0,0,0,0,0,0,0,0,8,1,: 0,0,0,0,0,0,0,0,8,2,:  
 0,0,0,0,0,0,0,0,8,3,: 0,0,0,0,0,0,0,0,8,4,: 0,0,0,0,0,0,0,0,8,5,:  
 0,0,0,0,0,0,0,0,8,6,: 0,0,0,0,0,0,0,2,4,6,: 0,0,0,0,0,0,0,2,4,7,:  
 0,0,0,0,0,0,0,2,4,8,: 0,0,0,0,0,0,0,2,4,9,: 0,0,0,0,0,0,0,2,5,7,:  
 0,0,0,0,0,0,0,2,5,8,: 0,0,0,0,0,0,0,2,5,9,: 0,0,0,0,0,0,0,2,6,8,:  
 0,0,0,0,0,0,0,2,6,9,: 0,0,0,0,0,0,0,2,7,9,: 0,0,0,0,0,0,0,2,8,4,:  
 0,0,0,0,0,0,0,2,8,5,: 0,0,0,0,0,0,0,2,8,6,: 0,0,0,0,0,0,0,3,5,7,:  
 0,0,0,0,0,0,0,3,5,8,: 0,0,0,0,0,0,0,3,5,9,: 0,0,0,0,0,0,0,3,6,8,:  
 0,0,0,0,0,0,0,3,6,9,: 0,0,0,0,0,0,0,3,7,9,: 0,0,0,0,0,0,0,3,8,5,:  
 0,0,0,0,0,0,0,3,8,6,: 0,0,0,0,0,0,0,4,6,8,: 0,0,0,0,0,0,0,4,6,9,:  
 0,0,0,0,0,0,0,4,7,9,: 0,0,0,0,0,0,0,4,8,6,: 0,0,0,0,0,0,0,5,7,9,:  
 0,0,0,0,0,0,2,4,6,8,: 0,0,0,0,0,0,2,4,6,9,: 0,0,0,0,0,0,2,4,7,9,:  
 0,0,0,0,0,0,2,4,8,6,: 0,0,0,0,0,0,2,5,7,9,: 0,0,0,0,0,0,3,5,7,9,:  
 Number new nodes in level n is given by : 1,2,3,5,7,11,17,27,43,69,

-----Class

881-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][100][102][120]]$

-----

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R5) 0,0,1,-->0,0,1,--0,0,2,--
- R6) 0,0,2,-->0,0,2,1,--0,1,--
- R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R8) 0,0,0,1,-->0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R9) 0,0,0,2,-->0,0,2,1,--0,0,1,--0,0,2,--
- R10) 0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,1,--
- R11) 0,0,2,1,-->
- R12) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R13) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R14) 0,0,0,0,2,-->0,0,2,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R15) 0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,1,--0,0,2,--  
R16) 0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,1,--  
R17) 0,0,0,3,1,-->0,0,2,1,--  
R18)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R19)  
0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,  
--  
R20) 0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R21) 0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R22) 0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,1,--0,0,2,--  
R23)  
0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--0,1,  
--  
R24) 0,0,0,0,4,1,-->0,0,0,3,1,--0,0,0,3,1,--  
R25) 0,0,0,0,4,2,-->0,0,2,1,--0,0,2,1,--  
R26)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R27)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,  
0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R28)  
0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--  
R29)  
0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,  
0,4,--  
R30)  
0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,1,--0,0,0,2,--0,0,  
0,3,--  
R31)  
0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--0,  
0,1,--0,0,2,--  
R32)  
0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,  
6,4,--0,0,0,0,0,6,1,--0,1,--  
R33) 0,0,0,0,0,5,1,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--  
R34) 0,0,0,0,0,5,2,-->0,0,2,1,--0,0,0,3,1,--0,0,0,3,1,--  
R35) 0,0,0,0,0,5,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,2,1,--  
R36)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--  
R37)  
0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,  
0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--



R38)

0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R39)

0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R40)

0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R41)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--

R42)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,1,--0,0,1,--0,0,2,--

R43)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,7,2,--0,0,0,0,0,0,0,7,3,--0,0,0,0,0,0,0,7,4,--0,0,0,0,0,0,0,7,5,--0,0,0,0,0,0,0,7,1,--0,1,--

R44)

0,0,0,0,0,0,0,6,1,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--

R45) 0,0,0,0,0,0,0,6,2,-->0,0,2,1,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--

R46) 0,0,0,0,0,0,0,6,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,3,1,--0,0,0,3,1,--

R47) 0,0,0,0,0,0,0,6,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,2,1,--

R48)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,9,--

R49)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R50)

0,0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R51)

0,0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R52)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R53)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--0,0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R54)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R55)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,7,2,--0,0,0,0,0,0,0,7,3,--0,0,0,0,0,0,0,7,4,--0,0,0,0,0,0,0,7,5,--0,0,0,0,0,0,0,7,1,--0,0,1,--0,0,2,--

R56)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,8,1,--0,0,0,0,0,0,0,0,8,2,--0,0,0,0,0,0,0,0,8,3,--0,0,0,0,0,0,0,0,8,4,--0,0,0,0,0,0,0,0,8,5,--0,0,0,0,0,0,0,0,8,6,--0,0,0,0,0,0,0,0,8,1,--0,1,--

R57)

0,0,0,0,0,0,0,0,7,1,-->0,0,0,0,0,0,0,0,6,1,--0,0,0,0,0,0,0,0,6,2,--0,0,0,0,0,0,0,0,6,3,--0,0,0,0,0,0,0,0,6,4,--0,0,0,0,0,0,0,0,6,1,--

R58)

0,0,0,0,0,0,0,0,7,2,-->0,0,0,2,1,--0,0,0,0,0,0,0,5,1,--0,0,0,0,0,0,0,5,2,--0,0,0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--

R59)

0,0,0,0,0,0,0,0,7,3,-->0,0,0,0,3,1,--0,0,0,0,3,1,--0,0,0,0,0,4,1,--0,0,0,0,0,4,2,--0,0,0,0,0,4,1,--

R60)

0,0,0,0,0,0,0,0,7,4,-->0,0,0,0,0,4,1,--0,0,0,0,0,4,2,--0,0,0,0,0,4,1,--0,0,0,0,3,1,--0,0,0,0,3,1,--

R61)

0,0,0,0,0,0,0,0,7,5,-->0,0,0,0,0,0,5,1,--0,0,0,0,0,0,5,2,--0,0,0,0,0,0,5,3,--0,0,0,0,0,0,5,1,--0,0,0,2,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,1,,: 0,0,0,2,,: 0,0,0,3,,: 0,0,2,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,,: 0,0,0,0,2,,: 0,0,0,0,3,,: 0,0,0,0,4,,: 0,0,0,3,1,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,,: 0,0,0,0,0,2,,: 0,0,0,0,0,3,,: 0,0,0,0,0,4,,: 0,0,0,0,0,5,:

0,0,0,0,0,4,1,,: 0,0,0,0,0,4,2,:

LEN=7) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,,: 0,0,0,0,0,0,2,,: 0,0,0,0,0,0,3,:

0,0,0,0,0,0,4,,: 0,0,0,0,0,0,5,,: 0,0,0,0,0,0,6,,: 0,0,0,0,0,0,5,1,,: 0,0,0,0,0,0,5,2,:

0,0,0,0,0,0,5,3,:

LEN=8) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,,: 0,0,0,0,0,0,0,0,2,,: 0,0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,0,4,,: 0,0,0,0,0,0,0,0,5,,: 0,0,0,0,0,0,0,0,6,,: 0,0,0,0,0,0,0,0,7,:

0,0,0,0,0,0,0,0,6,1,,: 0,0,0,0,0,0,0,0,6,2,,: 0,0,0,0,0,0,0,0,6,3,,: 0,0,0,0,0,0,0,0,6,4,:

LEN=9) 0,0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,,: 0,0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,0,3,,: 0,0,0,0,0,0,0,0,0,4,,: 0,0,0,0,0,0,0,0,0,5,,: 0,0,0,0,0,0,0,0,0,6,:

0,0,0,0,0,0,0,0,0,7,,: 0,0,0,0,0,0,0,0,0,8,,: 0,0,0,0,0,0,0,0,7,1,,: 0,0,0,0,0,0,0,0,7,2,:

0,0,0,0,0,0,0,0,7,3,,: 0,0,0,0,0,0,0,0,7,4,,: 0,0,0,0,0,0,0,0,7,5,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,1,,: 0,0,0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,0,0,3,,: 0,0,0,0,0,0,0,0,0,0,4,,: 0,0,0,0,0,0,0,0,0,0,5,:

0,0,0,0,0,0,0,0,0,0,6,,: 0,0,0,0,0,0,0,0,0,0,7,,: 0,0,0,0,0,0,0,0,0,0,8,:

0,0,0,0,0,0,0,0,0,0,9,,: 0,0,0,0,0,0,0,0,0,8,1,,: 0,0,0,0,0,0,0,0,0,8,2,:

0,0,0,0,0,0,0,0,0,8,3,,: 0,0,0,0,0,0,0,0,0,8,4,,: 0,0,0,0,0,0,0,0,0,8,5,:

0,0,0,0,0,0,0,0,0,8,6,:

Number new nodes in level n is given by : 1,2,3,5,6,8,10,12,14,16,

-----Class

882-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][011][100][102][201]]

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--  
R3) 0,1,-->0,1,--  
R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R5) 0,0,1,-->0,0,1,--0,0,2,--  
R6) 0,0,2,-->0,0,2,1,--0,0,2,--  
R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R8) 0,0,0,1,-->0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R9) 0,0,0,2,-->0,0,2,1,--0,0,0,2,--0,0,0,3,--  
R10) 0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,3,--  
R11) 0,0,2,1,-->  
R12)  
0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--  
R13) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R14) 0,0,0,0,2,-->0,0,2,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R15) 0,0,0,0,3,-->0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,3,--0,0,0,0,4,--  
R16) 0,0,0,0,4,-->0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,4,--  
R17) 0,0,0,3,2,-->0,0,2,1,--  
R18)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R19)  
0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,  
--  
R20)  
0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R21)  
0,0,0,0,0,3,-->0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R22)  
0,0,0,0,0,4,-->0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R23)  
0,0,0,0,0,5,-->0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,5,--  
R24) 0,0,0,0,4,3,-->0,0,2,1,--0,0,0,0,3,2,--  
R25)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R26)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,  
0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R27)  
0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,  
0,0,5,--0,0,0,0,0,0,6,--  
R28)  
0,0,0,0,0,0,3,-->0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,  
5,--0,0,0,0,0,0,6,--  
R29)  
0,0,0,0,0,0,4,-->0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,  
--0,0,0,0,0,0,6,--  
R30)

0,0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,5,  
--0,0,0,0,0,0,6,--

R31)

0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,  
5,--0,0,0,0,0,0,6,--

R32) 0,0,0,0,0,5,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--

R33)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R34)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,  
0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R35)

0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--  
0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R36)

0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,  
0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R37)

0,0,0,0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,  
0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R38)

0,0,0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,  
0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R39)

0,0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,  
6,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R40)

0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,  
6,5,--0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,7,--

R41) 0,0,0,0,0,0,6,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--

R42)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R43)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,  
0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,  
,0,0,0,0,8,--

R44)

0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,  
0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,  
,8,--

R45)

0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--  
0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R46)

0,0,0,0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,0,4,--0,0,0,  
0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R47)  
0,0,0,0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R48)  
0,0,0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R49)  
0,0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R50)  
0,0,0,0,0,0,0,0,8,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,8,7,--0,0,0,0,0,0,0,8,--

R51)  
0,0,0,0,0,0,0,7,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,: 0,0,2,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,: 0,0,0,3,2,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,:

0,0,0,0,0,5,: 0,0,0,0,4,3,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,:

0,0,0,0,0,0,4,: 0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,: 0,0,0,0,0,5,4,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:

0,0,0,0,0,0,6,5,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,:

0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,7,6,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,:

0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,:

0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,8,7,:

Number new nodes in level n is given by : 1,2,3,5,6,7,8,9,10,11,

-----Class

883-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][100][102][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--

R3) 0,1,-->0,1,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R5) 0,0,1,-->0,0,1,--0,0,2,--

R6) 0,0,2,-->0,0,2,1,--0,0,2,--

R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R8) 0,0,0,1,-->0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R9) 0,0,0,2,-->0,0,2,1,--0,0,0,2,--0,0,0,2,4,--  
R10) 0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,3,--  
R11) 0,0,2,1,-->  
R12)  
0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--  
R13) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R14) 0,0,0,0,2,-->0,0,2,1,--0,0,0,0,2,--0,0,0,0,2,4,--0,0,0,0,2,5,--  
R15) 0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,3,--0,0,0,0,3,5,--  
R16) 0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,4,--  
R17) 0,0,0,2,4,-->0,0,2,1,--0,0,2,1,--0,0,0,2,4,--  
R18) 0,0,0,3,1,-->0,0,2,1,--  
R19)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R20)  
0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,  
--  
R21)  
0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,2,--0,0,0,0,0,2,4,--0,0,0,0,0,2,5,--0,0,0,0,0,2,  
6,--  
R22)  
0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,3,--0,0,0,0,0,3,5,--0,0,0,0,0,3,6,--  
R23)  
0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,4,--0,0,0,0,0,4,6,--  
R24)  
0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,5,--  
R25) 0,0,0,0,2,4,-->0,0,2,1,--0,0,2,1,--0,0,0,0,2,4,--0,0,0,0,2,4,6,--  
R26) 0,0,0,0,2,5,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,2,5,--  
R27) 0,0,0,0,3,5,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,3,5,--  
R28) 0,0,0,0,4,1,-->0,0,0,3,1,--0,0,2,1,--  
R29)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R30)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,  
0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R31)  
0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,2,4,--0,0,0,0,0,0,2,5,--0,0,  
0,0,0,0,2,6,--0,0,0,0,0,0,2,7,--  
R32)  
0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,3,5,--0,0,0,0,0,  
0,3,6,--0,0,0,0,0,0,3,7,--  
R33)  
0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,4,--0,0,0,0,0,0,4,  
6,--0,0,0,0,0,0,4,7,--  
R34)  
0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,5,  
--0,0,0,0,0,0,5,7,--

R35)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,6,--

R36)

0,0,0,0,0,2,4,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,2,4,--0,0,0,0,0,2,4,6,--0,0,0,0,0,2,4,7,--

R37)

0,0,0,0,0,2,5,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,2,5,--0,0,0,0,0,2,5,7,--

R38)

0,0,0,0,0,2,6,-->0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,2,6,--

R39)

0,0,0,0,0,3,5,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,3,5,--0,0,0,0,0,3,5,7,--

R40) 0,0,0,0,0,3,6,-->0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,3,6,--

R41)

0,0,0,0,0,4,6,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,4,6,--

R42) 0,0,0,0,0,5,1,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--

R43) 0,0,0,0,2,4,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,2,4,6,--

R44)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R45)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R46)

0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,2,4,--0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,2,8,--

R47)

0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,3,5,--0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,3,8,--

R48)

0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,4,8,--

R49)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,5,8,--

R50)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,6,8,--

R51)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,7,--

R52)

0,0,0,0,0,0,2,4,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,2,4,--0,0,0,0,0,0,2,4,6,--0,0,0,0,0,0,2,4,7,--0,0,0,0,0,0,2,4,8,--

R53)

0,0,0,0,0,0,2,5,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,2,5,--0,0,0,0,0,0,2,5,7,--0,0,0,0,0,0,2,5,8,--

R54)

0,0,0,0,0,0,2,6,-->0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,2,6,--

0,0,0,0,0,0,2,6,8, --  
R55)  
0,0,0,0,0,0,2,7, -->0,0,2,1, --0,0,0,0,0,5,1, --0,0,0,0,4,1, --0,0,0,3,1, --0,0,2,1, --0,  
0,0,0,0,0,2,7, --  
R56)  
0,0,0,0,0,0,3,5, -->0,0,0,3,1, --0,0,2,1, --0,0,2,1, --0,0,0,0,0,0,3,5, --0,0,0,0,0,0,3,  
5,7, --0,0,0,0,0,0,3,5,8, --  
R57)  
0,0,0,0,0,0,3,6, -->0,0,0,3,1, --0,0,2,1, --0,0,0,3,1, --0,0,2,1, --0,0,0,0,0,0,3,6, --0,  
0,0,0,0,0,3,6,8, --  
R58)  
0,0,0,0,0,0,3,7, -->0,0,0,3,1, --0,0,2,1, --0,0,0,0,4,1, --0,0,0,3,1, --0,0,2,1, --0,0,0,  
0,0,0,3,7, --  
R59)  
0,0,0,0,0,0,4,6, -->0,0,0,0,4,1, --0,0,0,3,1, --0,0,2,1, --0,0,2,1, --0,0,0,0,0,0,4,6, --  
0,0,0,0,0,0,4,6,8, --  
R60)  
0,0,0,0,0,0,4,7, -->0,0,0,0,4,1, --0,0,0,3,1, --0,0,2,1, --0,0,0,3,1, --0,0,2,1, --0,0,0,  
0,0,0,4,7, --  
R61)  
0,0,0,0,0,0,5,7, -->0,0,0,0,0,5,1, --0,0,0,0,4,1, --0,0,0,3,1, --0,0,2,1, --0,0,2,1, --0,  
0,0,0,0,0,5,7, --  
R62) 0,0,0,0,0,0,6,1, -->0,0,0,0,0,5,1, --0,0,0,0,4,1, --0,0,0,3,1, --0,0,2,1, --  
R63)  
0,0,0,0,0,2,4,6, -->0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,0,0,0,2,4,6, --0,0,0,0,0,2,4,6,  
8, --  
R64)  
0,0,0,0,0,2,4,7, -->0,0,2,1, --0,0,2,1, --0,0,0,3,1, --0,0,2,1, --0,0,0,0,0,2,4,7, --  
R65)  
0,0,0,0,0,2,5,7, -->0,0,2,1, --0,0,0,3,1, --0,0,2,1, --0,0,2,1, --0,0,0,0,0,2,5,7, --  
R66)  
0,0,0,0,0,3,5,7, -->0,0,0,3,1, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,0,0,0,3,5,7, --  
R67)  
0,0,0,0,0,0,0,0,0, -->0,  
2, --0,0,0,0,0,0,0,0,0,0,0,3, --0,0,0,0,0,0,0,0,0,0,0,4, --0,0,0,0,0,0,0,0,0,0,5, --0,0,0,0,0,0,0,  
,0,0,6, --0,0,0,0,0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,0,0,0,8, --0,0,0,0,0,0,0,0,0,0,9, --  
R68)  
0,0,0,0,0,0,0,0,1, -->0,0,0,0,0,0,0,0,1, --0,0,0,0,0,0,0,0,2, --0,0,0,0,0,0,0,0,3, --0,  
0,0,0,0,0,0,0,4, --0,0,0,0,0,0,0,0,5, --0,0,0,0,0,0,0,0,6, --0,0,0,0,0,0,0,0,7, --0,0,0,  
,0,0,0,0,0,8, --  
R69)  
0,0,0,0,0,0,0,0,2, -->0,0,2,1, --0,0,0,0,0,0,0,0,2, --0,0,0,0,0,0,0,0,2,4, --0,0,0,0,0,  
0,0,0,2,5, --0,0,0,0,0,0,0,0,2,6, --0,0,0,0,0,0,0,0,2,7, --0,0,0,0,0,0,0,0,2,8, --0,0,0,  
,0,0,0,0,0,2,9, --  
R70)  
0,0,0,0,0,0,0,0,3, -->0,0,0,3,1, --0,0,2,1, --0,0,0,0,0,0,0,0,3, --0,0,0,0,0,0,0,0,3,5,  
--0,0,0,0,0,0,0,0,3,6, --0,0,0,0,0,0,0,0,3,7, --0,0,0,0,0,0,0,0,3,8, --0,0,0,0,0,0,0,0,  
,3,9, --  
R71)  
0,0,0,0,0,0,0,0,4, -->0,0,0,0,4,1, --0,0,0,3,1, --0,0,2,1, --0,0,0,0,0,0,0,0,4, --0,0,0,



0,0,0,0,0,4,6,--0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,4,8,--0,0,0,0,0,0,0,4,9,--  
R72)  
0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,  
0,0,0,5,--0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,5,8,--0,0,0,0,0,0,0,5,9,--  
R73)  
0,0,0,0,0,0,0,6,-->0,0,0,0,0,6,1,--0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,  
0,2,1,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,6,9,--  
R74)  
0,0,0,0,0,0,0,7,-->0,0,0,0,0,7,1,--0,0,0,0,0,6,1,--0,0,0,0,5,1,--0,0,0,0,  
4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,7,9,--  
R75)  
0,0,0,0,0,0,0,8,-->0,0,0,0,0,8,1,--0,0,0,0,0,7,1,--0,0,0,0,6,1,--0,  
0,0,0,5,1,--0,0,0,4,1,--0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,8,--  
R76)  
0,0,0,0,0,0,2,4,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,2,4,--0,0,0,0,0,2,4,6,--  
0,0,0,0,0,2,4,7,--0,0,0,0,0,2,4,8,--0,0,0,0,0,2,4,9,--  
R77)  
0,0,0,0,0,0,2,5,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,2,5,--0,0,0,0,0,  
0,0,2,5,7,--0,0,0,0,0,2,5,8,--0,0,0,0,0,2,5,9,--  
R78)  
0,0,0,0,0,0,2,6,-->0,0,2,1,--0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,2,  
6,--0,0,0,0,0,2,6,8,--0,0,0,0,0,2,6,9,--  
R79)  
0,0,0,0,0,0,2,7,-->0,0,2,1,--0,0,0,0,5,1,--0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--  
0,0,0,0,0,2,7,--0,0,0,0,0,2,7,9,--  
R80)  
0,0,0,0,0,0,2,8,-->0,0,2,1,--0,0,0,0,6,1,--0,0,0,5,1,--0,0,0,4,1,--0,0,  
0,3,1,--0,0,2,1,--0,0,0,0,0,2,8,--  
R81)  
0,0,0,0,0,0,3,5,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,3,5,--0,0,0,0,0,  
0,0,3,5,7,--0,0,0,0,0,3,5,8,--0,0,0,0,0,3,5,9,--  
R82)  
0,0,0,0,0,0,3,6,-->0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,3,6,  
--0,0,0,0,0,3,6,8,--0,0,0,0,0,3,6,9,--  
R83)  
0,0,0,0,0,0,3,7,-->0,0,0,3,1,--0,0,2,1,--0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,  
0,0,0,0,3,7,--0,0,0,0,0,3,7,9,--  
R84)  
0,0,0,0,0,0,3,8,-->0,0,0,3,1,--0,0,2,1,--0,0,0,5,1,--0,0,0,4,1,--0,0,0,3,1,  
--0,0,2,1,--0,0,0,0,0,3,8,--  
R85)  
0,0,0,0,0,0,4,6,-->0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,4,  
6,--0,0,0,0,0,4,6,8,--0,0,0,0,0,4,6,9,--  
R86)  
0,0,0,0,0,0,4,7,-->0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,  
0,0,0,0,4,7,--0,0,0,0,0,4,7,9,--  
R87)  
0,0,0,0,0,0,4,8,-->0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,4,1,--0,0,0,3,1,--  
0,0,2,1,--0,0,0,0,0,4,8,--  
R88)

0,0,0,0,0,0,0,5,7,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--  
0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,5,7,9,--

R89)

0,0,0,0,0,0,0,5,8,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,  
--0,0,2,1,--0,0,0,0,0,0,5,8,--

R90)

0,0,0,0,0,0,0,6,8,-->0,0,0,0,0,6,1,--0,0,0,0,5,1,--0,0,0,4,1,--0,0,0,3,1,--0,  
0,2,1,--0,0,2,1,--0,0,0,0,0,0,6,8,--

R91)

0,0,0,0,0,0,0,7,1,-->0,0,0,0,0,6,1,--0,0,0,0,5,1,--0,0,0,4,1,--0,0,0,3,1,--0,  
0,2,1,--

R92)

0,0,0,0,0,0,2,4,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,2,4,6,--0,0,0,0,0,  
2,4,6,8,--0,0,0,0,0,2,4,6,9,--

R93)

0,0,0,0,0,0,2,4,7,-->0,0,2,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,2,4,7,--  
0,0,0,0,0,2,4,7,9,--

R94)

0,0,0,0,0,0,2,4,8,-->0,0,2,1,--0,0,2,1,--0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,  
0,0,0,2,4,8,--

R95)

0,0,0,0,0,0,2,5,7,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,2,5,7,--  
0,0,0,0,0,2,5,7,9,--

R96)

0,0,0,0,0,0,2,5,8,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,  
0,0,2,5,8,--

R97)

0,0,0,0,0,0,2,6,8,-->0,0,2,1,--0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,  
0,0,0,2,6,8,--

R98)

0,0,0,0,0,0,3,5,7,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,3,5,7,--  
0,0,0,0,0,3,5,7,9,--

R99)

0,0,0,0,0,0,3,5,8,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,  
0,0,3,5,8,--

R100)

0,0,0,0,0,0,3,6,8,-->0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,  
0,0,3,6,8,--

R101)

0,0,0,0,0,0,4,6,8,-->0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,  
0,0,0,4,6,8,--

R102)

0,0,0,0,0,2,4,6,8,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,2,4,6,8,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,: 0,0,2,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,: 0,0,0,2,4,:

0,0,0,3,1,:

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, :  
 0,0,0,0,0,5, : 0,0,0,0,2,4, : 0,0,0,0,2,5, : 0,0,0,0,3,5, : 0,0,0,0,4,1, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,2,4, : 0,0,0,0,0,2,5, :  
 0,0,0,0,0,2,6, : 0,0,0,0,0,3,5, : 0,0,0,0,0,3,6, : 0,0,0,0,0,4,6, : 0,0,0,0,0,5,1, :  
 0,0,0,0,2,4,6, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :  
 0,0,0,0,0,0,2,4, : 0,0,0,0,0,0,2,5, : 0,0,0,0,0,0,2,6, : 0,0,0,0,0,0,2,7, :  
 0,0,0,0,0,0,3,5, : 0,0,0,0,0,0,3,6, : 0,0,0,0,0,0,3,7, : 0,0,0,0,0,0,4,6, :  
 0,0,0,0,0,0,4,7, : 0,0,0,0,0,0,5,7, : 0,0,0,0,0,0,6,1, : 0,0,0,0,0,2,4,6, :  
 0,0,0,0,0,2,4,7, : 0,0,0,0,0,2,5,7, : 0,0,0,0,0,3,5,7, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, :  
 0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,2,4, : 0,0,0,0,0,0,0,2,5, :  
 0,0,0,0,0,0,0,2,6, : 0,0,0,0,0,0,0,2,7, : 0,0,0,0,0,0,0,2,8, : 0,0,0,0,0,0,0,3,5, :  
 0,0,0,0,0,0,0,3,6, : 0,0,0,0,0,0,0,3,7, : 0,0,0,0,0,0,0,3,8, : 0,0,0,0,0,0,0,4,6, :  
 0,0,0,0,0,0,0,4,7, : 0,0,0,0,0,0,0,4,8, : 0,0,0,0,0,0,0,5,7, : 0,0,0,0,0,0,0,5,8, :  
 0,0,0,0,0,0,0,6,8, : 0,0,0,0,0,0,0,7,1, : 0,0,0,0,0,0,2,4,6, : 0,0,0,0,0,0,2,4,7, :  
 0,0,0,0,0,0,2,4,8, : 0,0,0,0,0,0,2,5,7, : 0,0,0,0,0,0,2,5,8, : 0,0,0,0,0,0,2,6,8, :  
 0,0,0,0,0,0,3,5,7, : 0,0,0,0,0,0,3,5,8, : 0,0,0,0,0,0,3,6,8, : 0,0,0,0,0,0,4,6,8, :  
 0,0,0,0,0,2,4,6,8, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, :  
 0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :  
 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,2,4, : 0,0,0,0,0,0,0,0,2,5, :  
 0,0,0,0,0,0,0,0,2,6, : 0,0,0,0,0,0,0,0,2,7, : 0,0,0,0,0,0,0,0,2,8, :  
 0,0,0,0,0,0,0,0,2,9, : 0,0,0,0,0,0,0,0,3,5, : 0,0,0,0,0,0,0,0,3,6, :  
 0,0,0,0,0,0,0,0,3,7, : 0,0,0,0,0,0,0,0,3,8, : 0,0,0,0,0,0,0,0,3,9, :  
 0,0,0,0,0,0,0,0,4,6, : 0,0,0,0,0,0,0,0,4,7, : 0,0,0,0,0,0,0,0,4,8, :  
 0,0,0,0,0,0,0,0,4,9, : 0,0,0,0,0,0,0,0,5,7, : 0,0,0,0,0,0,0,0,5,8, :  
 0,0,0,0,0,0,0,0,5,9, : 0,0,0,0,0,0,0,0,6,8, : 0,0,0,0,0,0,0,0,6,9, :  
 0,0,0,0,0,0,0,0,7,9, : 0,0,0,0,0,0,0,0,8,1, : 0,0,0,0,0,0,0,2,4,6, :  
 0,0,0,0,0,0,0,2,4,7, : 0,0,0,0,0,0,0,2,4,8, : 0,0,0,0,0,0,0,2,4,9, :  
 0,0,0,0,0,0,0,2,5,7, : 0,0,0,0,0,0,0,2,5,8, : 0,0,0,0,0,0,0,2,5,9, :  
 0,0,0,0,0,0,0,2,6,8, : 0,0,0,0,0,0,0,2,6,9, : 0,0,0,0,0,0,0,2,7,9, :  
 0,0,0,0,0,0,0,3,5,7, : 0,0,0,0,0,0,0,3,5,8, : 0,0,0,0,0,0,0,3,5,9, :  
 0,0,0,0,0,0,0,3,6,8, : 0,0,0,0,0,0,0,3,6,9, : 0,0,0,0,0,0,0,3,7,9, :  
 0,0,0,0,0,0,0,4,6,8, : 0,0,0,0,0,0,0,4,6,9, : 0,0,0,0,0,0,0,4,7,9, :  
 0,0,0,0,0,0,0,5,7,9, : 0,0,0,0,0,0,0,2,4,6,8, : 0,0,0,0,0,0,0,2,4,6,9, :  
 0,0,0,0,0,0,2,4,7,9, : 0,0,0,0,0,0,2,5,7,9, : 0,0,0,0,0,0,3,5,7,9, :  
 Number new nodes in level n is given by : 1,2,3,5,7,10,15,23,36,57,

-----Class

884-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][100][110][120]]$

-----

--

Rules of  $T[L]$ :

R1) 0, -->0,0, --0,1, --

R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--  
R3) 0,1,-->0,1,--  
R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R5) 0,0,1,-->0,0,1,--0,0,2,--  
R6) 0,0,2,-->0,0,1,--0,1,--  
R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R8) 0,0,0,1,-->0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R9) 0,0,0,2,-->0,0,0,1,--0,0,1,--0,0,2,--  
R10) 0,0,0,3,-->0,0,0,2,--0,0,0,2,--0,1,--  
R11)  
0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--  
R12) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R13) 0,0,0,0,2,-->0,0,0,0,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R14) 0,0,0,0,3,-->0,0,0,0,2,--0,0,0,0,2,--0,0,1,--0,0,2,--  
R15) 0,0,0,0,4,-->0,0,0,0,3,--0,0,0,0,4,2,--0,0,0,0,3,--0,1,--  
R16)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R17)  
0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,  
--  
R18) 0,0,0,0,0,2,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R19) 0,0,0,0,0,3,-->0,0,0,0,0,2,--0,0,0,0,0,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R20) 0,0,0,0,0,4,-->0,0,0,0,0,3,--0,0,0,0,0,4,2,--0,0,0,0,0,3,--0,0,1,--0,0,2,--  
R21)  
0,0,0,0,0,5,-->0,0,0,0,0,4,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,4,--0,1,--  
R22) 0,0,0,0,4,2,-->0,0,0,0,2,--0,0,0,1,--0,0,1,--0,0,2,--  
R23)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R24)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,  
0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R25)  
0,0,0,0,0,0,2,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,  
0,4,--0,0,0,0,0,5,--  
R26)  
0,0,0,0,0,0,3,-->0,0,0,0,0,0,2,--0,0,0,0,0,0,2,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,  
--0,0,0,0,4,--  
R27)  
0,0,0,0,0,0,4,-->0,0,0,0,0,0,3,--0,0,0,0,0,0,4,2,--0,0,0,0,0,0,3,--0,0,0,1,--0,0,0,  
2,--0,0,0,3,--  
R28)  
0,0,0,0,0,0,5,-->0,0,0,0,0,0,4,--0,0,0,0,0,0,5,2,--0,0,0,0,0,0,5,3,--0,0,0,0,0,0,4,  
--0,0,1,--0,0,2,--  
R29)  
0,0,0,0,0,0,6,-->0,0,0,0,0,0,5,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,6,  
4,--0,0,0,0,0,5,--0,1,--  
R30) 0,0,0,0,0,4,2,-->0,0,0,0,0,2,--0,0,0,0,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R31) 0,0,0,0,0,5,2,-->0,0,0,0,0,3,--0,0,0,0,2,--0,0,0,0,2,--0,0,1,--0,0,2,--  
R32) 0,0,0,0,0,5,3,-->0,0,0,0,0,4,2,--0,0,0,0,0,4,2,--0,0,0,1,--0,0,1,--0,0,2,--  
R33)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--  
R34)  
0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,  
0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R35)  
0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,3,  
--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R36)  
0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,2,--0,0,0,0,0,1,--0,0,0,0,0,2,--  
0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R37)  
0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,2,--0,0,0,0,0,0,0,3,--0,0,0,0,  
1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R38)  
0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,2,--0,0,0,0,0,0,0,5,3,--0,0,0,  
0,0,0,0,4,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R39)  
0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,2,--0,0,0,0,0,0,0,6,3,--0,0,0,  
0,0,0,0,6,4,--0,0,0,0,0,0,0,5,--0,0,1,--0,0,2,--  
R40)  
0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,2,--0,0,0,0,0,0,0,7,3,--0,0,0,  
0,0,0,0,7,4,--0,0,0,0,0,0,0,7,5,--0,0,0,0,0,0,0,6,--0,1,--  
R41)  
0,0,0,0,0,0,4,2,-->0,0,0,0,0,0,2,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,  
--0,0,0,0,4,--  
R42)  
0,0,0,0,0,0,5,2,-->0,0,0,0,0,0,3,--0,0,0,0,0,2,--0,0,0,0,0,2,--0,0,0,1,--0,0,0,2,--  
0,0,0,3,--  
R43)  
0,0,0,0,0,0,5,3,-->0,0,0,0,0,0,4,2,--0,0,0,0,0,0,4,2,--0,0,0,0,1,--0,0,0,1,--0,0,0,  
2,--0,0,0,3,--  
R44)  
0,0,0,0,0,0,6,2,-->0,0,0,0,0,0,4,--0,0,0,0,0,3,--0,0,0,0,0,4,2,--0,0,0,0,0,3,--0,0,  
1,--0,0,2,--  
R45)  
0,0,0,0,0,0,6,3,-->0,0,0,0,0,0,5,2,--0,0,0,0,0,0,5,2,--0,0,0,0,2,--0,0,0,0,2,--0,0,  
1,--0,0,2,--  
R46)  
0,0,0,0,0,0,6,4,-->0,0,0,0,0,0,5,3,--0,0,0,0,0,0,6,4,2,--0,0,0,0,0,0,5,3,--0,0,0,1,  
--0,0,1,--0,0,2,--  
R47)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--  
R48)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R49)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

-

R50)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--

R51)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--

R52)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,2,--0,0,0,0,0,0,0,0,5,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--

R53)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,2,--0,0,0,0,0,0,0,0,6,3,--0,0,0,0,0,0,0,0,6,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--

R54)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,2,--0,0,0,0,0,0,0,0,7,3,--0,0,0,0,0,0,0,0,7,4,--0,0,0,0,0,0,0,0,7,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--

R55)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,2,--0,0,0,0,0,0,0,0,8,3,--0,0,0,0,0,0,0,0,8,4,--0,0,0,0,0,0,0,0,8,5,--0,0,0,0,0,0,0,0,8,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,1,--

R56)

0,0,0,0,0,0,0,0,4,2,-->0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--

R57)

0,0,0,0,0,0,0,0,5,2,-->0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--

R58)

0,0,0,0,0,0,0,0,5,3,-->0,0,0,0,0,0,0,0,4,2,--0,0,0,0,0,0,0,0,4,2,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--

R59)

0,0,0,0,0,0,0,0,6,2,-->0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--

R60)

0,0,0,0,0,0,0,0,6,3,-->0,0,0,0,0,0,0,0,5,2,--0,0,0,0,0,0,0,0,5,2,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--

R61)

0,0,0,0,0,0,0,0,6,4,-->0,0,0,0,0,0,0,0,5,3,--0,0,0,0,0,0,0,0,6,4,2,--0,0,0,0,0,0,0,0,5,3,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--

R62)

0,0,0,0,0,0,0,0,7,2,-->0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,2,--0,0,0,0,0,0,0,0,5,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--

R63)

0,0,0,0,0,0,0,0,7,3,-->0,0,0,0,0,0,0,0,6,2,--0,0,0,0,0,0,0,0,6,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--

R64)

0,0,0,0,0,0,0,7,4,-->0,0,0,0,0,0,0,6,3,--0,0,0,0,0,0,0,7,4,2,--0,0,0,0,0,0,0,6,3,--  
0,0,0,0,2,--0,0,0,0,2,--0,0,1,--0,0,2,--

R65)

0,0,0,0,0,0,0,7,5,-->0,0,0,0,0,0,0,6,4,--0,0,0,0,0,0,0,7,5,2,--0,0,0,0,0,0,0,7,5,3,  
--0,0,0,0,0,0,0,6,4,--0,0,0,1,--0,0,1,--0,0,2,--

R66)

0,0,0,0,0,0,6,4,2,-->0,0,0,0,0,0,4,2,--0,0,0,0,0,2,--0,0,0,0,1,--0,0,0,1,--0,0,0,2,  
--0,0,0,3,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,:

0,0,0,0,0,5,: 0,0,0,0,4,2,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,:

0,0,0,0,0,0,4,: 0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,: 0,0,0,0,0,4,2,: 0,0,0,0,0,5,2,:

0,0,0,0,0,5,3,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:

0,0,0,0,0,0,4,2,: 0,0,0,0,0,0,5,2,: 0,0,0,0,0,0,5,3,: 0,0,0,0,0,0,6,2,:

0,0,0,0,0,0,6,3,: 0,0,0,0,0,0,6,4,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,:

0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,4,2,: 0,0,0,0,0,0,0,5,2,:

0,0,0,0,0,0,0,5,3,: 0,0,0,0,0,0,0,6,2,: 0,0,0,0,0,0,0,6,3,: 0,0,0,0,0,0,0,6,4,:

0,0,0,0,0,0,0,7,2,: 0,0,0,0,0,0,0,7,3,: 0,0,0,0,0,0,0,7,4,: 0,0,0,0,0,0,0,7,5,:

0,0,0,0,0,0,6,4,2,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,:

0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,:

0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,0,4,2,: 0,0,0,0,0,0,0,0,5,2,:

0,0,0,0,0,0,0,0,5,3,: 0,0,0,0,0,0,0,0,6,2,: 0,0,0,0,0,0,0,0,6,3,:

0,0,0,0,0,0,0,0,6,4,: 0,0,0,0,0,0,0,0,7,2,: 0,0,0,0,0,0,0,0,7,3,:

0,0,0,0,0,0,0,0,7,4,: 0,0,0,0,0,0,0,0,7,5,: 0,0,0,0,0,0,0,0,8,2,:

0,0,0,0,0,0,0,0,8,3,: 0,0,0,0,0,0,0,0,8,4,: 0,0,0,0,0,0,0,0,8,5,:

0,0,0,0,0,0,0,0,8,6,: 0,0,0,0,0,0,0,6,4,2,: 0,0,0,0,0,0,0,7,4,2,:

0,0,0,0,0,0,0,7,5,2,: 0,0,0,0,0,0,0,7,5,3,:

Number new nodes in level n is given by : 1,2,3,4,5,7,10,14,20,29,

-----Class

885-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][011][100][110][201]]

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,0,1,--

R3) 0,1,-->0,1,--  
R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,1,--0,0,0,3,--  
R5) 0,0,1,-->0,0,1,--0,0,1,--  
R6) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,3,--0,0,0,0,4,--  
R7) 0,0,0,1,-->0,0,0,1,--0,0,0,1,--0,0,0,3,--  
R8) 0,0,0,3,-->0,0,1,--0,0,0,1,--0,0,0,3,--  
R9)  
0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--  
R10) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,3,--0,0,0,0,4,--  
R11) 0,0,0,0,3,-->0,0,0,1,--0,0,0,0,1,--0,0,0,0,3,--0,0,0,0,4,--  
R12) 0,0,0,0,4,-->0,0,1,--0,0,0,1,--0,0,0,0,3,--0,0,0,0,4,--  
R13)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R14)  
0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,  
--  
R15)  
0,0,0,0,0,3,-->0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R16)  
0,0,0,0,0,4,-->0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R17) 0,0,0,0,0,5,-->0,0,1,--0,0,0,1,--0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R18)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R19)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,  
0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R20)  
0,0,0,0,0,0,3,-->0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,  
0,0,0,0,5,--0,0,0,0,0,0,6,--  
R21)  
0,0,0,0,0,0,4,-->0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,  
0,0,5,--0,0,0,0,0,0,6,--  
R22)  
0,0,0,0,0,0,5,-->0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,  
--0,0,0,0,0,0,6,--  
R23)  
0,0,0,0,0,0,6,-->0,0,1,--0,0,0,1,--0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,  
0,0,0,6,--  
R24)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--  
R25)  
0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,  
0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R26)  
0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,



0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R27)

0,0,0,0,0,0,0,4,-->0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,  
--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R28)

0,0,0,0,0,0,0,5,-->0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,  
0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R29)

0,0,0,0,0,0,0,6,-->0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,  
0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R30)

0,0,0,0,0,0,0,7,-->0,0,1,--0,0,0,1,--0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,  
0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R31)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,  
1,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R32)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,3,--0,  
0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,  
0,0,0,0,0,8,--

R33)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,3,--0,0,  
0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,  
0,0,0,0,8,--

R34)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,3,--0,0,0,0,  
0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,  
0,0,8,--

R35)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,  
0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,  
--

R36)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,  
0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R37)

0,0,0,0,0,0,0,0,7,-->0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,  
0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R38)

0,0,0,0,0,0,0,0,8,-->0,0,1,--0,0,0,1,--0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,  
0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,0, : 0,0,1, :

LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,3, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,3, : 0,0,0,0,4, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, :

0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, :  
 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7, :  
 0,0,0,0,0,0,0,0,8, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, :  
 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, :  
 Number new nodes in level n is given by : 1,2,2,3,4,5,6,7,8,9,

-----Class

886-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][100][110][210]]$

--  
 Rules of  $T[L]$ :  
 R1) 0, -->0,0, --0,1, --  
 R2) 0,0, -->0,0,0, --0,0,1, --0,0,1, --  
 R3) 0,1, -->0,1, --  
 R4) 0,0,0, -->0,0,0,0, --0,0,0,1, --0,0,0,1, --0,0,0,3, --  
 R5) 0,0,1, -->0,0,1, --0,0,1, --  
 R6) 0,0,0,0, -->0,0,0,0,0, --0,0,0,0,1, --0,0,0,0,1, --0,0,0,0,3, --0,0,0,0,4, --  
 R7) 0,0,0,1, -->0,0,0,1, --0,0,0,1, --0,0,0,3, --  
 R8) 0,0,0,3, -->0,0,0,1, --0,0,1, --0,0,0,3, --  
 R9)  
 0,0,0,0,0, -->0,0,0,0,0,0, --0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,0,3, --0,0,0,0,0,4, --  
 0,0,0,0,0,5, --  
 R10) 0,0,0,0,1, -->0,0,0,0,1, --0,0,0,0,1, --0,0,0,0,3, --0,0,0,0,4, --  
 R11) 0,0,0,0,3, -->0,0,0,0,1, --0,0,0,1, --0,0,0,0,3, --0,0,0,0,4, --  
 R12) 0,0,0,0,4, -->0,0,0,0,3, --0,0,0,1, --0,0,1, --0,0,0,0,4, --  
 R13)  
 0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,0,0,0,0,0,1, --0,0,0,0,0,0,1, --0,0,0,0,0,0,3, --0,0,  
 0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --  
 R14)  
 0,0,0,0,0,1, -->0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5,  
 --  
 R15)  
 0,0,0,0,0,3, -->0,0,0,0,0,1, --0,0,0,0,1, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5, --  
 R16)  
 0,0,0,0,0,4, -->0,0,0,0,0,3, --0,0,0,0,1, --0,0,0,1, --0,0,0,0,0,4, --0,0,0,0,0,5, --  
 R17) 0,0,0,0,0,5, -->0,0,0,0,0,4, --0,0,0,0,3, --0,0,0,1, --0,0,1, --0,0,0,0,0,5, --  
 R18)  
 0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,1, --0,0,0,0,0,0,0,1, --0,0,0,0,0,0,  
 0,3, --0,0,0,0,0,0,0,4, --0,0,0,0,0,0,0,5, --0,0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --  
 R19)  
 0,0,0,0,0,0,1, -->0,0,0,0,0,0,1, --0,0,0,0,0,0,1, --0,0,0,0,0,0,3, --0,0,0,0,0,0,4, --0,  
 0,0,0,0,0,5, --0,0,0,0,0,0,6, --  
 R20)  
 0,0,0,0,0,0,3, -->0,0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,0,0,3, --0,0,0,0,0,0,4, --0,0,

0,0,0,0,5,--0,0,0,0,0,0,6,--

R21)

0,0,0,0,0,0,4,-->0,0,0,0,0,0,3,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R22)

0,0,0,0,0,0,5,-->0,0,0,0,0,0,4,--0,0,0,0,0,3,--0,0,0,0,1,--0,0,0,1,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R23)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,5,--0,0,0,0,0,4,--0,0,0,0,3,--0,0,0,1,--0,0,1,--0,0,0,0,0,0,6,--

R24)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R25)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R26)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R27)

0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,3,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R28)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,4,--0,0,0,0,0,0,3,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R29)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,5,--0,0,0,0,0,0,4,--0,0,0,0,0,3,--0,0,0,0,1,--0,0,0,1,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R30)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,6,--0,0,0,0,0,0,5,--0,0,0,0,0,4,--0,0,0,0,3,--0,0,0,1,--0,0,1,--0,0,0,0,0,0,7,--

R31)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R32)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R33)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R34)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R35)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,1,--0,0,0,0,0,

0,1,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8  
,--

R36)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,3,--0,0,0,0,  
0,1,--0,0,0,0,1,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R37)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,4,--0,0,0,0,  
0,3,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R38)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,5,--0,0,0,0,  
0,4,--0,0,0,0,3,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,0,0,0,8,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,:

LEN=4) 0,0,0,0,: 0,0,0,1, : 0,0,0,3, :

LEN=5) 0,0,0,0,0,: 0,0,0,0,1, : 0,0,0,0,3, : 0,0,0,0,4, :

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, :

0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, :

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, :

0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,3, :

0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7, :

0,0,0,0,0,0,0,0,8, :

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,3, :

0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, :

0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, :

Number new nodes in level n is given by : 1,2,2,3,4,5,6,7,8,9,

-----Class

887-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][100][120][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--

R3) 0,1,-->0,1,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R5) 0,0,1,-->0,0,1,--0,0,2,--

R6) 0,0,2,-->0,0,1,--0,1,--

R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R8) 0,0,0,1,-->0,0,0,1,--0,0,0,2,--0,0,0,3,--

R9) 0,0,0,2,-->0,0,0,1,--0,0,1,--0,0,2,--

R10) 0,0,0,3,-->0,0,1,--0,0,0,2,--0,1,--

R11)

0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--

R12) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R13) 0,0,0,0,2,-->0,0,0,0,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R14) 0,0,0,0,3,-->0,0,0,1,--0,0,0,0,2,--0,0,1,--0,0,2,--  
R15) 0,0,0,0,4,-->0,0,1,--0,0,0,2,--0,0,0,0,3,--0,1,--  
R16)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R17)  
0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,  
--  
R18) 0,0,0,0,0,2,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R19) 0,0,0,0,0,3,-->0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R20) 0,0,0,0,0,4,-->0,0,0,1,--0,0,0,0,2,--0,0,0,0,0,3,--0,0,1,--0,0,2,--  
R21) 0,0,0,0,0,5,-->0,0,1,--0,0,0,2,--0,0,0,0,3,--0,0,0,0,0,4,--0,1,--  
R22)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R23)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,  
0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R24)  
0,0,0,0,0,0,2,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,  
0,4,--0,0,0,0,0,5,--  
R25)  
0,0,0,0,0,0,3,-->0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--  
0,0,0,0,4,--  
R26)  
0,0,0,0,0,0,4,-->0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,1,--0,0,0,2,--0,0,  
0,3,--  
R27)  
0,0,0,0,0,0,5,-->0,0,0,1,--0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,1,--0,0,2,  
--  
R28)  
0,0,0,0,0,0,6,-->0,0,1,--0,0,0,2,--0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,1,--  
R29)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--  
R30)  
0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,  
0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R31)  
0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,  
--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R32)  
0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,  
0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R33)  
0,0,0,0,0,0,0,4,-->0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,1,--0,0,  
0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R34)

0,0,0,0,0,0,0,5,-->0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,  
0,1,--0,0,0,2,--0,0,0,3,--

R35)

0,0,0,0,0,0,0,6,-->0,0,0,1,--0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,  
0,5,--0,0,1,--0,0,2,--

R36)

0,0,0,0,0,0,0,7,-->0,0,1,--0,0,0,2,--0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,  
0,0,0,0,0,6,--0,1,--

R37)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R38)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,  
0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,  
0,0,0,0,0,8,--

R39)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
-

R40)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,1,--0,0,0,0,  
0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R41)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,  
0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--

R42)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,0,  
0,4,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R43)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--0,  
0,0,0,0,0,0,5,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R44)

0,0,0,0,0,0,0,0,7,-->0,0,0,1,--0,0,0,2,--0,0,0,3,--0,0,0,4,--0,0,0,0,  
0,0,5,--0,0,0,0,0,0,6,--0,0,1,--0,0,2,--

R45)

0,0,0,0,0,0,0,0,8,-->0,0,1,--0,0,2,--0,0,3,--0,0,4,--0,0,0,0,0,5,--0,  
0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,1,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,0, : 0,0,1, : 0,0,2, :

LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,2, : 0,0,0,3, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, :  
0,0,0,0,0,5, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :  
0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :  
0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, :  
 0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, :  
 0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :  
 0,0,0,0,0,0,0,0,0,9, :  
 Number new nodes in level n is given by : 1,2,3,4,5,6,7,8,9,10,

-----Class

888-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][100][120][210]]$

-----

--  
 Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R5) 0,0,1,-->0,0,1,--0,0,2,--
- R6) 0,0,2,-->0,0,1,--0,1,--
- R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R8) 0,0,0,1,-->0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R9) 0,0,0,2,-->0,0,0,1,--0,0,1,--0,0,2,--
- R10) 0,0,0,3,-->0,0,0,2,--0,0,1,--0,1,--
- R11)  
 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
 0,0,0,0,0,5,--
- R12) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R13) 0,0,0,0,2,-->0,0,0,0,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R14) 0,0,0,0,3,-->0,0,0,0,2,--0,0,0,1,--0,0,1,--0,0,2,--
- R15) 0,0,0,0,4,-->0,0,0,0,3,--0,0,0,2,--0,0,1,--0,1,--
- R16)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
 0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--
- R17)  
 0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,  
 --
- R18) 0,0,0,0,0,2,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R19) 0,0,0,0,0,3,-->0,0,0,0,0,2,--0,0,0,0,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R20) 0,0,0,0,0,4,-->0,0,0,0,0,3,--0,0,0,0,2,--0,0,0,1,--0,0,1,--0,0,2,--
- R21) 0,0,0,0,0,5,-->0,0,0,0,0,4,--0,0,0,0,3,--0,0,0,2,--0,0,1,--0,1,--
- R22)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
 0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--
- R23)  
 0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,  
 0,0,0,0,0,5,--0,0,0,0,0,0,6,--
- R24)  
 0,0,0,0,0,0,2,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,

0,4,--0,0,0,0,0,5,--

R25)

0,0,0,0,0,0,3,-->0,0,0,0,0,0,2,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--  
0,0,0,0,4,--

R26)

0,0,0,0,0,0,4,-->0,0,0,0,0,0,3,--0,0,0,0,0,2,--0,0,0,0,1,--0,0,0,1,--0,0,0,2,--0,0,  
0,3,--

R27)

0,0,0,0,0,0,5,-->0,0,0,0,0,0,4,--0,0,0,0,0,3,--0,0,0,0,2,--0,0,0,1,--0,0,1,--0,0,2,  
--

R28)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,5,--0,0,0,0,0,4,--0,0,0,0,3,--0,0,0,2,--0,0,1,--0,1,--

R29)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R30)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,  
0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R31)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,  
--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R32)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,2,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,  
0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R33)

0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,3,--0,0,0,0,0,0,2,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,  
0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R34)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,4,--0,0,0,0,0,0,3,--0,0,0,0,0,2,--0,0,0,0,1,--0,0,  
0,1,--0,0,0,2,--0,0,0,3,--

R35)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,5,--0,0,0,0,0,0,4,--0,0,0,0,0,3,--0,0,0,0,2,--0,0,  
0,1,--0,0,1,--0,0,2,--

R36)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,6,--0,0,0,0,0,0,5,--0,0,0,0,0,4,--0,0,0,0,3,--0,0,  
0,2,--0,0,1,--0,1,--

R37)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,  
,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R38)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,  
0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,  
,0,0,0,0,0,8,--

R39)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,-

R40)



0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--

R41)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R42)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--

R43)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,2,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--

R44)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,3,--0,0,0,0,0,2,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,0,2,--

R45)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,4,--0,0,0,0,0,3,--0,0,0,0,2,--0,0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,0, : 0,0,1, : 0,0,2, :

LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,2, : 0,0,0,3, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, :

Number new nodes in level n is given by : 1,2,3,4,5,6,7,8,9,10,

-----Class

889-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][100][201][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,0,1,--

R3) 0,1,-->0,1,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,1,--0,0,0,3,--

R5) 0,0,1,-->0,0,1,--0,0,1,--

R6) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,3,--0,0,0,0,4,--

R7) 0,0,0,1,-->0,0,0,1,--0,0,0,1,--0,0,0,3,--  
R8) 0,0,0,3,-->0,0,1,--0,0,1,--0,0,0,3,--  
R9)  
0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--  
R10) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,3,--0,0,0,0,4,--  
R11) 0,0,0,0,3,-->0,0,0,1,--0,0,0,1,--0,0,0,0,3,--0,0,0,0,4,--  
R12) 0,0,0,0,4,-->0,0,1,--0,0,1,--0,0,1,--0,0,0,0,4,--  
R13)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R14)  
0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,  
--  
R15)  
0,0,0,0,0,3,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R16) 0,0,0,0,0,4,-->0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R17) 0,0,0,0,0,5,-->0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,0,0,0,5,--  
R18)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R19)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,  
0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R20)  
0,0,0,0,0,0,3,-->0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,  
0,0,0,5,--0,0,0,0,0,0,6,--  
R21)  
0,0,0,0,0,0,4,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,0,6,--  
R22)  
0,0,0,0,0,0,5,-->0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,0,0,0,5,--0,0,0,0,0,  
0,6,--  
R23) 0,0,0,0,0,0,6,-->0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,0,0,0,0,6,--  
R24)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--  
R25)  
0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,  
0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R26)  
0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,  
4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R27)  
0,0,0,0,0,0,0,4,-->0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,0,0,4,--0,0,  
0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R28)  
0,0,0,0,0,0,0,5,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,0,0,5,  
--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R29)

0,0,0,0,0,0,0,6,-->0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R30)

0,0,0,0,0,0,0,7,-->0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,0,0,0,0,0,7,--

R31)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,9,--

R32)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R33)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R34)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R35)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R36)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R37)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R38)

0,0,0,0,0,0,0,0,8,-->0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,0,0,0,0,0,8,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,0, : 0,0,1, :

LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,3, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,3, : 0,0,0,0,4, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, :

0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, :

0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,3, :

0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7, :

0,0,0,0,0,0,0,0,8, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,3, :

0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, :

0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,0,9,:  
Number new nodes in level n is given by : 1,2,2,3,4,5,6,7,8,9,

-----Class

890-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][101][102][110]]$

-----

--  
Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R5) 0,0,1,-->0,0,1,--0,0,2,--
- R6) 0,0,2,-->0,0,2,1,--0,0,2,--
- R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R8) 0,0,0,1,-->0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R9) 0,0,0,2,-->0,0,2,1,--0,0,0,2,--0,0,0,2,4,--
- R10) 0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,3,--
- R11) 0,0,2,1,-->
- R12)  
0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--
- R13) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R14) 0,0,0,0,2,-->0,0,2,1,--0,0,0,0,2,--0,0,0,0,2,4,--0,0,0,0,2,5,--
- R15) 0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,3,--0,0,0,0,3,5,--
- R16) 0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,4,--
- R17) 0,0,0,2,4,-->0,0,2,1,--0,0,0,3,1,--0,0,0,2,4,--
- R18) 0,0,0,3,1,-->0,0,2,1,--
- R19)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--
- R20)  
0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,  
--
- R21)  
0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,2,--0,0,0,0,0,2,4,--0,0,0,0,0,2,5,--0,0,0,0,0,2,  
6,--
- R22)  
0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,3,--0,0,0,0,0,3,5,--0,0,0,0,0,3,6,  
--
- R23)  
0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,4,--0,0,0,0,0,4,  
6,--
- R24)  
0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--0,0,  
0,0,0,5,--
- R25) 0,0,0,0,2,4,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,2,4,--0,0,0,0,2,4,6,--
- R26) 0,0,0,0,2,5,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,2,5,--
- R27) 0,0,0,0,3,5,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,3,5,--

R28) 0,0,0,0,4,1,-->0,0,0,3,1,--0,0,0,3,1,--  
R29) 0,0,0,0,4,2,-->0,0,2,1,--0,0,0,3,1,--  
R30)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R31)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R32)  
0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,2,4,--0,0,0,0,0,0,2,5,--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,2,7,--  
R33)  
0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,3,5,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,7,--  
R34)  
0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,0,4,--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,7,--  
R35)  
0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--0,0,0,0,0,5,--0,0,0,0,0,5,7,--  
R36)  
0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,--  
R37)  
0,0,0,0,0,2,4,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,0,2,4,--0,0,0,0,0,2,4,6,--0,0,0,0,0,2,4,7,--  
R38)  
0,0,0,0,0,2,5,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,2,5,--0,0,0,0,0,2,5,7,--  
R39)  
0,0,0,0,0,2,6,-->0,0,2,1,--0,0,0,0,0,5,2,--0,0,0,0,0,2,6,4,--0,0,0,0,0,5,2,--0,0,0,0,0,2,6,--  
R40)  
0,0,0,0,0,3,5,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,0,3,5,--0,0,0,0,0,3,5,7,--  
R41)  
0,0,0,0,0,3,6,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,5,3,--0,0,0,0,0,5,3,--0,0,0,0,0,3,6,--  
R42)  
0,0,0,0,0,4,6,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,5,1,--0,0,0,0,0,4,6,--  
R43) 0,0,0,0,0,5,1,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--  
R44) 0,0,0,0,0,5,2,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--  
R45) 0,0,0,0,0,5,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--  
R46) 0,0,0,0,2,4,6,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,4,2,--0,0,0,0,2,4,6,--  
R47)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--  
R48)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R49)

0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,2,4,--0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,2,8,--

R50)

0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,3,5,--0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,3,8,--

R51)

0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,4,8,--

R52)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,5,8,--

R53)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,6,--0,0,0,0,0,0,6,8,--

R54)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,7,2,--0,0,0,0,0,0,0,7,3,--0,0,0,0,0,0,0,7,4,--0,0,0,0,0,0,0,7,5,--0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,7,--

R55)

0,0,0,0,0,0,2,4,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,0,0,2,4,--0,0,0,0,0,0,2,4,6,--0,0,0,0,0,0,2,4,7,--0,0,0,0,0,0,2,4,8,--

R56)

0,0,0,0,0,0,2,5,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,0,2,5,--0,0,0,0,0,0,2,5,7,--0,0,0,0,0,0,2,5,8,--

R57)

0,0,0,0,0,0,2,6,-->0,0,2,1,--0,0,0,0,0,5,2,--0,0,0,0,0,2,6,4,--0,0,0,0,0,5,2,--0,0,0,0,0,2,6,--0,0,0,0,0,2,6,8,--

R58)

0,0,0,0,0,0,2,7,-->0,0,2,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,2,7,4,--0,0,0,0,0,0,2,7,5,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,2,7,--

R59)

0,0,0,0,0,0,3,5,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,0,0,3,5,--0,0,0,0,0,0,3,5,7,--0,0,0,0,0,0,3,5,8,--

R60)

0,0,0,0,0,0,3,6,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,5,3,--0,0,0,0,0,5,3,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,6,8,--

R61)

0,0,0,0,0,0,3,7,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,3,7,5,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,3,7,--

R62)

0,0,0,0,0,0,4,6,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,5,1,--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,6,8,--

R63)

0,0,0,0,0,0,4,7,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,4,7,--

R64)

0,0,0,0,0,0,5,7,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,5,7,--

R65)

0,0,0,0,0,0,6,1,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--

R66)

0,0,0,0,0,0,6,2,-->0,0,2,1,--0,0,0,0,0,5,2,--0,0,0,0,0,2,6,4,--0,0,0,0,0,5,2,--

R67) 0,0,0,0,0,0,6,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,5,3,--0,0,0,0,0,5,3,--

R68) 0,0,0,0,0,0,6,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,5,1,--

R69)

0,0,0,0,0,2,4,6,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,4,2,--0,0,0,0,0,2,4,6,--0,0,0,0,0,2,4,6,8,--

R70)

0,0,0,0,0,2,4,7,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,0,2,6,4,--0,0,0,0,0,2,6,4,--0,0,0,0,0,2,4,7,--

R71)

0,0,0,0,0,2,5,7,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,5,2,--0,0,0,0,0,2,5,7,--

R72) 0,0,0,0,0,2,6,4,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,4,2,--

R73)

0,0,0,0,0,3,5,7,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,0,5,3,--0,0,0,0,0,3,5,7,--

R74)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,9,--

R75)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R76)

0,0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,2,4,--0,0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,0,2,8,--0,0,0,0,0,0,0,0,2,9,--

R77)

0,0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,3,5,--0,0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,0,3,8,--0,0,0,0,0,0,0,0,3,9,--

R78)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,0,4,8,--0,0,0,0,0,0,0,0,4,9,--

R79)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,0,5,8,--0,0,0,0,0,0,0,0,5,9,--

R80)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,6,--0,0,0,0,0,0,6,8,--0,0,0,0,0,0,6,9,--

R81)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,7,1,--0,0,0,0,0,0,7,2,--0,0,0,0,0,0,7,3,--0,0,0,0,0,0,7,4,--0,0,0,0,0,0,7,5,--0,0,0,0,0,0,7,1,--0,0,0,0,0,0,7,7,--0,0,0,0,0,0,7,9,--

,0,0,0,0,0,7,9,--

R82)

0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,1,--0,0,0,0,0,0,0,8,2,--0,0,0,0,0,0,0,8,3,--0,0,0,0,0,0,0,8,4,--0,0,0,0,0,0,0,8,5,--0,0,0,0,0,0,0,8,6,--0,0,0,0,0,0,0,8,1,--0,0,0,0,0,0,0,8,--

R83)

0,0,0,0,0,0,2,4,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,0,0,2,4,--0,0,0,0,0,0,2,4,6,--0,0,0,0,0,0,2,4,7,--0,0,0,0,0,0,2,4,8,--0,0,0,0,0,0,2,4,9,--

R84)

0,0,0,0,0,0,2,5,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,0,2,5,--0,0,0,0,0,0,2,5,7,--0,0,0,0,0,0,2,5,8,--0,0,0,0,0,0,2,5,9,--

R85)

0,0,0,0,0,0,2,6,-->0,0,2,1,--0,0,0,0,5,2,--0,0,0,0,2,6,4,--0,0,0,0,5,2,--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,2,6,8,--0,0,0,0,0,0,2,6,9,--

R86)

0,0,0,0,0,0,2,7,-->0,0,2,1,--0,0,0,0,6,2,--0,0,0,0,2,7,4,--0,0,0,0,0,0,2,7,5,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,2,7,--0,0,0,0,0,0,2,7,9,--

R87)

0,0,0,0,0,0,2,8,-->0,0,2,1,--0,0,0,0,7,2,--0,0,0,0,2,8,4,--0,0,0,0,0,0,2,8,5,--0,0,0,0,0,0,2,8,6,--0,0,0,0,0,0,7,2,--0,0,0,0,0,0,2,8,--

R88)

0,0,0,0,0,0,3,5,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,0,0,3,5,--0,0,0,0,0,0,3,5,7,--0,0,0,0,0,0,3,5,8,--0,0,0,0,0,0,3,5,9,--

R89)

0,0,0,0,0,0,3,6,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,5,3,--0,0,0,0,5,3,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,6,8,--0,0,0,0,0,0,3,6,9,--

R90)

0,0,0,0,0,0,3,7,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,6,3,--0,0,0,0,0,0,3,7,5,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,3,7,--0,0,0,0,0,0,3,7,9,--

R91)

0,0,0,0,0,0,3,8,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,7,3,--0,0,0,0,0,0,3,8,5,--0,0,0,0,0,0,3,8,6,--0,0,0,0,0,0,7,3,--0,0,0,0,0,0,3,8,--

R92)

0,0,0,0,0,0,4,6,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,5,1,--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,6,8,--0,0,0,0,0,0,4,6,9,--

R93)

0,0,0,0,0,0,4,7,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,6,4,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,4,7,--0,0,0,0,0,0,4,7,9,--

R94)

0,0,0,0,0,0,4,8,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,7,4,--0,0,0,0,0,0,4,8,6,--0,0,0,0,0,0,7,4,--0,0,0,0,0,0,4,8,--

R95)

0,0,0,0,0,0,5,7,-->0,0,0,0,5,1,--0,0,0,0,5,2,--0,0,0,0,5,3,--0,0,0,0,5,1,--0,0,0,0,6,1,--0,0,0,0,5,7,--0,0,0,0,5,7,9,--

R96)

0,0,0,0,0,0,5,8,-->0,0,0,0,5,1,--0,0,0,0,5,2,--0,0,0,0,5,3,--0,0,0,0,5,1,--0,0,0,0,7,5,--0,0,0,0,7,5,--0,0,0,0,5,8,--

R97)

0,0,0,0,0,0,6,8,-->0,0,0,0,6,1,--0,0,0,0,6,2,--0,0,0,0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,6,1,--0,0,0,0,7,1,--0,0,0,0,6,8,--



R98)

0,0,0,0,0,0,0,7,1,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,  
0,0,6,4,--0,0,0,0,0,0,6,1,--

R99)

0,0,0,0,0,0,0,7,2,-->0,0,2,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,2,7,4,--0,0,0,0,0,0,2,  
7,5,--0,0,0,0,0,0,6,2,--

R100)

0,0,0,0,0,0,0,7,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,3,7,5,--  
0,0,0,0,0,0,6,3,--

R101)

0,0,0,0,0,0,0,7,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,0,6,4,--0,  
0,0,0,0,0,6,4,--

R102)

0,0,0,0,0,0,0,7,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,  
--0,0,0,0,0,6,1,--

R103)

0,0,0,0,0,0,2,4,6,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,4,2,--0,0,0,0,0,0,2,4,6,--0,0,0,  
0,0,0,2,4,6,8,--0,0,0,0,0,0,2,4,6,9,--

R104)

0,0,0,0,0,0,2,4,7,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,0,2,6,4,--0,0,0,0,0,2,6,4,--0,0,  
0,0,0,0,2,4,7,--0,0,0,0,0,0,2,4,7,9,--

R105)

0,0,0,0,0,0,2,4,8,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,0,0,2,7,4,--0,0,0,0,0,0,2,4,8,6,  
--0,0,0,0,0,0,2,7,4,--0,0,0,0,0,0,2,4,8,--

R106)

0,0,0,0,0,0,2,5,7,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,5,2,--0,0,0,0,  
0,0,2,5,7,--0,0,0,0,0,0,2,5,7,9,--

R107)

0,0,0,0,0,0,2,5,8,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,0,2,7,5,--0,0,  
0,0,0,0,2,7,5,--0,0,0,0,0,0,2,5,8,--

R108)

0,0,0,0,0,0,2,6,8,-->0,0,2,1,--0,0,0,0,0,5,2,--0,0,0,0,0,2,6,4,--0,0,0,0,0,5,2,--0,  
0,0,0,0,0,6,2,--0,0,0,0,0,0,2,6,8,--

R109)

0,0,0,0,0,0,2,7,4,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,0,2,6,4,--0,0,0,0,0,2,6,4,--

R110) 0,0,0,0,0,0,2,7,5,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,5,2,--

R111)

0,0,0,0,0,0,3,5,7,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,0,5,3,--0,0,0,0,  
0,0,3,5,7,--0,0,0,0,0,0,3,5,7,9,--

R112)

0,0,0,0,0,0,3,5,8,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,0,0,3,7,5,--0,0,  
0,0,0,0,3,7,5,--0,0,0,0,0,0,3,5,8,--

R113)

0,0,0,0,0,0,3,6,8,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,5,3,--0,0,0,0,0,5,3,--0,0,0,  
0,0,0,6,3,--0,0,0,0,0,0,3,6,8,--

R114) 0,0,0,0,0,0,3,7,5,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,0,5,3,--

R115)

0,0,0,0,0,0,4,6,8,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,5,1,--0,0,  
0,0,0,0,6,4,--0,0,0,0,0,0,4,6,8,--

R116)

0,0,0,0,0,2,4,6,8,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,4,2,--0,0,0,0,0,2,6,4,--0,0,0,0,  
0,2,4,6,8,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,: 0,0,2,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,: 0,0,0,2,4,:  
0,0,0,3,1,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,:

0,0,0,0,0,5,: 0,0,0,0,2,4,: 0,0,0,0,2,5,: 0,0,0,0,3,5,: 0,0,0,0,4,1,: 0,0,0,0,4,2,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,:

0,0,0,0,0,0,4,: 0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,: 0,0,0,0,0,2,4,: 0,0,0,0,0,2,5,:

0,0,0,0,0,2,6,: 0,0,0,0,0,3,5,: 0,0,0,0,0,3,6,: 0,0,0,0,0,4,6,: 0,0,0,0,0,5,1,:

0,0,0,0,0,5,2,: 0,0,0,0,0,5,3,: 0,0,0,0,2,4,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:

0,0,0,0,0,0,2,4,: 0,0,0,0,0,0,2,5,: 0,0,0,0,0,0,2,6,: 0,0,0,0,0,0,2,7,:

0,0,0,0,0,0,3,5,: 0,0,0,0,0,0,3,6,: 0,0,0,0,0,0,3,7,: 0,0,0,0,0,0,4,6,:

0,0,0,0,0,0,4,7,: 0,0,0,0,0,0,5,7,: 0,0,0,0,0,0,6,1,: 0,0,0,0,0,0,6,2,:

0,0,0,0,0,0,6,3,: 0,0,0,0,0,0,6,4,: 0,0,0,0,0,2,4,6,: 0,0,0,0,0,2,4,7,:

0,0,0,0,0,2,5,7,: 0,0,0,0,0,2,6,4,: 0,0,0,0,0,3,5,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,:

0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,2,4,: 0,0,0,0,0,0,0,2,5,:

0,0,0,0,0,0,0,2,6,: 0,0,0,0,0,0,0,2,7,: 0,0,0,0,0,0,0,2,8,: 0,0,0,0,0,0,0,3,5,:

0,0,0,0,0,0,0,3,6,: 0,0,0,0,0,0,0,3,7,: 0,0,0,0,0,0,0,3,8,: 0,0,0,0,0,0,0,4,6,:

0,0,0,0,0,0,0,4,7,: 0,0,0,0,0,0,0,4,8,: 0,0,0,0,0,0,0,5,7,: 0,0,0,0,0,0,0,5,8,:

0,0,0,0,0,0,0,6,8,: 0,0,0,0,0,0,0,7,1,: 0,0,0,0,0,0,0,7,2,: 0,0,0,0,0,0,0,7,3,:

0,0,0,0,0,0,0,7,4,: 0,0,0,0,0,0,0,7,5,: 0,0,0,0,0,0,2,4,6,: 0,0,0,0,0,0,2,4,7,:

0,0,0,0,0,0,2,4,8,: 0,0,0,0,0,0,2,5,7,: 0,0,0,0,0,0,2,5,8,: 0,0,0,0,0,0,2,6,8,:

0,0,0,0,0,0,2,7,4,: 0,0,0,0,0,0,2,7,5,: 0,0,0,0,0,0,3,5,7,: 0,0,0,0,0,0,3,5,8,:

0,0,0,0,0,0,3,6,8,: 0,0,0,0,0,0,3,7,5,: 0,0,0,0,0,0,4,6,8,: 0,0,0,0,0,2,4,6,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,:

0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,:

0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,0,2,4,: 0,0,0,0,0,0,0,0,2,5,:

0,0,0,0,0,0,0,0,2,6,: 0,0,0,0,0,0,0,0,2,7,: 0,0,0,0,0,0,0,0,2,8,:

0,0,0,0,0,0,0,0,2,9,: 0,0,0,0,0,0,0,0,3,5,: 0,0,0,0,0,0,0,0,3,6,:

0,0,0,0,0,0,0,0,3,7,: 0,0,0,0,0,0,0,0,3,8,: 0,0,0,0,0,0,0,0,3,9,:

0,0,0,0,0,0,0,0,4,6,: 0,0,0,0,0,0,0,0,4,7,: 0,0,0,0,0,0,0,0,4,8,:

0,0,0,0,0,0,0,0,4,9,: 0,0,0,0,0,0,0,0,5,7,: 0,0,0,0,0,0,0,0,5,8,:

0,0,0,0,0,0,0,0,5,9,: 0,0,0,0,0,0,0,0,6,8,: 0,0,0,0,0,0,0,0,6,9,:

0,0,0,0,0,0,0,0,7,9,: 0,0,0,0,0,0,0,0,8,1,: 0,0,0,0,0,0,0,0,8,2,:

0,0,0,0,0,0,0,0,8,3,: 0,0,0,0,0,0,0,0,8,4,: 0,0,0,0,0,0,0,0,8,5,:

0,0,0,0,0,0,0,0,8,6,: 0,0,0,0,0,0,0,2,4,6,: 0,0,0,0,0,0,0,2,4,7,:

0,0,0,0,0,0,0,2,4,8,: 0,0,0,0,0,0,0,2,4,9,: 0,0,0,0,0,0,0,2,5,7,:

0,0,0,0,0,0,0,2,5,8,: 0,0,0,0,0,0,0,2,5,9,: 0,0,0,0,0,0,0,2,6,8,:

0,0,0,0,0,0,0,2,6,9,: 0,0,0,0,0,0,0,2,7,9,: 0,0,0,0,0,0,0,2,8,4,:

0,0,0,0,0,0,2,8,5,: 0,0,0,0,0,0,2,8,6,: 0,0,0,0,0,0,3,5,7,:  
 0,0,0,0,0,0,3,5,8,: 0,0,0,0,0,0,3,5,9,: 0,0,0,0,0,0,3,6,8,:  
 0,0,0,0,0,0,3,6,9,: 0,0,0,0,0,0,3,7,9,: 0,0,0,0,0,0,3,8,5,:  
 0,0,0,0,0,0,3,8,6,: 0,0,0,0,0,0,4,6,8,: 0,0,0,0,0,0,4,6,9,:  
 0,0,0,0,0,0,4,7,9,: 0,0,0,0,0,0,4,8,6,: 0,0,0,0,0,0,5,7,9,:  
 0,0,0,0,0,2,4,6,8,: 0,0,0,0,0,2,4,6,9,: 0,0,0,0,0,2,4,7,9,:  
 0,0,0,0,0,2,4,8,6,: 0,0,0,0,0,2,5,7,9,: 0,0,0,0,0,3,5,7,9,:  
 Number new nodes in level n is given by : 1,2,3,5,7,11,17,27,43,69,

-----Class

891-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][101][102][120]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R5) 0,0,1,-->0,0,1,--0,0,2,--
- R6) 0,0,2,-->0,0,2,1,--0,1,--
- R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R8) 0,0,0,1,-->0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R9) 0,0,0,2,-->0,0,2,1,--0,0,1,--0,0,2,--
- R10) 0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,1,--
- R11) 0,0,2,1,-->
- R12) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--
- R13) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R14) 0,0,0,0,2,-->0,0,2,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R15) 0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,1,--0,0,2,--
- R16) 0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,1,--
- R17) 0,0,0,3,1,-->0,0,2,1,--
- R18) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--
- R19) 0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--
- 
- R20) 0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R21) 0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R22) 0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,1,--0,0,2,--
- R23) 0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--0,1,--
- 
- R24) 0,0,0,0,4,1,-->0,0,0,3,1,--0,0,0,3,1,--
- R25) 0,0,0,0,4,2,-->0,0,2,1,--0,0,2,1,--
- R26) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,

0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R27)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,  
0,0,0,0,0,5,--0,0,0,0,0,6,--  
R28)  
0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--  
R29)  
0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,  
0,4,--  
R30)  
0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,1,--0,0,0,2,--0,0,  
0,3,--  
R31)  
0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--0,  
0,1,--0,0,2,--  
R32)  
0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,  
6,4,--0,0,0,0,0,6,1,--0,1,--  
R33) 0,0,0,0,0,5,1,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--  
R34) 0,0,0,0,0,5,2,-->0,0,2,1,--0,0,0,3,1,--0,0,0,3,1,--  
R35) 0,0,0,0,0,5,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,2,1,--  
R36)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--  
R37)  
0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,  
0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R38)  
0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,  
0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R39)  
0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,  
--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R40)  
0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,1,--0,0,0,0,2,  
--0,0,0,0,3,--0,0,0,0,4,--  
R41)  
0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--  
0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R42)  
0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,  
0,6,4,--0,0,0,0,0,0,6,1,--0,0,1,--0,0,2,--  
R43)  
0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,7,2,--0,0,0,0,0,0,0,7,3,--0,0,  
0,0,0,0,0,7,4,--0,0,0,0,0,0,0,7,5,--0,0,0,0,0,0,0,7,1,--0,1,--  
R44)  
0,0,0,0,0,0,0,6,1,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--  
R45) 0,0,0,0,0,0,6,2,-->0,0,2,1,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--

R46) 0,0,0,0,0,0,6,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,3,1,--0,0,0,3,1,--  
R47) 0,0,0,0,0,0,6,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,2,1,--  
R48)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,9,--  
R49)  
0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--  
R50)  
0,0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R51)  
0,0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R52)  
0,0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R53)  
0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R54)  
0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R55)  
0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,7,2,--0,0,0,0,0,0,0,7,3,--0,0,0,0,0,0,0,7,4,--0,0,0,0,0,0,0,7,5,--0,0,0,0,0,0,0,7,1,--0,0,1,--0,0,2,--  
R56)  
0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,8,1,--0,0,0,0,0,0,0,0,8,2,--0,0,0,0,0,0,0,0,8,3,--0,0,0,0,0,0,0,0,8,4,--0,0,0,0,0,0,0,0,8,5,--0,0,0,0,0,0,0,0,8,6,--0,0,0,0,0,0,0,0,8,1,--0,1,--  
R57)  
0,0,0,0,0,0,0,0,7,1,-->0,0,0,0,0,0,0,6,1,--0,0,0,0,0,0,0,6,2,--0,0,0,0,0,0,0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,1,--  
R58)  
0,0,0,0,0,0,0,0,7,2,-->0,0,2,1,--0,0,0,0,0,0,5,1,--0,0,0,0,0,0,5,2,--0,0,0,0,0,0,5,3,--0,0,0,0,5,1,--  
R59)  
0,0,0,0,0,0,0,0,7,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--  
R60)  
0,0,0,0,0,0,0,0,7,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,0,3,1,--  
R61)  
0,0,0,0,0,0,0,0,7,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--0,0,2,1,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,0, : 0,0,1, : 0,0,2, :  
 LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,2, : 0,0,0,3, : 0,0,2,1, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,3,1, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, :  
 0,0,0,0,0,5, : 0,0,0,0,4,1, : 0,0,0,0,4,2, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,1, : 0,0,0,0,0,5,2, :  
 0,0,0,0,0,5,3, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :  
 0,0,0,0,0,0,6,1, : 0,0,0,0,0,0,6,2, : 0,0,0,0,0,0,6,3, : 0,0,0,0,0,0,6,4, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, :  
 0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,1, : 0,0,0,0,0,0,0,7,2, :  
 0,0,0,0,0,0,0,7,3, : 0,0,0,0,0,0,0,7,4, : 0,0,0,0,0,0,0,7,5, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, :  
 0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :  
 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,8,1, : 0,0,0,0,0,0,0,0,8,2, :  
 0,0,0,0,0,0,0,0,8,3, : 0,0,0,0,0,0,0,0,8,4, : 0,0,0,0,0,0,0,0,8,5, :  
 0,0,0,0,0,0,0,0,8,6, :

Number new nodes in level n is given by : 1,2,3,5,6,8,10,12,14,16,

-----Class

892-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][101][102][201]]$

-----

--

Rules of  $T[L]$ :

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,0, --0,0,1, --0,0,2, --
- R3) 0,1, -->0,1, --
- R4) 0,0,0, -->0,0,0,0, --0,0,0,1, --0,0,0,2, --0,0,0,3, --
- R5) 0,0,1, -->0,0,1, --0,0,2, --
- R6) 0,0,2, -->0,0,2,1, --0,0,2, --
- R7) 0,0,0,0, -->0,0,0,0,0, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --
- R8) 0,0,0,1, -->0,0,0,1, --0,0,0,2, --0,0,0,3, --
- R9) 0,0,0,2, -->0,0,2,1, --0,0,0,2, --0,0,0,3, --
- R10) 0,0,0,3, -->0,0,2,1, --0,0,0,3,2, --0,0,0,3, --
- R11) 0,0,2,1, -->
- R12) 0,0,0,0,0, -->0,0,0,0,0,0, --0,0,0,0,0,1, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5, --
- R13) 0,0,0,0,1, -->0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --
- R14) 0,0,0,0,2, -->0,0,2,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --
- R15) 0,0,0,0,3, -->0,0,2,1, --0,0,0,0,3,2, --0,0,0,0,3, --0,0,0,0,4, --
- R16) 0,0,0,0,4, -->0,0,2,1, --0,0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,4, --
- R17) 0,0,0,3,2, -->0,0,2,1, --
- R18) 0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,0,0,0,0,0,1, --0,0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,

0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--  
R19)  
0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,  
--  
R20)  
0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R21)  
0,0,0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R22)  
0,0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R23)  
0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,5,--  
R24) 0,0,0,0,4,3,-->0,0,2,1,--0,0,0,3,2,--  
R25)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R26)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,  
0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R27)  
0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,  
0,0,5,--0,0,0,0,0,0,6,--  
R28)  
0,0,0,0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,  
5,--0,0,0,0,0,0,6,--  
R29)  
0,0,0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,  
--0,0,0,0,0,0,6,--  
R30)  
0,0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,5,  
--0,0,0,0,0,0,6,--  
R31)  
0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,  
5,--0,0,0,0,0,0,6,--  
R32) 0,0,0,0,0,5,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--  
R33)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--  
R34)  
0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,  
0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R35)  
0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--  
0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R36)  
0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,  
0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R37)  
0,0,0,0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,

0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
 R38)  
 0,0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,5,4,--0,0,0,0,0,0,  
 0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
 R39)  
 0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,5,4,--0,0,0,0,0,0,  
 6,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
 R40)  
 0,0,0,0,0,0,7,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,5,4,--0,0,0,0,0,0,  
 6,5,--0,0,0,0,0,0,7,6,--0,0,0,0,0,0,7,--  
 R41) 0,0,0,0,0,6,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,5,4,--  
 R42)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,  
 2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
 ,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--  
 R43)  
 0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,  
 0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,  
 ,0,0,0,0,8,--  
 R44)  
 0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,  
 0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,  
 ,8,--  
 R45)  
 0,0,0,0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--  
 0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--  
 R46)  
 0,0,0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,4,--0,0,0,  
 0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--  
 R47)  
 0,0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,5,4,--0,0,0,0,0,  
 0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--  
 R48)  
 0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,5,4,--0,0,0,0,0,  
 0,6,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--  
 R49)  
 0,0,0,0,0,0,7,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,5,4,--0,0,0,0,0,  
 0,6,5,--0,0,0,0,0,0,7,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--  
 R50)  
 0,0,0,0,0,0,8,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,5,4,--0,0,0,0,0,  
 0,6,5,--0,0,0,0,0,0,7,6,--0,0,0,0,0,0,8,7,--0,0,0,0,0,0,8,--  
 R51)  
 0,0,0,0,0,0,7,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,5,4,--0,0,0,0,0,  
 0,6,5,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,0, : 0,0,1, : 0,0,2, :

LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,2, : 0,0,0,3, : 0,0,2,1, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,3,2, :



LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, :  
 0,0,0,0,0,5, : 0,0,0,0,4,3, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,4, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :  
 0,0,0,0,0,0,6,5, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, :  
 0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,6, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, :  
 0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :  
 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,8,7, :  
 Number new nodes in level n is given by : 1,2,3,5,6,7,8,9,10,11,

-----Class

893-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][101][102][210]]$

-----

--

Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,0, --0,0,1, --0,0,2, --
- R3) 0,1, -->0,1, --
- R4) 0,0,0, -->0,0,0,0, --0,0,0,1, --0,0,0,2, --0,0,0,3, --
- R5) 0,0,1, -->0,0,1, --0,0,2, --
- R6) 0,0,2, -->0,0,2,1, --0,0,2, --
- R7) 0,0,0,0, -->0,0,0,0,0, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --
- R8) 0,0,0,1, -->0,0,0,1, --0,0,0,2, --0,0,0,3, --
- R9) 0,0,0,2, -->0,0,2,1, --0,0,0,2, --0,0,0,2,4, --
- R10) 0,0,0,3, -->0,0,0,3,1, --0,0,2,1, --0,0,0,3, --
- R11) 0,0,2,1, -->
- R12) 0,0,0,0,0, -->0,0,0,0,0,0, --0,0,0,0,0,1, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --  
0,0,0,0,0,5, --
- R13) 0,0,0,0,1, -->0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --
- R14) 0,0,0,0,2, -->0,0,2,1, --0,0,0,0,2, --0,0,0,0,2,4, --0,0,0,0,2,5, --
- R15) 0,0,0,0,3, -->0,0,0,3,1, --0,0,2,1, --0,0,0,0,3, --0,0,0,0,3,5, --
- R16) 0,0,0,0,4, -->0,0,0,0,4,1, --0,0,0,3,1, --0,0,2,1, --0,0,0,0,4, --
- R17) 0,0,0,2,4, -->0,0,2,1, --0,0,2,1, --0,0,0,2,4, --
- R18) 0,0,0,3,1, -->0,0,2,1, --
- R19) 0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,0,0,0,0,0,1, --0,0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,  
0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --
- R20) 0,0,0,0,0,1, -->0,0,0,0,0,1, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5,  
--
- R21) 0,0,0,0,0,2, -->0,0,2,1, --0,0,0,0,0,2, --0,0,0,0,0,2,4, --0,0,0,0,0,2,5, --0,0,0,0,0,2,

6, --  
R22) 0,0,0,0,0,3, -->0,0,0,3,1, --0,0,2,1, --0,0,0,0,0,3, --0,0,0,0,0,3,5, --0,0,0,0,0,3,6, --  
R23) 0,0,0,0,0,4, -->0,0,0,0,4,1, --0,0,0,3,1, --0,0,2,1, --0,0,0,0,0,4, --0,0,0,0,0,4,6, --  
R24) 0,0,0,0,0,5, -->0,0,0,0,0,5,1, --0,0,0,0,4,1, --0,0,0,3,1, --0,0,2,1, --0,0,0,0,0,5, --  
R25) 0,0,0,0,2,4, -->0,0,2,1, --0,0,2,1, --0,0,0,0,2,4, --0,0,0,0,2,4,6, --  
R26) 0,0,0,0,2,5, -->0,0,2,1, --0,0,0,3,1, --0,0,2,1, --0,0,0,0,2,5, --  
R27) 0,0,0,0,3,5, -->0,0,0,3,1, --0,0,2,1, --0,0,2,1, --0,0,0,0,3,5, --  
R28) 0,0,0,0,4,1, -->0,0,0,3,1, --0,0,2,1, --  
R29) 0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,1, --0,0,0,0,0,0,0,2, --0,0,0,0,0,0,0,3, --0,0,0,0,0,0,0,4, --0,0,0,0,0,0,0,5, --0,0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --  
R30) 0,0,0,0,0,0,1, -->0,0,0,0,0,0,1, --0,0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --  
R31) 0,0,0,0,0,0,2, -->0,0,2,1, --0,0,0,0,0,0,2, --0,0,0,0,0,0,2,4, --0,0,0,0,0,0,2,5, --0,0,0,0,0,0,2,6, --0,0,0,0,0,0,2,7, --  
R32) 0,0,0,0,0,0,3, -->0,0,0,3,1, --0,0,2,1, --0,0,0,0,0,0,3, --0,0,0,0,0,0,3,5, --0,0,0,0,0,0,3,6, --0,0,0,0,0,0,3,7, --  
R33) 0,0,0,0,0,0,4, -->0,0,0,0,4,1, --0,0,0,3,1, --0,0,2,1, --0,0,0,0,0,0,4, --0,0,0,0,0,0,4,6, --0,0,0,0,0,0,4,7, --  
R34) 0,0,0,0,0,0,5, -->0,0,0,0,0,5,1, --0,0,0,0,4,1, --0,0,0,3,1, --0,0,2,1, --0,0,0,0,0,0,5, --0,0,0,0,0,0,5,7, --  
R35) 0,0,0,0,0,0,6, -->0,0,0,0,0,0,6,1, --0,0,0,0,0,5,1, --0,0,0,0,4,1, --0,0,0,3,1, --0,0,2,1, --0,0,0,0,0,0,6, --  
R36) 0,0,0,0,0,2,4, -->0,0,2,1, --0,0,2,1, --0,0,0,0,0,2,4, --0,0,0,0,0,2,4,6, --0,0,0,0,0,2,4,7, --  
R37) 0,0,0,0,0,2,5, -->0,0,2,1, --0,0,0,3,1, --0,0,2,1, --0,0,0,0,0,2,5, --0,0,0,0,0,2,5,7, --  
R38) 0,0,0,0,0,2,6, -->0,0,2,1, --0,0,0,0,4,1, --0,0,0,3,1, --0,0,2,1, --0,0,0,0,0,2,6, --  
R39) 0,0,0,0,0,3,5, -->0,0,0,3,1, --0,0,2,1, --0,0,2,1, --0,0,0,0,0,3,5, --0,0,0,0,0,3,5,7, --  
R40) 0,0,0,0,0,3,6, -->0,0,0,3,1, --0,0,2,1, --0,0,0,3,1, --0,0,2,1, --0,0,0,0,0,3,6, --  
R41) 0,0,0,0,0,4,6, -->0,0,0,0,4,1, --0,0,0,3,1, --0,0,2,1, --0,0,2,1, --0,0,0,0,0,4,6, --  
R42) 0,0,0,0,0,5,1, -->0,0,0,0,4,1, --0,0,0,3,1, --0,0,2,1, --  
R43) 0,0,0,0,2,4,6, -->0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,0,0,2,4,6, --  
R44) 0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0,1, --0,0,0,0,0,0,0,0,2, --0,0,0,0,0,0,0,0,3, --0,0,0,0,0,0,0,0,4, --0,0,0,0,0,0,0,0,5, --0,0,0,0,0,0,0,0,6, --0,0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,0,8, --

R45)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R46)

0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,2,4,--0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,2,8,--

R47)

0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,3,5,--0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,3,8,--

R48)

0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,4,8,--

R49)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,5,8,--

R50)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,6,8,--

R51)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,7,--

R52)

0,0,0,0,0,0,2,4,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,2,4,--0,0,0,0,0,0,2,4,6,--0,0,0,0,0,0,2,4,7,--0,0,0,0,0,0,2,4,8,--

R53)

0,0,0,0,0,0,2,5,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,2,5,--0,0,0,0,0,0,2,5,7,--0,0,0,0,0,0,2,5,8,--

R54)

0,0,0,0,0,0,2,6,-->0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,2,6,8,--

R55)

0,0,0,0,0,0,2,7,-->0,0,2,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,2,7,--

R56)

0,0,0,0,0,0,3,5,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,3,5,--0,0,0,0,0,0,3,5,7,--0,0,0,0,0,0,3,5,8,--

R57)

0,0,0,0,0,0,3,6,-->0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,6,8,--

R58)

0,0,0,0,0,0,3,7,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,3,7,--

R59)

0,0,0,0,0,0,4,6,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,6,8,--

R60)

0,0,0,0,0,0,4,7,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,4,7,--

R61)

0,0,0,0,0,0,5,7,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,5,7,--

0,0,0,0,0,5,7,--

R62) 0,0,0,0,0,0,6,1,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--

R63)

0,0,0,0,0,2,4,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,2,4,6,--0,0,0,0,0,2,4,6,8,--

R64)

0,0,0,0,0,2,4,7,-->0,0,2,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,2,4,7,--

R65)

0,0,0,0,0,2,5,7,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,2,5,7,--

R66)

0,0,0,0,0,3,5,7,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,3,5,7,--

R67)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,9,--

R68)

0,0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R69)

0,0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,2,4,--0,0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,0,2,8,--0,0,0,0,0,0,0,0,2,9,--

R70)

0,0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,3,5,--0,0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,0,3,8,--0,0,0,0,0,0,0,0,3,9,--

R71)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,0,4,8,--0,0,0,0,0,0,0,0,4,9,--

R72)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,0,5,8,--0,0,0,0,0,0,0,0,5,9,--

R73)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,0,6,9,--

R74)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,7,9,--

R75)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,1,--0,0,0,0,0,0,7,1,--0,0,0,0,0,6,1,--0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,8,--

R76)

0,0,0,0,0,0,0,2,4,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,2,4,--0,0,0,0,0,0,2,4,6,--0,0,0,0,0,0,0,2,4,7,--0,0,0,0,0,0,2,4,8,--0,0,0,0,0,0,2,4,9,--

R77)

0,0,0,0,0,0,0,2,5,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,2,5,--0,0,0,0,0,0,2,5,7,--0,0,0,0,0,0,2,5,8,--0,0,0,0,0,0,2,5,9,--

R78)

0,0,0,0,0,0,0,2,6,-->0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,2,

6, --0,0,0,0,0,0,0,2,6,8, --0,0,0,0,0,0,0,2,6,9, --  
R79)  
0,0,0,0,0,0,0,2,7, -->0,0,2,1, --0,0,0,0,0,5,1, --0,0,0,0,4,1, --0,0,0,3,1, --0,0,2,1, --  
0,0,0,0,0,0,0,2,7, --0,0,0,0,0,0,0,2,7,9, --  
R80)  
0,0,0,0,0,0,0,2,8, -->0,0,2,1, --0,0,0,0,0,0,6,1, --0,0,0,0,0,5,1, --0,0,0,0,4,1, --0,0,  
0,3,1, --0,0,2,1, --0,0,0,0,0,0,0,2,8, --  
R81)  
0,0,0,0,0,0,0,3,5, -->0,0,0,3,1, --0,0,2,1, --0,0,2,1, --0,0,0,0,0,0,3,5, --0,0,0,0,0,  
0,0,3,5,7, --0,0,0,0,0,0,0,3,5,8, --0,0,0,0,0,0,0,3,5,9, --  
R82)  
0,0,0,0,0,0,0,3,6, -->0,0,0,3,1, --0,0,2,1, --0,0,0,3,1, --0,0,2,1, --0,0,0,0,0,0,3,6,  
--0,0,0,0,0,0,0,3,6,8, --0,0,0,0,0,0,0,3,6,9, --  
R83)  
0,0,0,0,0,0,0,3,7, -->0,0,0,3,1, --0,0,2,1, --0,0,0,0,4,1, --0,0,0,3,1, --0,0,2,1, --0,0,  
0,0,0,0,0,3,7, --0,0,0,0,0,0,0,3,7,9, --  
R84)  
0,0,0,0,0,0,0,3,8, -->0,0,0,3,1, --0,0,2,1, --0,0,0,0,0,5,1, --0,0,0,0,4,1, --0,0,0,3,1,  
--0,0,2,1, --0,0,0,0,0,0,0,3,8, --  
R85)  
0,0,0,0,0,0,0,4,6, -->0,0,0,0,4,1, --0,0,0,3,1, --0,0,2,1, --0,0,2,1, --0,0,0,0,0,0,4,  
6, --0,0,0,0,0,0,0,4,6,8, --0,0,0,0,0,0,0,4,6,9, --  
R86)  
0,0,0,0,0,0,0,4,7, -->0,0,0,0,4,1, --0,0,0,3,1, --0,0,2,1, --0,0,0,3,1, --0,0,2,1, --0,0,  
0,0,0,0,0,4,7, --0,0,0,0,0,0,0,4,7,9, --  
R87)  
0,0,0,0,0,0,0,4,8, -->0,0,0,0,4,1, --0,0,0,3,1, --0,0,2,1, --0,0,0,0,4,1, --0,0,0,3,1, --  
0,0,2,1, --0,0,0,0,0,0,0,4,8, --  
R88)  
0,0,0,0,0,0,0,5,7, -->0,0,0,0,0,5,1, --0,0,0,0,4,1, --0,0,0,3,1, --0,0,2,1, --0,0,2,1, --  
0,0,0,0,0,0,0,5,7, --0,0,0,0,0,0,0,5,7,9, --  
R89)  
0,0,0,0,0,0,0,5,8, -->0,0,0,0,0,5,1, --0,0,0,0,4,1, --0,0,0,3,1, --0,0,2,1, --0,0,0,3,1,  
--0,0,2,1, --0,0,0,0,0,0,0,5,8, --  
R90)  
0,0,0,0,0,0,0,6,8, -->0,0,0,0,0,0,6,1, --0,0,0,0,0,5,1, --0,0,0,0,4,1, --0,0,0,3,1, --0,  
0,2,1, --0,0,2,1, --0,0,0,0,0,0,0,6,8, --  
R91)  
0,0,0,0,0,0,0,7,1, -->0,0,0,0,0,0,6,1, --0,0,0,0,0,5,1, --0,0,0,0,4,1, --0,0,0,3,1, --0,  
0,2,1, --  
R92)  
0,0,0,0,0,0,2,4,6, -->0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,0,0,0,0,2,4,6, --0,0,0,0,0,0,  
2,4,6,8, --0,0,0,0,0,0,2,4,6,9, --  
R93)  
0,0,0,0,0,0,2,4,7, -->0,0,2,1, --0,0,2,1, --0,0,0,3,1, --0,0,2,1, --0,0,0,0,0,0,2,4,7, --  
0,0,0,0,0,0,2,4,7,9, --  
R94)  
0,0,0,0,0,0,2,4,8, -->0,0,2,1, --0,0,2,1, --0,0,0,0,4,1, --0,0,0,3,1, --0,0,2,1, --0,0,0,  
0,0,0,2,4,8, --  
R95)

0,0,0,0,0,0,2,5,7,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,2,5,7,--  
0,0,0,0,0,0,2,5,7,9,--

R96)

0,0,0,0,0,0,2,5,8,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,  
0,0,2,5,8,--

R97)

0,0,0,0,0,0,2,6,8,-->0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,  
0,0,0,2,6,8,--

R98)

0,0,0,0,0,0,3,5,7,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,3,5,7,--  
0,0,0,0,0,0,3,5,7,9,--

R99)

0,0,0,0,0,0,3,5,8,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,  
0,0,3,5,8,--

R100)

0,0,0,0,0,0,3,6,8,-->0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,  
0,0,3,6,8,--

R101)

0,0,0,0,0,0,4,6,8,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,  
0,0,0,4,6,8,--

R102)

0,0,0,0,0,2,4,6,8,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,2,4,6,8,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,: 0,0,2,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,: 0,0,0,2,4,:  
0,0,0,3,1,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,:

0,0,0,0,0,5,: 0,0,0,0,2,4,: 0,0,0,0,2,5,: 0,0,0,0,3,5,: 0,0,0,0,4,1,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,:

0,0,0,0,0,0,4,: 0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,: 0,0,0,0,0,2,4,: 0,0,0,0,0,2,5,:

0,0,0,0,0,2,6,: 0,0,0,0,0,3,5,: 0,0,0,0,0,3,6,: 0,0,0,0,0,4,6,: 0,0,0,0,0,5,1,:

0,0,0,0,2,4,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:

0,0,0,0,0,0,2,4,: 0,0,0,0,0,0,2,5,: 0,0,0,0,0,0,2,6,: 0,0,0,0,0,0,2,7,:

0,0,0,0,0,0,3,5,: 0,0,0,0,0,0,3,6,: 0,0,0,0,0,0,3,7,: 0,0,0,0,0,0,4,6,:

0,0,0,0,0,0,4,7,: 0,0,0,0,0,0,5,7,: 0,0,0,0,0,0,6,1,: 0,0,0,0,0,2,4,6,:

0,0,0,0,0,2,4,7,: 0,0,0,0,0,2,5,7,: 0,0,0,0,0,3,5,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,:

0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,2,4,: 0,0,0,0,0,0,0,2,5,:

0,0,0,0,0,0,0,2,6,: 0,0,0,0,0,0,0,2,7,: 0,0,0,0,0,0,0,2,8,: 0,0,0,0,0,0,0,3,5,:

0,0,0,0,0,0,0,3,6,: 0,0,0,0,0,0,0,3,7,: 0,0,0,0,0,0,0,3,8,: 0,0,0,0,0,0,0,4,6,:

0,0,0,0,0,0,0,4,7,: 0,0,0,0,0,0,0,4,8,: 0,0,0,0,0,0,0,5,7,: 0,0,0,0,0,0,0,5,8,:

0,0,0,0,0,0,0,6,8,: 0,0,0,0,0,0,0,7,1,: 0,0,0,0,0,0,2,4,6,: 0,0,0,0,0,0,2,4,7,:

0,0,0,0,0,0,2,4,8,: 0,0,0,0,0,0,2,5,7,: 0,0,0,0,0,0,2,5,8,: 0,0,0,0,0,0,2,6,8,:

0,0,0,0,0,0,3,5,7,: 0,0,0,0,0,0,3,5,8,: 0,0,0,0,0,0,3,6,8,: 0,0,0,0,0,0,4,6,8,:

0,0,0,0,0,2,4,6,8, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,0,5, :  
 0,0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,0,8, :  
 0,0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,2,4, : 0,0,0,0,0,0,0,0,2,5, :  
 0,0,0,0,0,0,0,0,2,6, : 0,0,0,0,0,0,0,0,2,7, : 0,0,0,0,0,0,0,0,2,8, :  
 0,0,0,0,0,0,0,0,2,9, : 0,0,0,0,0,0,0,0,3,5, : 0,0,0,0,0,0,0,0,3,6, :  
 0,0,0,0,0,0,0,0,3,7, : 0,0,0,0,0,0,0,0,3,8, : 0,0,0,0,0,0,0,0,3,9, :  
 0,0,0,0,0,0,0,0,4,6, : 0,0,0,0,0,0,0,0,4,7, : 0,0,0,0,0,0,0,0,4,8, :  
 0,0,0,0,0,0,0,0,4,9, : 0,0,0,0,0,0,0,0,5,7, : 0,0,0,0,0,0,0,0,5,8, :  
 0,0,0,0,0,0,0,0,5,9, : 0,0,0,0,0,0,0,0,6,8, : 0,0,0,0,0,0,0,0,6,9, :  
 0,0,0,0,0,0,0,0,7,9, : 0,0,0,0,0,0,0,0,8,1, : 0,0,0,0,0,0,0,2,4,6, :  
 0,0,0,0,0,0,0,2,4,7, : 0,0,0,0,0,0,0,2,4,8, : 0,0,0,0,0,0,0,2,4,9, :  
 0,0,0,0,0,0,0,2,5,7, : 0,0,0,0,0,0,0,2,5,8, : 0,0,0,0,0,0,0,2,5,9, :  
 0,0,0,0,0,0,0,2,6,8, : 0,0,0,0,0,0,0,2,6,9, : 0,0,0,0,0,0,0,2,7,9, :  
 0,0,0,0,0,0,0,3,5,7, : 0,0,0,0,0,0,0,3,5,8, : 0,0,0,0,0,0,0,3,5,9, :  
 0,0,0,0,0,0,0,3,6,8, : 0,0,0,0,0,0,0,3,6,9, : 0,0,0,0,0,0,0,3,7,9, :  
 0,0,0,0,0,0,0,4,6,8, : 0,0,0,0,0,0,0,4,6,9, : 0,0,0,0,0,0,0,4,7,9, :  
 0,0,0,0,0,0,0,5,7,9, : 0,0,0,0,0,0,2,4,6,8, : 0,0,0,0,0,0,2,4,6,9, :  
 0,0,0,0,0,0,2,4,7,9, : 0,0,0,0,0,0,2,5,7,9, : 0,0,0,0,0,0,3,5,7,9, :  
 Number new nodes in level n is given by : 1,2,3,5,7,10,15,23,36,57,

-----Class

894-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][101][110][120]]$

-----

--

Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,0, --0,0,1, --0,0,2, --
- R3) 0,1, -->0,1, --
- R4) 0,0,0, -->0,0,0,0, --0,0,0,1, --0,0,0,2, --0,0,0,3, --
- R5) 0,0,1, -->0,0,1, --0,0,2, --
- R6) 0,0,2, -->0,0,1, --0,1, --
- R7) 0,0,0,0, -->0,0,0,0,0, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --
- R8) 0,0,0,1, -->0,0,0,1, --0,0,0,2, --0,0,0,3, --
- R9) 0,0,0,2, -->0,0,0,1, --0,0,1, --0,0,2, --
- R10) 0,0,0,3, -->0,0,0,2, --0,0,0,2, --0,1, --
- R11) 0,0,0,0,0, -->0,0,0,0,0,0, --0,0,0,0,0,1, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5, --
- R12) 0,0,0,0,1, -->0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --
- R13) 0,0,0,0,2, -->0,0,0,0,1, --0,0,0,1, --0,0,0,2, --0,0,0,3, --
- R14) 0,0,0,0,3, -->0,0,0,0,2, --0,0,0,0,2, --0,0,1, --0,0,2, --
- R15) 0,0,0,0,4, -->0,0,0,0,3, --0,0,0,0,4,2, --0,0,0,0,3, --0,1, --
- R16) 0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,0,0,0,0,0,1, --0,0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --
- R17) 0,0,0,0,0,1, -->0,0,0,0,0,1, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5,

--

R18) 0,0,0,0,0,2,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R19) 0,0,0,0,0,3,-->0,0,0,0,0,2,--0,0,0,0,0,2,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--

R20) 0,0,0,0,0,4,-->0,0,0,0,0,3,--0,0,0,0,0,4,2,--0,0,0,0,0,3,--0,0,1,--0,0,2,--

R21)

0,0,0,0,0,5,-->0,0,0,0,0,4,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,4,--0,1,--

R22) 0,0,0,0,4,2,-->0,0,0,0,2,--0,0,0,0,1,--0,0,1,--0,0,2,--

R23)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,

0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R24)

0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,

0,0,0,0,0,5,--0,0,0,0,0,6,--

R25)

0,0,0,0,0,0,2,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,

0,4,--0,0,0,0,0,5,--

R26)

0,0,0,0,0,0,3,-->0,0,0,0,0,0,2,--0,0,0,0,0,0,2,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,

--0,0,0,0,4,--

R27)

0,0,0,0,0,0,4,-->0,0,0,0,0,0,3,--0,0,0,0,0,0,4,2,--0,0,0,0,0,0,3,--0,0,0,1,--0,0,0,

2,--0,0,0,3,--

R28)

0,0,0,0,0,0,5,-->0,0,0,0,0,0,4,--0,0,0,0,0,0,5,2,--0,0,0,0,0,0,5,3,--0,0,0,0,0,0,4,

--0,0,1,--0,0,2,--

R29)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,5,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,6,

4,--0,0,0,0,0,5,--0,1,--

R30) 0,0,0,0,0,4,2,-->0,0,0,0,0,2,--0,0,0,0,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R31) 0,0,0,0,0,5,2,-->0,0,0,0,0,3,--0,0,0,0,2,--0,0,0,0,2,--0,0,1,--0,0,2,--

R32) 0,0,0,0,0,5,3,-->0,0,0,0,0,4,2,--0,0,0,0,0,4,2,--0,0,0,1,--0,0,1,--0,0,2,--

R33)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,

0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,

,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R34)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,

0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R35)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,

--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R36)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,2,--0,0,0,0,0,1,--0,0,0,0,0,2,--

0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R37)

0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,2,--0,0,0,0,0,0,0,3,--0,0,0,0,

1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R38)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,2,--0,0,0,0,0,0,0,5,3,--0,0,0,

0,0,0,0,4,--0,0,0,1,--0,0,0,2,--0,0,0,3,--



R39)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,2,--0,0,0,0,0,0,0,6,3,--0,0,0,0,0,0,0,6,4,--0,0,0,0,0,0,0,5,--0,0,1,--0,0,2,--

R40)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,2,--0,0,0,0,0,0,0,7,3,--0,0,0,0,0,0,0,7,4,--0,0,0,0,0,0,0,7,5,--0,0,0,0,0,0,0,6,--0,1,--

R41)

0,0,0,0,0,0,4,2,-->0,0,0,0,0,0,2,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R42)

0,0,0,0,0,0,5,2,-->0,0,0,0,0,0,3,--0,0,0,0,0,2,--0,0,0,0,0,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R43)

0,0,0,0,0,0,5,3,-->0,0,0,0,0,0,4,2,--0,0,0,0,0,0,4,2,--0,0,0,0,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R44)

0,0,0,0,0,0,6,2,-->0,0,0,0,0,0,4,--0,0,0,0,0,3,--0,0,0,0,0,4,2,--0,0,0,0,0,3,--0,0,1,--0,0,2,--

R45)

0,0,0,0,0,0,6,3,-->0,0,0,0,0,0,5,2,--0,0,0,0,0,0,5,2,--0,0,0,0,2,--0,0,0,0,2,--0,0,1,--0,0,2,--

R46)

0,0,0,0,0,0,6,4,-->0,0,0,0,0,0,5,3,--0,0,0,0,0,0,6,4,2,--0,0,0,0,0,0,5,3,--0,0,0,1,--0,0,1,--0,0,2,--

R47)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,9,--

R48)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R49)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

R50)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--

R51)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R52)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,2,--0,0,0,0,0,0,0,0,5,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--

R53)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,2,--0,0,0,0,0,0,0,0,6,3,--0,0,0,0,0,0,0,0,6,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--

R54)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,2,--0,0,0,0,0,0,0,0,7,3,--

--0,0,0,0,0,0,0,0,7,4,--0,0,0,0,0,0,0,0,7,5,--0,0,0,0,0,0,0,0,6,--0,0,1,--0,0,2,--  
R55)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,2,--0,0,0,0,0,0,0,0,8,3,  
--0,0,0,0,0,0,0,0,8,4,--0,0,0,0,0,0,0,0,8,5,--0,0,0,0,0,0,0,0,8,6,--0,0,0,0,0,0,0,0,  
7,--0,1,--  
R56)

0,0,0,0,0,0,0,0,4,2,-->0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--  
0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--  
R57)

0,0,0,0,0,0,0,0,5,2,-->0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,2,--0,0,0,0,0,1,--  
0,0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R58)

0,0,0,0,0,0,0,0,5,3,-->0,0,0,0,0,0,0,0,4,2,--0,0,0,0,0,0,0,0,4,2,--0,0,0,0,0,0,1,--0,0,0,0,  
1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R59)

0,0,0,0,0,0,0,0,6,2,-->0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,2,--0,0,0,0,0,  
0,3,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--  
R60)

0,0,0,0,0,0,0,0,6,3,-->0,0,0,0,0,0,0,0,5,2,--0,0,0,0,0,0,0,0,5,2,--0,0,0,0,0,0,2,--0,0,0,0,  
0,2,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--  
R61)

0,0,0,0,0,0,0,0,6,4,-->0,0,0,0,0,0,0,0,5,3,--0,0,0,0,0,0,0,0,6,4,2,--0,0,0,0,0,0,0,0,5,3,--  
0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--  
R62)

0,0,0,0,0,0,0,0,7,2,-->0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,2,--0,0,0,0,0,  
0,5,3,--0,0,0,0,0,0,4,--0,0,0,1,--0,0,2,--  
R63)

0,0,0,0,0,0,0,0,7,3,-->0,0,0,0,0,0,0,0,6,2,--0,0,0,0,0,0,0,0,6,2,--0,0,0,0,0,0,3,--0,0,0,0,  
0,4,2,--0,0,0,0,0,0,3,--0,0,0,1,--0,0,2,--  
R64)

0,0,0,0,0,0,0,0,7,4,-->0,0,0,0,0,0,0,0,6,3,--0,0,0,0,0,0,0,0,7,4,2,--0,0,0,0,0,0,0,0,6,3,--  
0,0,0,0,0,2,--0,0,0,0,0,2,--0,0,0,1,--0,0,2,--  
R65)

0,0,0,0,0,0,0,0,7,5,-->0,0,0,0,0,0,0,0,6,4,--0,0,0,0,0,0,0,0,7,5,2,--0,0,0,0,0,0,0,0,7,5,3,  
--0,0,0,0,0,0,0,0,6,4,--0,0,0,0,1,--0,0,0,1,--0,0,2,--  
R66)

0,0,0,0,0,0,0,0,6,4,2,-->0,0,0,0,0,0,0,0,4,2,--0,0,0,0,0,0,2,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,  
--0,0,0,0,3,--

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, : 0,1, :
- LEN=3) 0,0,0, : 0,0,1, : 0,0,2, :
- LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,2, : 0,0,0,3, :
- LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, :
- LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, :  
0,0,0,0,0,5, : 0,0,0,0,4,2, :
- LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :  
0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,4,2, : 0,0,0,0,0,5,2, :  
0,0,0,0,0,5,3, :
- LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :

$0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :$   
 $0,0,0,0,0,0,0,4,2, : 0,0,0,0,0,0,0,5,2, : 0,0,0,0,0,0,0,5,3, : 0,0,0,0,0,0,0,6,2, :$   
 $0,0,0,0,0,0,0,6,3, : 0,0,0,0,0,0,0,6,4, :$   
 LEN=9)  $0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, :$   
 $0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, :$   
 $0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,4,2, : 0,0,0,0,0,0,0,5,2, :$   
 $0,0,0,0,0,0,0,0,5,3, : 0,0,0,0,0,0,0,0,6,2, : 0,0,0,0,0,0,0,0,6,3, : 0,0,0,0,0,0,0,0,6,4, :$   
 $0,0,0,0,0,0,0,0,7,2, : 0,0,0,0,0,0,0,0,7,3, : 0,0,0,0,0,0,0,0,7,4, : 0,0,0,0,0,0,0,0,7,5, :$   
 $0,0,0,0,0,0,0,6,4,2, :$   
 LEN=10)  $0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :$   
 $0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, :$   
 $0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :$   
 $0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,4,2, : 0,0,0,0,0,0,0,0,5,2, :$   
 $0,0,0,0,0,0,0,0,0,5,3, : 0,0,0,0,0,0,0,0,0,6,2, : 0,0,0,0,0,0,0,0,0,6,3, :$   
 $0,0,0,0,0,0,0,0,0,6,4, : 0,0,0,0,0,0,0,0,0,7,2, : 0,0,0,0,0,0,0,0,0,7,3, :$   
 $0,0,0,0,0,0,0,0,0,7,4, : 0,0,0,0,0,0,0,0,0,7,5, : 0,0,0,0,0,0,0,0,0,8,2, :$   
 $0,0,0,0,0,0,0,0,0,8,3, : 0,0,0,0,0,0,0,0,0,8,4, : 0,0,0,0,0,0,0,0,0,8,5, :$   
 $0,0,0,0,0,0,0,0,0,8,6, : 0,0,0,0,0,0,0,0,6,4,2, : 0,0,0,0,0,0,0,0,7,4,2, :$   
 $0,0,0,0,0,0,0,0,7,5,2, : 0,0,0,0,0,0,0,0,7,5,3, :$   
 Number new nodes in level n is given by : 1,2,3,4,5,7,10,14,20,29,

-----Class

895-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][101][110][201]]$

-----

--

Rules of T[L]:

- R1)  $0, -->0,0, --0,1, --$
- R2)  $0,0, -->0,0,0, --0,0,1, --0,0,1, --$
- R3)  $0,1, -->0,1, --$
- R4)  $0,0,0, -->0,0,0,0, --0,0,0,1, --0,0,0,1, --0,0,0,3, --$
- R5)  $0,0,1, -->0,0,1, --0,0,1, --$
- R6)  $0,0,0,0, -->0,0,0,0,0, --0,0,0,0,1, --0,0,0,0,1, --0,0,0,0,3, --0,0,0,0,4, --$
- R7)  $0,0,0,1, -->0,0,0,1, --0,0,0,1, --0,0,0,3, --$
- R8)  $0,0,0,3, -->0,0,1, --0,0,0,1, --0,0,0,3, --$
- R9)  $0,0,0,0,0, -->0,0,0,0,0,0, --0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,0,3, --0,0,0,0,0,4, --$   
 $0,0,0,0,0,5, --$
- R10)  $0,0,0,0,1, -->0,0,0,0,1, --0,0,0,0,1, --0,0,0,0,3, --0,0,0,0,4, --$
- R11)  $0,0,0,0,3, -->0,0,0,1, --0,0,0,0,1, --0,0,0,0,3, --0,0,0,0,4, --$
- R12)  $0,0,0,0,4, -->0,0,1, --0,0,0,1, --0,0,0,0,3, --0,0,0,0,4, --$
- R13)  $0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,0,0,0,0,0,1, --0,0,0,0,0,0,1, --0,0,0,0,0,0,3, --0,0,$   
 $0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --$
- R14)  $0,0,0,0,0,1, -->0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5,$   
 --
- R15)  $0,0,0,0,0,3, -->0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5, --$
- R16)

0,0,0,0,0,4,-->0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R17) 0,0,0,0,0,5,-->0,0,1,--0,0,0,1,--0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R18)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R19)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,  
0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R20)  
0,0,0,0,0,0,3,-->0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,  
0,0,0,0,5,--0,0,0,0,0,0,6,--  
R21)  
0,0,0,0,0,0,4,-->0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,  
0,0,5,--0,0,0,0,0,0,6,--  
R22)  
0,0,0,0,0,0,5,-->0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,0,6,--  
R23)  
0,0,0,0,0,0,6,-->0,0,1,--0,0,0,1,--0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,  
0,0,0,6,--  
R24)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--  
R25)  
0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,  
0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R26)  
0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,  
0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R27)  
0,0,0,0,0,0,0,4,-->0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,  
--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R28)  
0,0,0,0,0,0,0,5,-->0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,  
0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R29)  
0,0,0,0,0,0,0,6,-->0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,  
0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R30)  
0,0,0,0,0,0,0,7,-->0,0,1,--0,0,0,1,--0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,  
0,0,0,0,6,--0,0,0,0,0,0,7,--  
R31)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,  
1,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--  
R32)  
0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,3,--0,  
0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,  
0,0,0,0,8,--

R33)  
0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,3,--0,0,  
0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,  
,0,0,0,0,8,--

R34)  
0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,3,--0,0,0,0,  
0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,  
,0,0,8,--

R35)  
0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,  
0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,  
,--

R36)  
0,0,0,0,0,0,0,0,6,-->0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,  
0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R37)  
0,0,0,0,0,0,0,0,7,-->0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,  
0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R38)  
0,0,0,0,0,0,0,0,8,-->0,0,1,--0,0,0,1,--0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,  
0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, :  
LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,3, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,3, : 0,0,0,0,4, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, :  
0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, :  
0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,3, :  
0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7, :  
0,0,0,0,0,0,0,0,8, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,3, :  
0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, :  
0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, :  
Number new nodes in level n is given by : 1,2,2,3,4,5,6,7,8,9,

-----Class  
896-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][011][101][110][210]]  
-----

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,0,1,--0,0,1,--  
R3) 0,1,-->0,1,--  
R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,1,--0,0,0,3,--

R5) 0,0,1,-->0,0,1,--0,0,1,--  
R6) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,3,--0,0,0,0,4,--  
R7) 0,0,0,1,-->0,0,0,1,--0,0,0,1,--0,0,0,3,--  
R8) 0,0,0,3,-->0,0,0,1,--0,0,1,--0,0,0,3,--  
R9)  
0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--  
R10) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,3,--0,0,0,0,4,--  
R11) 0,0,0,0,3,-->0,0,0,0,1,--0,0,0,1,--0,0,0,0,3,--0,0,0,0,4,--  
R12) 0,0,0,0,4,-->0,0,0,0,3,--0,0,0,1,--0,0,1,--0,0,0,0,4,--  
R13)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R14)  
0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,  
--  
R15)  
0,0,0,0,0,3,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R16)  
0,0,0,0,0,4,-->0,0,0,0,0,3,--0,0,0,0,1,--0,0,0,1,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R17) 0,0,0,0,0,5,-->0,0,0,0,0,4,--0,0,0,0,3,--0,0,0,1,--0,0,1,--0,0,0,0,0,5,--  
R18)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R19)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,  
0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R20)  
0,0,0,0,0,0,3,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,  
0,0,0,0,5,--0,0,0,0,0,0,6,--  
R21)  
0,0,0,0,0,0,4,-->0,0,0,0,0,0,3,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,0,4,--0,0,0,0,  
0,0,5,--0,0,0,0,0,0,6,--  
R22)  
0,0,0,0,0,0,5,-->0,0,0,0,0,0,4,--0,0,0,0,0,3,--0,0,0,0,1,--0,0,0,1,--0,0,0,0,0,0,5,  
--0,0,0,0,0,0,6,--  
R23)  
0,0,0,0,0,0,6,-->0,0,0,0,0,0,5,--0,0,0,0,0,4,--0,0,0,0,3,--0,0,0,1,--0,0,1,--0,0,0,  
0,0,0,6,--  
R24)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--  
R25)  
0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,  
0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R26)  
0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,  
0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R27)

0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,3,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,0,0,4,  
--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R28)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,4,--0,0,0,0,0,0,3,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,  
0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R29)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,5,--0,0,0,0,0,0,4,--0,0,0,0,0,3,--0,0,0,0,1,--0,0,  
0,1,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R30)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,6,--0,0,0,0,0,0,5,--0,0,0,0,0,4,--0,0,0,0,3,--0,0,  
0,1,--0,0,1,--0,0,0,0,0,0,0,7,--

R31)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,  
1,--0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,  
,0,0,6,--0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,9,--

R32)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,3,--0,  
0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,  
,0,0,0,0,0,8,--

R33)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,3,--0,0,  
0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,  
,0,0,0,0,8,--

R34)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,  
0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,  
,0,0,8,--

R35)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,1,--0,0,0,0,  
0,1,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,  
,--

R36)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,3,--0,0,0,0,  
0,1,--0,0,0,0,1,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R37)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,4,--0,0,0,0,  
0,3,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R38)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,5,--0,0,0,0,  
0,4,--0,0,0,0,3,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,0,0,8,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,:

LEN=4) 0,0,0,0,: 0,0,0,1, : 0,0,0,3, :

LEN=5) 0,0,0,0,0,: 0,0,0,0,1, : 0,0,0,0,3, : 0,0,0,0,4, :

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, :

0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, :

0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,3,:  
 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,7,:  
 0,0,0,0,0,0,0,0,8,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,3,:  
 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,0,6,:  
 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,0,0,9,:  
 Number new nodes in level n is given by : 1,2,2,3,4,5,6,7,8,9,

-----Class

897-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][101][120][201]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R5) 0,0,1,-->0,0,1,--0,0,2,--
- R6) 0,0,2,-->0,0,1,--0,1,--
- R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R8) 0,0,0,1,-->0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R9) 0,0,0,2,-->0,0,0,1,--0,0,1,--0,0,2,--
- R10) 0,0,0,3,-->0,0,1,--0,0,0,2,--0,1,--
- R11) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--
- R12) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R13) 0,0,0,0,2,-->0,0,0,0,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R14) 0,0,0,0,3,-->0,0,0,1,--0,0,0,0,2,--0,0,1,--0,0,2,--
- R15) 0,0,0,0,4,-->0,0,1,--0,0,0,2,--0,0,0,0,3,--0,1,--
- R16) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--
- R17) 0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--
- R18) 0,0,0,0,0,2,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R19) 0,0,0,0,0,3,-->0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R20) 0,0,0,0,0,4,-->0,0,0,1,--0,0,0,0,2,--0,0,0,0,0,3,--0,0,1,--0,0,2,--
- R21) 0,0,0,0,0,5,-->0,0,1,--0,0,0,2,--0,0,0,0,3,--0,0,0,0,0,4,--0,1,--
- R22) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--
- R23) 0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--
- R24) 0,0,0,0,0,0,2,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,



0,4,--0,0,0,0,0,5,--

R25)

0,0,0,0,0,0,3,-->0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--  
0,0,0,0,4,--

R26)

0,0,0,0,0,0,4,-->0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,1,--0,0,0,2,--0,0,  
0,3,--

R27)

0,0,0,0,0,0,5,-->0,0,0,1,--0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,1,--0,0,2,  
--

R28)

0,0,0,0,0,0,6,-->0,0,1,--0,0,0,2,--0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,1,--

R29)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R30)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,  
0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R31)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,  
--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R32)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,  
0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R33)

0,0,0,0,0,0,0,4,-->0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,1,--0,0,  
0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R34)

0,0,0,0,0,0,0,5,-->0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,  
0,1,--0,0,0,2,--0,0,0,3,--

R35)

0,0,0,0,0,0,0,6,-->0,0,0,1,--0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,  
0,5,--0,0,1,--0,0,2,--

R36)

0,0,0,0,0,0,0,7,-->0,0,1,--0,0,0,2,--0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,  
0,0,0,0,0,6,--0,1,--

R37)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R38)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,  
0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,  
,0,0,0,0,0,8,--

R39)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,-

R40)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,1,--0,0,0,0,  
0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R41)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,  
0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R42)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,0,  
0,4,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R43)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,0,0,4,--0,  
0,0,0,0,0,0,5,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R44)

0,0,0,0,0,0,0,0,7,-->0,0,0,1,--0,0,0,2,--0,0,0,3,--0,0,0,4,--0,0,0,0,  
0,0,5,--0,0,0,0,0,0,6,--0,0,1,--0,0,2,--

R45)

0,0,0,0,0,0,0,0,8,-->0,0,1,--0,0,2,--0,0,3,--0,0,4,--0,0,0,0,5,--0,  
0,0,0,0,0,6,--0,0,0,0,0,7,--0,1,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,0, : 0,0,1, : 0,0,2, :

LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,2, : 0,0,0,3, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, :  
0,0,0,0,0,5, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :

0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :

0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, :

0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, :

0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :

0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, :

0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :

0,0,0,0,0,0,0,0,0,9, :

Number new nodes in level n is given by : 1,2,3,4,5,6,7,8,9,10,

-----Class

898-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][101][120][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--

R3) 0,1,-->0,1,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R5) 0,0,1,-->0,0,1,--0,0,2,--

R6) 0,0,2,-->0,0,1,--0,1,--

R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R8) 0,0,0,1,-->0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R9) 0,0,0,2,-->0,0,0,1,--0,0,1,--0,0,2,--  
R10) 0,0,0,3,-->0,0,0,2,--0,0,1,--0,1,--  
R11)  
0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--  
R12) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R13) 0,0,0,0,2,-->0,0,0,0,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R14) 0,0,0,0,3,-->0,0,0,0,2,--0,0,0,1,--0,0,1,--0,0,2,--  
R15) 0,0,0,0,4,-->0,0,0,0,3,--0,0,0,2,--0,0,1,--0,1,--  
R16)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R17)  
0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,  
--  
R18) 0,0,0,0,0,2,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R19) 0,0,0,0,0,3,-->0,0,0,0,0,2,--0,0,0,0,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R20) 0,0,0,0,0,4,-->0,0,0,0,0,3,--0,0,0,0,2,--0,0,0,1,--0,0,1,--0,0,2,--  
R21) 0,0,0,0,0,5,-->0,0,0,0,0,4,--0,0,0,0,3,--0,0,0,2,--0,0,1,--0,1,--  
R22)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R23)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,  
0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R24)  
0,0,0,0,0,0,2,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,  
0,4,--0,0,0,0,0,5,--  
R25)  
0,0,0,0,0,0,3,-->0,0,0,0,0,0,2,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--  
0,0,0,0,4,--  
R26)  
0,0,0,0,0,0,4,-->0,0,0,0,0,0,3,--0,0,0,0,0,2,--0,0,0,0,1,--0,0,0,1,--0,0,0,2,--0,0,  
0,3,--  
R27)  
0,0,0,0,0,0,5,-->0,0,0,0,0,0,4,--0,0,0,0,0,3,--0,0,0,0,2,--0,0,0,1,--0,0,1,--0,0,2,  
--  
R28)  
0,0,0,0,0,0,6,-->0,0,0,0,0,0,5,--0,0,0,0,0,4,--0,0,0,0,3,--0,0,0,2,--0,0,1,--0,1,--  
R29)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--  
R30)  
0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,  
0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R31)  
0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,

--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R32)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,2,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,  
0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R33)

0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,3,--0,0,0,0,0,0,2,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,  
0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R34)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,4,--0,0,0,0,0,0,3,--0,0,0,0,0,2,--0,0,0,0,1,--0,0,  
0,1,--0,0,0,2,--0,0,0,3,--

R35)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,5,--0,0,0,0,0,0,4,--0,0,0,0,0,3,--0,0,0,0,2,--0,0,  
0,1,--0,0,1,--0,0,2,--

R36)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,6,--0,0,0,0,0,0,5,--0,0,0,0,0,4,--0,0,0,0,3,--0,0,  
0,2,--0,0,1,--0,1,--

R37)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R38)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,  
0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,  
,0,0,0,0,0,8,--

R39)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,-

-

R40)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,  
0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R41)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,1,--0,0,0,0,  
0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R42)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,2,--0,0,0,0,  
0,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R43)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,3,--0,0,0,0,  
0,2,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--

R44)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,4,--0,0,0,0,  
0,3,--0,0,0,0,2,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--

R45)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,5,--0,0,0,0,  
0,4,--0,0,0,0,3,--0,0,0,0,2,--0,0,0,0,1,--0,0,0,0,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,:

LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,2, : 0,0,0,3, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, :  
 0,0,0,0,0,5, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, :  
 0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, :  
 0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :  
 0,0,0,0,0,0,0,0,0,9, :

Number new nodes in level n is given by : 1,2,3,4,5,6,7,8,9,10,

-----Class

899-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][101][201][210]]$

-----

--

Rules of  $T[L]$ :

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,0, --0,0,1, --0,0,1, --
- R3) 0,1, -->0,1, --
- R4) 0,0,0, -->0,0,0,0, --0,0,0,1, --0,0,0,1, --0,0,0,3, --
- R5) 0,0,1, -->0,0,1, --0,0,1, --
- R6) 0,0,0,0, -->0,0,0,0,0, --0,0,0,0,1, --0,0,0,0,1, --0,0,0,0,3, --0,0,0,0,4, --
- R7) 0,0,0,1, -->0,0,0,1, --0,0,0,1, --0,0,0,3, --
- R8) 0,0,0,3, -->0,0,1, --0,0,1, --0,0,0,3, --
- R9) 0,0,0,0,0, -->0,0,0,0,0,0, --0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,0,3, --0,0,0,0,0,4, --  
0,0,0,0,0,5, --
- R10) 0,0,0,0,1, -->0,0,0,0,1, --0,0,0,0,1, --0,0,0,0,3, --0,0,0,0,4, --
- R11) 0,0,0,0,3, -->0,0,0,1, --0,0,0,1, --0,0,0,0,3, --0,0,0,0,4, --
- R12) 0,0,0,0,4, -->0,0,1, --0,0,1, --0,0,1, --0,0,0,0,4, --
- R13) 0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,0,0,0,0,0,1, --0,0,0,0,0,0,1, --0,0,0,0,0,0,3, --0,0,  
0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --
- R14) 0,0,0,0,0,1, -->0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5, --
- R15) 0,0,0,0,0,3, -->0,0,0,0,1, --0,0,0,0,1, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5, --
- R16) 0,0,0,0,0,4, -->0,0,0,1, --0,0,0,1, --0,0,0,1, --0,0,0,0,0,4, --0,0,0,0,0,5, --
- R17) 0,0,0,0,0,5, -->0,0,1, --0,0,1, --0,0,1, --0,0,1, --0,0,0,0,0,5, --
- R18) 0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,1, --0,0,0,0,0,0,0,1, --0,0,0,0,0,0,0,  
0,3, --0,0,0,0,0,0,0,0,4, --0,0,0,0,0,0,0,0,5, --0,0,0,0,0,0,0,0,6, --0,0,0,0,0,0,0,0,7, --

R19)

0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R20)

0,0,0,0,0,0,3,-->0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R21)

0,0,0,0,0,0,4,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R22)

0,0,0,0,0,0,5,-->0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,0,0,0,5,--0,0,0,0,0,6,--

R23) 0,0,0,0,0,0,6,-->0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,0,0,0,0,6,--

R24)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R25)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R26)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R27)

0,0,0,0,0,0,0,4,-->0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R28)

0,0,0,0,0,0,0,5,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R29)

0,0,0,0,0,0,0,6,-->0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R30)

0,0,0,0,0,0,0,7,-->0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,0,0,0,0,0,7,--

R31)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,9,--

R32)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R33)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R34)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8

```

,--
R35)
0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,
0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--
R36)
0,0,0,0,0,0,0,0,6,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,
0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--
R37)
0,0,0,0,0,0,0,0,7,-->0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,
0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--
R38)
0,0,0,0,0,0,0,0,8,-->0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,0,
0,0,0,0,0,8,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,0,0,: 0,0,1,:
LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,3,:
LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,3,: 0,0,0,0,4,:
LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,3,: 0,0,0,0,0,4,: 0,0,0,0,0,5,:
LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,3,: 0,0,0,0,0,0,4,:
0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,:
LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,4,:
0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:
LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,3,:
0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,7,:
0,0,0,0,0,0,0,0,8,:
LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,3,:
0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,0,6,:
0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,0,0,9,:
Number new nodes in level n is given by : 1,2,2,3,4,5,6,7,8,9,

```

-----Class

900-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][102][110][120]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R5) 0,0,1,-->0,0,1,--0,0,2,--
- R6) 0,0,2,-->0,0,2,1,--0,1,--
- R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R8) 0,0,0,1,-->0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R9) 0,0,0,2,-->0,0,2,1,--0,0,1,--0,0,2,--
- R10) 0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,1,--
- R11) 0,0,2,1,-->
- R12)

0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--

R13) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R14) 0,0,0,0,2,-->0,0,2,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R15) 0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,1,--0,0,2,--

R16) 0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,1,--

R17) 0,0,0,3,1,-->0,0,2,1,--

R18)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R19)

0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,  
--

R20) 0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R21) 0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R22) 0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,1,--0,0,2,--

R23)

0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--0,1,  
--

R24) 0,0,0,0,4,1,-->0,0,0,3,1,--0,0,0,3,1,--

R25) 0,0,0,0,4,2,-->0,0,2,1,--0,0,2,1,--

R26)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R27)

0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,  
0,0,0,0,0,5,--0,0,0,0,0,6,--

R28)

0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--

R29)

0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,  
0,4,--

R30)

0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,1,--0,0,0,2,--0,0,  
0,3,--

R31)

0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--0,  
0,1,--0,0,2,--

R32)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,  
6,4,--0,0,0,0,0,6,1,--0,1,--

R33) 0,0,0,0,0,5,1,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--

R34) 0,0,0,0,0,5,2,-->0,0,2,1,--0,0,0,3,1,--0,0,0,3,1,--

R35) 0,0,0,0,0,5,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,2,1,--

R36)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,  
0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R37)



0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R38)

0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R39)

0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R40)

0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R41)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R42)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,1,--0,0,1,--0,0,2,--

R43)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,7,2,--0,0,0,0,0,0,0,7,3,--0,0,0,0,0,0,0,7,4,--0,0,0,0,0,0,0,7,5,--0,0,0,0,0,0,0,7,1,--0,1,--

R44)

0,0,0,0,0,0,0,6,1,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--

R45) 0,0,0,0,0,0,0,6,2,-->0,0,2,1,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--

R46) 0,0,0,0,0,0,0,6,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,3,1,--0,0,0,3,1,--

R47) 0,0,0,0,0,0,0,6,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,2,1,--

R48)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R49)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R50)

0,0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R51)

0,0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--

R52)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R53)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R54)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R55)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,7,2,--0,0,0,0,0,0,0,7,3,--0,

0,0,0,0,0,0,7,4,--0,0,0,0,0,0,7,5,--0,0,0,0,0,0,7,1,--0,0,1,--0,0,2,--  
 R56)  
 0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,1,--0,0,0,0,0,0,0,8,2,--0,0,0,0,0,0,0,8,  
 3,--0,0,0,0,0,0,0,8,4,--0,0,0,0,0,0,0,8,5,--0,0,0,0,0,0,0,8,6,--0,0,0,0,0,0,  
 ,0,8,1,--0,1,--  
 R57)  
 0,0,0,0,0,0,7,1,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,  
 0,0,6,4,--0,0,0,0,0,0,6,1,--  
 R58)  
 0,0,0,0,0,0,7,2,-->0,0,2,1,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,  
 0,0,0,5,1,--  
 R59)  
 0,0,0,0,0,0,7,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,  
 1,--  
 R60)  
 0,0,0,0,0,0,7,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,0,3,  
 1,--  
 R61)  
 0,0,0,0,0,0,7,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,  
 --0,0,2,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,1, : 0,0,2, :  
 LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,2, : 0,0,0,3, : 0,0,2,1, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,3,1, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, :  
 0,0,0,0,0,5, : 0,0,0,0,4,1, : 0,0,0,0,4,2, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,1, : 0,0,0,0,0,5,2, :  
 0,0,0,0,0,5,3, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :  
 0,0,0,0,0,0,6,1, : 0,0,0,0,0,0,6,2, : 0,0,0,0,0,0,6,3, : 0,0,0,0,0,0,6,4, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, :  
 0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,1, : 0,0,0,0,0,0,0,7,2, :  
 0,0,0,0,0,0,0,7,3, : 0,0,0,0,0,0,0,7,4, : 0,0,0,0,0,0,0,7,5, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, :  
 0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :  
 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,8,1, : 0,0,0,0,0,0,0,0,8,2, :  
 0,0,0,0,0,0,0,0,8,3, : 0,0,0,0,0,0,0,0,8,4, : 0,0,0,0,0,0,0,0,8,5, :  
 0,0,0,0,0,0,0,0,8,6, :  
 Number new nodes in level n is given by : 1,2,3,5,6,8,10,12,14,16,

-----Class

901-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][102][110][201]]$

-----



--0,0,0,0,0,0,6,--

R30)

0,0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,5,  
--0,0,0,0,0,0,6,--

R31)

0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,  
5,--0,0,0,0,0,0,6,--

R32) 0,0,0,0,0,0,5,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--

R33)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,  
,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R34)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,  
0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R35)

0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--  
0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R36)

0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,  
0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R37)

0,0,0,0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,  
0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R38)

0,0,0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,  
0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R39)

0,0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,  
6,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R40)

0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,  
6,5,--0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,7,--

R41) 0,0,0,0,0,0,0,6,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--

R42)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,  
,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R43)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,  
0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,  
,0,0,0,0,0,8,--

R44)

0,0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,  
0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,  
,8,--

R45)

0,0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--  
0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R46)

0,0,0,0,0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R47)

0,0,0,0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R48)

0,0,0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R49)

0,0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R50)

0,0,0,0,0,0,0,0,8,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,8,7,--0,0,0,0,0,0,0,8,--

R51)

0,0,0,0,0,0,0,0,7,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,1,,: 0,0,0,2,,: 0,0,0,3,,: 0,0,2,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,,: 0,0,0,0,2,,: 0,0,0,0,3,,: 0,0,0,0,4,,: 0,0,0,3,2,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,,: 0,0,0,0,0,2,,: 0,0,0,0,0,3,,: 0,0,0,0,0,4,,: 0,0,0,0,0,5,,: 0,0,0,0,4,3,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,,: 0,0,0,0,0,0,2,,: 0,0,0,0,0,0,3,,: 0,0,0,0,0,0,4,,: 0,0,0,0,0,0,5,,: 0,0,0,0,0,5,4,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,,: 0,0,0,0,0,0,0,2,,: 0,0,0,0,0,0,0,3,,: 0,0,0,0,0,0,0,4,,: 0,0,0,0,0,0,0,5,,: 0,0,0,0,0,0,0,6,,: 0,0,0,0,0,0,0,7,:

0,0,0,0,0,0,6,5,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,,: 0,0,0,0,0,0,0,0,2,,: 0,0,0,0,0,0,0,0,3,,: 0,0,0,0,0,0,0,0,4,,: 0,0,0,0,0,0,0,0,5,,: 0,0,0,0,0,0,0,0,6,:

0,0,0,0,0,0,0,0,7,,: 0,0,0,0,0,0,0,0,8,,: 0,0,0,0,0,0,0,7,6,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,,: 0,0,0,0,0,0,0,0,0,2,,: 0,0,0,0,0,0,0,0,0,3,,: 0,0,0,0,0,0,0,0,0,4,,: 0,0,0,0,0,0,0,0,0,5,:

0,0,0,0,0,0,0,0,0,6,,: 0,0,0,0,0,0,0,0,0,7,,: 0,0,0,0,0,0,0,0,0,8,:

0,0,0,0,0,0,0,0,0,9,,: 0,0,0,0,0,0,0,0,0,8,7,:

Number new nodes in level n is given by : 1,2,3,5,6,7,8,9,10,11,

-----Class

902-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][011][102][110][210]]

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--

R3) 0,1,-->0,1,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R5) 0,0,1,-->0,0,1,--0,0,2,--

R6) 0,0,2,-->0,0,2,1,--0,0,2,--  
R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R8) 0,0,0,1,-->0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R9) 0,0,0,2,-->0,0,2,1,--0,0,0,2,--0,0,0,2,4,--  
R10) 0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,3,--  
R11) 0,0,2,1,-->  
R12)  
0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--  
R13) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R14) 0,0,0,0,2,-->0,0,2,1,--0,0,0,0,2,--0,0,0,0,2,4,--0,0,0,0,2,5,--  
R15) 0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,3,--0,0,0,0,3,5,--  
R16) 0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,4,--  
R17) 0,0,0,2,4,-->0,0,2,1,--0,0,2,1,--0,0,0,2,4,--  
R18) 0,0,0,3,1,-->0,0,2,1,--  
R19)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R20)  
0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,  
--  
R21)  
0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,2,--0,0,0,0,0,2,4,--0,0,0,0,0,2,5,--0,0,0,0,0,2,  
6,--  
R22)  
0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,3,--0,0,0,0,0,3,5,--0,0,0,0,0,3,6,--  
R23)  
0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,4,--0,0,0,0,0,4,6,--  
R24)  
0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,5,--  
R25) 0,0,0,0,2,4,-->0,0,2,1,--0,0,2,1,--0,0,0,0,2,4,--0,0,0,0,2,4,6,--  
R26) 0,0,0,0,2,5,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,2,5,--  
R27) 0,0,0,0,3,5,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,3,5,--  
R28) 0,0,0,0,4,1,-->0,0,0,3,1,--0,0,2,1,--  
R29)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R30)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,  
0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R31)  
0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,2,4,--0,0,0,0,0,0,2,5,--0,0,  
0,0,0,0,2,6,--0,0,0,0,0,0,2,7,--  
R32)  
0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,3,5,--0,0,0,0,0,  
0,3,6,--0,0,0,0,0,0,3,7,--  
R33)  
0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,4,--0,0,0,0,0,0,4,  
6,--0,0,0,0,0,0,4,7,--  
R34)

0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,5,  
--0,0,0,0,0,0,5,7,--

R35)

0,0,0,0,0,0,6,-->0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,  
1,--0,0,0,0,0,0,6,--

R36)

0,0,0,0,0,2,4,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,2,4,--0,0,0,0,0,2,4,6,--0,0,0,0,0,2,  
4,7,--

R37)

0,0,0,0,0,2,5,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,2,5,--0,0,0,0,0,2,5,7,--  
R38)

0,0,0,0,0,2,6,-->0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,2,6,--

R39)

0,0,0,0,0,3,5,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,3,5,--0,0,0,0,0,3,5,7,--  
R40) 0,0,0,0,0,3,6,-->0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,3,6,--

R41)

0,0,0,0,0,4,6,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,4,6,--

R42) 0,0,0,0,0,5,1,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--

R43) 0,0,0,0,2,4,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,2,4,6,--

R44)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R45)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,  
0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R46)

0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,2,4,--0,0,0,0,0,0,0,2,  
5,--0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,2,8,--

R47)

0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,3,5,--0,0,  
0,0,0,0,0,3,6,--0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,3,8,--

R48)

0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,4,--0,0,0,0,0,  
0,0,4,6,--0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,4,8,--

R49)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,  
0,5,--0,0,0,0,0,0,5,7,--0,0,0,0,0,0,5,8,--

R50)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,  
2,1,--0,0,0,0,0,0,6,--0,0,0,0,0,0,6,8,--

R51)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,7,1,--0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,  
1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,7,--

R52)

0,0,0,0,0,0,2,4,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,2,4,--0,0,0,0,0,2,4,6,--0,0,0,  
0,0,0,2,4,7,--0,0,0,0,0,2,4,8,--

R53)

0,0,0,0,0,0,2,5,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,2,5,--0,0,0,0,0,2,  
5,7,--0,0,0,0,0,2,5,8,--

R54)

0,0,0,0,0,0,2,6,-->0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,2,6,--  
0,0,0,0,0,0,2,6,8,--

R55)

0,0,0,0,0,0,2,7,-->0,0,2,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,  
0,0,0,0,0,0,2,7,--

R56)

0,0,0,0,0,0,3,5,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,3,5,--0,0,0,0,0,0,3,  
5,7,--0,0,0,0,0,0,3,5,8,--

R57)

0,0,0,0,0,0,3,6,-->0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,3,6,--0,  
0,0,0,0,0,0,3,6,8,--

R58)

0,0,0,0,0,0,3,7,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,  
0,0,0,3,7,--

R59)

0,0,0,0,0,0,4,6,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,4,6,--  
0,0,0,0,0,0,4,6,8,--

R60)

0,0,0,0,0,0,4,7,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,  
0,0,0,4,7,--

R61)

0,0,0,0,0,0,5,7,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,  
0,0,0,0,0,0,5,7,--

R62) 0,0,0,0,0,0,6,1,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--

R63)

0,0,0,0,0,2,4,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,2,4,6,--0,0,0,0,0,2,4,6,  
8,--

R64)

0,0,0,0,0,2,4,7,-->0,0,2,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,2,4,7,--

R65)

0,0,0,0,0,2,5,7,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,2,5,7,--

R66)

0,0,0,0,0,3,5,7,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,3,5,7,--

R67)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,  
0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R68)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,  
0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,  
0,0,0,0,0,8,--

R69)

0,0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,2,4,--0,0,0,0,0,  
0,0,0,2,5,--0,0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,0,2,8,--0,0,0,  
0,0,0,0,0,2,9,--

R70)

0,0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,3,5,  
--0,0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,0,3,8,--0,0,0,0,0,0,0,0,  
3,9,--



R71)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,4,8,--0,0,0,0,0,0,0,4,9,--

R72)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,5,1,--0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,5,8,--0,0,0,0,0,0,0,5,9,--

R73)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,6,1,--0,0,0,0,5,1,--0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,6,9,--

R74)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,7,1,--0,0,0,0,0,6,1,--0,0,0,0,5,1,--0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,7,9,--

R75)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,8,1,--0,0,0,0,0,7,1,--0,0,0,0,6,1,--0,0,0,5,1,--0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,8,--

R76)

0,0,0,0,0,0,0,2,4,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,2,4,--0,0,0,0,0,0,2,4,6,--0,0,0,0,0,0,2,4,7,--0,0,0,0,0,0,2,4,8,--0,0,0,0,0,0,2,4,9,--

R77)

0,0,0,0,0,0,0,2,5,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,2,5,--0,0,0,0,0,0,2,5,7,--0,0,0,0,0,0,2,5,8,--0,0,0,0,0,0,2,5,9,--

R78)

0,0,0,0,0,0,0,2,6,-->0,0,2,1,--0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,2,6,8,--0,0,0,0,0,0,2,6,9,--

R79)

0,0,0,0,0,0,0,2,7,-->0,0,2,1,--0,0,0,5,1,--0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,2,7,--0,0,0,0,0,0,2,7,9,--

R80)

0,0,0,0,0,0,0,2,8,-->0,0,2,1,--0,0,0,6,1,--0,0,0,5,1,--0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,2,8,--

R81)

0,0,0,0,0,0,0,3,5,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,3,5,--0,0,0,0,0,0,3,5,7,--0,0,0,0,0,0,3,5,8,--0,0,0,0,0,0,3,5,9,--

R82)

0,0,0,0,0,0,0,3,6,-->0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,6,8,--0,0,0,0,0,0,3,6,9,--

R83)

0,0,0,0,0,0,0,3,7,-->0,0,0,3,1,--0,0,2,1,--0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,3,7,--0,0,0,0,0,0,3,7,9,--

R84)

0,0,0,0,0,0,0,3,8,-->0,0,0,3,1,--0,0,2,1,--0,0,0,5,1,--0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,3,8,--

R85)

0,0,0,0,0,0,0,4,6,-->0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,6,8,--0,0,0,0,0,0,4,6,9,--

R86)

0,0,0,0,0,0,0,4,7,-->0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,4,7,--0,0,0,0,0,0,4,7,9,--

R87)

0,0,0,0,0,0,0,4,8,-->0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,4,8,--

0,0,2,1,--0,0,0,0,0,0,4,8,--  
 R88)  
 0,0,0,0,0,0,5,7,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--  
 0,0,0,0,0,0,5,7,--0,0,0,0,0,0,5,7,9,--  
 R89)  
 0,0,0,0,0,0,5,8,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,  
 --0,0,2,1,--0,0,0,0,0,0,5,8,--  
 R90)  
 0,0,0,0,0,0,6,8,-->0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,  
 0,2,1,--0,0,2,1,--0,0,0,0,0,0,6,8,--  
 R91)  
 0,0,0,0,0,0,7,1,-->0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,  
 0,2,1,--  
 R92)  
 0,0,0,0,0,2,4,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,2,4,6,--0,0,0,0,0,  
 2,4,6,8,--0,0,0,0,0,2,4,6,9,--  
 R93)  
 0,0,0,0,0,2,4,7,-->0,0,2,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,2,4,7,--  
 0,0,0,0,0,2,4,7,9,--  
 R94)  
 0,0,0,0,0,2,4,8,-->0,0,2,1,--0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,  
 0,0,0,2,4,8,--  
 R95)  
 0,0,0,0,0,2,5,7,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,2,5,7,--  
 0,0,0,0,0,2,5,7,9,--  
 R96)  
 0,0,0,0,0,2,5,8,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,  
 0,0,2,5,8,--  
 R97)  
 0,0,0,0,0,2,6,8,-->0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,  
 0,0,0,2,6,8,--  
 R98)  
 0,0,0,0,0,3,5,7,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,3,5,7,--  
 0,0,0,0,0,3,5,7,9,--  
 R99)  
 0,0,0,0,0,3,5,8,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,  
 0,0,3,5,8,--  
 R100)  
 0,0,0,0,0,3,6,8,-->0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,  
 0,0,3,6,8,--  
 R101)  
 0,0,0,0,0,4,6,8,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,  
 0,0,0,4,6,8,--  
 R102)  
 0,0,0,0,0,2,4,6,8,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,2,4,6,8,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,1, : 0,0,2, :  
 LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,2, : 0,0,0,3, : 0,0,2,1, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,2,4, :  
 0,0,0,3,1, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, :  
 0,0,0,0,0,5, : 0,0,0,0,2,4, : 0,0,0,0,2,5, : 0,0,0,0,3,5, : 0,0,0,0,4,1, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,2,4, : 0,0,0,0,0,2,5, :  
 0,0,0,0,0,2,6, : 0,0,0,0,0,3,5, : 0,0,0,0,0,3,6, : 0,0,0,0,0,4,6, : 0,0,0,0,0,5,1, :  
 0,0,0,0,2,4,6, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :  
 0,0,0,0,0,0,2,4, : 0,0,0,0,0,0,2,5, : 0,0,0,0,0,0,2,6, : 0,0,0,0,0,0,2,7, :  
 0,0,0,0,0,0,3,5, : 0,0,0,0,0,0,3,6, : 0,0,0,0,0,0,3,7, : 0,0,0,0,0,0,4,6, :  
 0,0,0,0,0,0,4,7, : 0,0,0,0,0,0,5,7, : 0,0,0,0,0,0,6,1, : 0,0,0,0,0,2,4,6, :  
 0,0,0,0,0,2,4,7, : 0,0,0,0,0,2,5,7, : 0,0,0,0,0,3,5,7, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, :  
 0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,2,4, : 0,0,0,0,0,0,0,2,5, :  
 0,0,0,0,0,0,0,2,6, : 0,0,0,0,0,0,0,2,7, : 0,0,0,0,0,0,0,2,8, : 0,0,0,0,0,0,0,3,5, :  
 0,0,0,0,0,0,0,3,6, : 0,0,0,0,0,0,0,3,7, : 0,0,0,0,0,0,0,3,8, : 0,0,0,0,0,0,0,4,6, :  
 0,0,0,0,0,0,0,4,7, : 0,0,0,0,0,0,0,4,8, : 0,0,0,0,0,0,0,5,7, : 0,0,0,0,0,0,0,5,8, :  
 0,0,0,0,0,0,0,6,8, : 0,0,0,0,0,0,0,7,1, : 0,0,0,0,0,0,2,4,6, : 0,0,0,0,0,0,2,4,7, :  
 0,0,0,0,0,0,2,4,8, : 0,0,0,0,0,0,2,5,7, : 0,0,0,0,0,0,2,5,8, : 0,0,0,0,0,0,2,6,8, :  
 0,0,0,0,0,0,3,5,7, : 0,0,0,0,0,0,3,5,8, : 0,0,0,0,0,0,3,6,8, : 0,0,0,0,0,0,4,6,8, :  
 0,0,0,0,0,2,4,6,8, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, :  
 0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :  
 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,2,4, : 0,0,0,0,0,0,0,0,2,5, :  
 0,0,0,0,0,0,0,0,2,6, : 0,0,0,0,0,0,0,0,2,7, : 0,0,0,0,0,0,0,0,2,8, :  
 0,0,0,0,0,0,0,0,2,9, : 0,0,0,0,0,0,0,0,3,5, : 0,0,0,0,0,0,0,0,3,6, :  
 0,0,0,0,0,0,0,0,3,7, : 0,0,0,0,0,0,0,0,3,8, : 0,0,0,0,0,0,0,0,3,9, :  
 0,0,0,0,0,0,0,0,4,6, : 0,0,0,0,0,0,0,0,4,7, : 0,0,0,0,0,0,0,0,4,8, :  
 0,0,0,0,0,0,0,0,4,9, : 0,0,0,0,0,0,0,0,5,7, : 0,0,0,0,0,0,0,0,5,8, :  
 0,0,0,0,0,0,0,0,5,9, : 0,0,0,0,0,0,0,0,6,8, : 0,0,0,0,0,0,0,0,6,9, :  
 0,0,0,0,0,0,0,0,7,9, : 0,0,0,0,0,0,0,0,8,1, : 0,0,0,0,0,0,0,2,4,6, :  
 0,0,0,0,0,0,0,2,4,7, : 0,0,0,0,0,0,0,2,4,8, : 0,0,0,0,0,0,0,2,4,9, :  
 0,0,0,0,0,0,0,2,5,7, : 0,0,0,0,0,0,0,2,5,8, : 0,0,0,0,0,0,0,2,5,9, :  
 0,0,0,0,0,0,0,2,6,8, : 0,0,0,0,0,0,0,2,6,9, : 0,0,0,0,0,0,0,2,7,9, :  
 0,0,0,0,0,0,0,3,5,7, : 0,0,0,0,0,0,0,3,5,8, : 0,0,0,0,0,0,0,3,5,9, :  
 0,0,0,0,0,0,0,3,6,8, : 0,0,0,0,0,0,0,3,6,9, : 0,0,0,0,0,0,0,3,7,9, :  
 0,0,0,0,0,0,0,4,6,8, : 0,0,0,0,0,0,0,4,6,9, : 0,0,0,0,0,0,0,4,7,9, :  
 0,0,0,0,0,0,0,5,7,9, : 0,0,0,0,0,0,2,4,6,8, : 0,0,0,0,0,0,2,4,6,9, :  
 0,0,0,0,0,0,2,4,7,9, : 0,0,0,0,0,0,2,5,7,9, : 0,0,0,0,0,0,3,5,7,9, :  
 Number new nodes in level n is given by : 1,2,3,5,7,10,15,23,36,57,

-----Class

903-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][011][102][120][201]]

-----  
--



5,--0,1,--

R32) 0,0,0,0,0,5,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--

R33)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R34)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R35)

0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R36)

0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R37)

0,0,0,0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R38)

0,0,0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,5,4,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R39)

0,0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,5,4,--0,0,0,0,0,6,5,--0,0,1,--0,0,2,--

R40)

0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,5,4,--0,0,0,0,0,6,5,--0,0,0,0,0,7,6,--0,1,--

R41) 0,0,0,0,0,0,6,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,5,4,--

R42)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R43)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R44)

0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R45)

0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R46)

0,0,0,0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R47)

0,0,0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,5,4,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R48)

0,0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,5,4,--0,0,0,0,0,

0,6,5,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R49)  
0,0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--0,0,0,0,0,0,7,6,--0,0,1,--0,0,2,--  
R50)  
0,0,0,0,0,0,0,0,8,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--0,0,0,0,0,0,7,6,--0,0,0,0,0,0,8,7,--0,1,--  
R51)  
0,0,0,0,0,0,0,7,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, : 0,0,2, :  
LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,2, : 0,0,0,3, : 0,0,2,1, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,3,2, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, :  
0,0,0,0,0,5, : 0,0,0,0,4,3, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :  
0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,4, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :  
0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :  
0,0,0,0,0,0,6,5, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, :  
0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, :  
0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,6, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :  
0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, :  
0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :  
0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,8,7, :

Number new nodes in level n is given by : 1,2,3,5,6,7,8,9,10,11,

-----Class

904-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][102][120][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--  
R3) 0,1,-->0,1,--  
R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R5) 0,0,1,-->0,0,1,--0,0,2,--  
R6) 0,0,2,-->0,0,2,1,--0,1,--  
R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R8) 0,0,0,1,-->0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R9) 0,0,0,2,-->0,0,2,1,--0,0,1,--0,0,2,--  
R10) 0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,1,--  
R11) 0,0,2,1,-->  
R12)

0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--

R13) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R14) 0,0,0,0,2,-->0,0,2,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R15) 0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,1,--0,0,2,--

R16) 0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,1,--

R17) 0,0,0,3,1,-->0,0,2,1,--

R18)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R19)

0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,  
--

R20) 0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R21) 0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R22) 0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,1,--0,0,2,--

R23) 0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,1,--

R24) 0,0,0,0,4,1,-->0,0,0,3,1,--0,0,2,1,--

R25)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R26)

0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,  
0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R27)

0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--

R28)

0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,  
4,--

R29)

0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R30)

0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,1,--0,0,2,  
--

R31)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,  
1,--0,1,--

R32) 0,0,0,0,0,5,1,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--

R33)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R34)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,  
0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R35)

0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,  
0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R36)

0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--  
0,0,0,0,0,4,--0,0,0,0,0,5,--

R37)

0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,  
0,0,3,--0,0,0,0,4,--

R38)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,1,--0,  
0,0,2,--0,0,0,3,--

R39)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,6,1,--0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,  
2,1,--0,0,1,--0,0,2,--

R40)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,7,1,--0,0,0,0,6,1,--0,0,0,0,5,1,--0,0,0,0,4,  
1,--0,0,0,3,1,--0,0,2,1,--0,1,--

R41) 0,0,0,0,0,0,6,1,-->0,0,0,0,5,1,--0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--

R42)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R43)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,  
0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,  
0,0,0,0,0,8,--

R44)

0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,  
--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R45)

0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,  
0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R46)

0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,1,--0,0,0,0,0,2,  
--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R47)

0,0,0,0,0,0,0,5,-->0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,1,  
--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R48)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,6,1,--0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,  
0,2,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R49)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,7,1,--0,0,0,0,6,1,--0,0,0,0,5,1,--0,0,0,0,  
4,1,--0,0,0,3,1,--0,0,2,1,--0,0,1,--0,0,2,--

R50)

0,0,0,0,0,0,0,8,-->0,0,0,0,0,8,1,--0,0,0,0,7,1,--0,0,0,0,6,1,--0,  
0,0,0,5,1,--0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,1,--

R51)

0,0,0,0,0,0,7,1,-->0,0,0,0,6,1,--0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,  
0,2,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:



LEN=3) 0,0,0, : 0,0,1, : 0,0,2, :  
 LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,2, : 0,0,0,3, : 0,0,2,1, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,3,1, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, :  
 0,0,0,0,0,5, : 0,0,0,0,4,1, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,1, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :  
 0,0,0,0,0,0,6,1, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, :  
 0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,1, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, :  
 0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :  
 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,8,1, :  
 Number new nodes in level n is given by : 1,2,3,5,6,7,8,9,10,11,

-----Class

905-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][102][201][210]]$

-----

--

Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,0, --0,0,1, --0,0,2, --
- R3) 0,1, -->0,1, --
- R4) 0,0,0, -->0,0,0,0, --0,0,0,1, --0,0,0,2, --0,0,0,3, --
- R5) 0,0,1, -->0,0,1, --0,0,2, --
- R6) 0,0,2, -->0,0,2,1, --0,0,2, --
- R7) 0,0,0,0, -->0,0,0,0,0, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --
- R8) 0,0,0,1, -->0,0,0,1, --0,0,0,2, --0,0,0,3, --
- R9) 0,0,0,2, -->0,0,2,1, --0,0,0,2, --0,0,0,3, --
- R10) 0,0,0,3, -->0,0,2,1, --0,0,2,1, --0,0,0,3, --
- R11) 0,0,2,1, -->
- R12) 0,0,0,0,0, -->0,0,0,0,0,0, --0,0,0,0,0,1, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5, --
- R13) 0,0,0,0,1, -->0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --
- R14) 0,0,0,0,2, -->0,0,2,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --
- R15) 0,0,0,0,3, -->0,0,2,1, --0,0,2,1, --0,0,0,0,3, --0,0,0,0,4, --
- R16) 0,0,0,0,4, -->0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,0,0,4, --
- R17) 0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,0,0,0,0,0,1, --0,0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --
- R18) 0,0,0,0,0,1, -->0,0,0,0,0,1, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5, --
- R19) 0,0,0,0,0,1, -->0,0,0,0,0,1, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5, --



0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,0,9,--  
R39)

0,0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--  
R40)

0,0,0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--  
R41)

0,0,0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--  
R42)

0,0,0,0,0,0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--  
R43)

0,0,0,0,0,0,0,0,0,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--  
R44)

0,0,0,0,0,0,0,0,0,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--  
R45)

0,0,0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--  
R46)

0,0,0,0,0,0,0,0,0,8,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,0,8,--

List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, : 0,0,2, :  
LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,2, : 0,0,0,3, : 0,0,2,1, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, :  
0,0,0,0,0,5, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :  
0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :  
0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, :  
0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, :  
0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :  
0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, :  
0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :  
0,0,0,0,0,0,0,0,0,9, :

Number new nodes in level n is given by : 1,2,3,5,5,6,7,8,9,10,

-----Class

906-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][110][120][201]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0, -->0,0, --0,1, --$

R2)  $0,0, -->0,0,0, --0,0,1, --0,0,2, --$

R3)  $0,1, -->0,1, --$

R4)  $0,0,0, -->0,0,0,0, --0,0,0,1, --0,0,0,2, --0,0,0,3, --$

R5)  $0,0,1, -->0,0,1, --0,0,2, --$

R6)  $0,0,2, -->0,0,1, --0,1, --$

R7)  $0,0,0,0, -->0,0,0,0,0, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --$

R8)  $0,0,0,1, -->0,0,0,1, --0,0,0,2, --0,0,0,3, --$

R9)  $0,0,0,2, -->0,0,0,1, --0,0,1, --0,0,2, --$

R10)  $0,0,0,3, -->0,0,1, --0,0,0,2, --0,1, --$

R11)

$0,0,0,0,0, -->0,0,0,0,0,0, --0,0,0,0,0,1, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --$   
 $0,0,0,0,0,5, --$

R12)  $0,0,0,0,1, -->0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --$

R13)  $0,0,0,0,2, -->0,0,0,0,1, --0,0,0,1, --0,0,0,2, --0,0,0,3, --$

R14)  $0,0,0,0,3, -->0,0,0,1, --0,0,0,0,2, --0,0,1, --0,0,2, --$

R15)  $0,0,0,0,4, -->0,0,1, --0,0,0,2, --0,0,0,0,3, --0,1, --$

R16)

$0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,0,0,0,0,0,1, --0,0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,$   
 $0,0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --$

R17)

$0,0,0,0,0,1, -->0,0,0,0,0,1, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5,$   
--

--

R18)  $0,0,0,0,0,2, -->0,0,0,0,0,1, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --$

R19)  $0,0,0,0,0,3, -->0,0,0,0,1, --0,0,0,0,0,2, --0,0,0,1, --0,0,0,2, --0,0,0,3, --$

R20)  $0,0,0,0,0,4, -->0,0,0,1, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,1, --0,0,2, --$

R21)  $0,0,0,0,0,5, -->0,0,1, --0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,1, --$

R22)

$0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0,1, --0,0,0,0,0,0,0,2, --0,0,0,0,0,0,$   
 $0,3, --0,0,0,0,0,0,0,0,4, --0,0,0,0,0,0,0,0,5, --0,0,0,0,0,0,0,0,6, --0,0,0,0,0,0,0,0,7, --$

R23)

$0,0,0,0,0,0,1, -->0,0,0,0,0,0,1, --0,0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,0,0,0,0,4, --0,$   
 $0,0,0,0,0,5, --0,0,0,0,0,0,6, --$

R24)

$0,0,0,0,0,0,2, -->0,0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,$   
 $0,4, --0,0,0,0,0,5, --$

R25)

$0,0,0,0,0,0,3, -->0,0,0,0,0,0,1, --0,0,0,0,0,0,2, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --$   
 $0,0,0,0,4, --$

R26)

$0,0,0,0,0,0,4, -->0,0,0,0,1, --0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,0,1, --0,0,0,2, --0,0,$   
 $0,3, --$

R27)

$0,0,0,0,0,0,5, -->0,0,0,1, --0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,0,0,0,0,4, --0,0,1, --0,0,2,$

--

R28)

0,0,0,0,0,0,6,-->0,0,1,--0,0,0,2,--0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,1,--

R29)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R30)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R31)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--

R32)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--

R33)

0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R34)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R35)

0,0,0,0,0,0,0,6,-->0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,1,--0,0,2,--

R36)

0,0,0,0,0,0,0,7,-->0,0,1,--0,0,0,2,--0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,1,--

R37)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,9,--

R38)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R39)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

R40)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R41)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--

R42)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R43)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,  
0,0,0,0,0,0,0,0,5,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R44)

0,0,0,0,0,0,0,0,7,-->0,0,0,1,--0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,  
0,0,5,--0,0,0,0,0,0,0,6,--0,0,1,--0,0,2,--

R45)

0,0,0,0,0,0,0,0,8,-->0,0,1,--0,0,0,2,--0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,  
0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,:

0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,:

0,0,0,0,0,0,4,: 0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,:

0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,:

0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,:

0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,3,4,5,6,7,8,9,10,

-----Class

907-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][011][110][120][210]]

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--

R3) 0,1,-->0,1,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R5) 0,0,1,-->0,0,1,--0,0,2,--

R6) 0,0,2,-->0,0,1,--0,1,--

R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R8) 0,0,0,1,-->0,0,0,1,--0,0,0,2,--0,0,0,3,--

R9) 0,0,0,2,-->0,0,0,1,--0,0,1,--0,0,2,--

R10) 0,0,0,3,-->0,0,0,2,--0,0,1,--0,1,--

R11)

0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--

R12) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R13) 0,0,0,0,2,-->0,0,0,0,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R14) 0,0,0,0,3,-->0,0,0,0,2,--0,0,0,1,--0,0,1,--0,0,2,--  
R15) 0,0,0,0,4,-->0,0,0,0,3,--0,0,0,2,--0,0,1,--0,1,--  
R16)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R17)  
0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,  
--  
R18) 0,0,0,0,0,2,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R19) 0,0,0,0,0,3,-->0,0,0,0,0,2,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--  
R20) 0,0,0,0,0,4,-->0,0,0,0,0,3,--0,0,0,0,2,--0,0,0,0,1,--0,0,1,--0,0,2,--  
R21) 0,0,0,0,0,5,-->0,0,0,0,0,4,--0,0,0,0,3,--0,0,0,0,2,--0,0,1,--0,1,--  
R22)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R23)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,  
0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R24)  
0,0,0,0,0,0,2,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,  
0,4,--0,0,0,0,0,5,--  
R25)  
0,0,0,0,0,0,3,-->0,0,0,0,0,0,2,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--  
0,0,0,0,4,--  
R26)  
0,0,0,0,0,0,4,-->0,0,0,0,0,0,3,--0,0,0,0,0,2,--0,0,0,0,1,--0,0,0,1,--0,0,0,2,--0,0,  
0,3,--  
R27)  
0,0,0,0,0,0,5,-->0,0,0,0,0,0,4,--0,0,0,0,0,3,--0,0,0,0,2,--0,0,0,1,--0,0,1,--0,0,2,  
--  
R28)  
0,0,0,0,0,0,6,-->0,0,0,0,0,0,5,--0,0,0,0,0,4,--0,0,0,0,3,--0,0,0,2,--0,0,1,--0,1,--  
R29)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--  
R30)  
0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,  
0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R31)  
0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,  
--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R32)  
0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,2,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,  
0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R33)  
0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,3,--0,0,0,0,0,0,2,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,  
0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R34)  
0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,4,--0,0,0,0,0,0,3,--0,0,0,0,0,2,--0,0,0,0,1,--0,0,

0,1,--0,0,0,2,--0,0,0,3,--

R35)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,5,--0,0,0,0,0,0,4,--0,0,0,0,0,3,--0,0,0,0,2,--0,0,0,1,--0,0,1,--0,0,2,--

R36)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,6,--0,0,0,0,0,0,5,--0,0,0,0,0,4,--0,0,0,0,3,--0,0,0,2,--0,0,1,--0,1,--

R37)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R38)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R39)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

R40)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--

R41)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--

R42)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--

R43)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--

R44)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--

R45)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,0, : 0,0,1, : 0,0,2, :

LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,2, : 0,0,0,3, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, :



0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,:  
0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,:  
LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,2,:  
0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,:  
0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,:  
0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,3,4,5,6,7,8,9,10,

-----Class

908-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][110][201][210]]$

-----

--

Rules of  $T[L]$ :

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,0, --0,0,1, --0,0,1, --
- R3) 0,1, -->0,1, --
- R4) 0,0,0, -->0,0,0,0, --0,0,0,1, --0,0,0,1, --0,0,0,3, --
- R5) 0,0,1, -->0,0,1, --0,0,1, --
- R6) 0,0,0,0, -->0,0,0,0,0, --0,0,0,0,1, --0,0,0,0,1, --0,0,0,0,3, --0,0,0,0,4, --
- R7) 0,0,0,1, -->0,0,0,1, --0,0,0,1, --0,0,0,3, --
- R8) 0,0,0,3, -->0,0,1, --0,0,1, --0,0,0,3, --
- R9) 0,0,0,0,0, -->0,0,0,0,0,0, --0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5, --
- R10) 0,0,0,0,1, -->0,0,0,0,1, --0,0,0,0,1, --0,0,0,0,3, --0,0,0,0,4, --
- R11) 0,0,0,0,3, -->0,0,0,1, --0,0,0,1, --0,0,0,0,3, --0,0,0,0,4, --
- R12) 0,0,0,0,4, -->0,0,1, --0,0,1, --0,0,1, --0,0,0,0,4, --
- R13) 0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,0,0,0,0,0,1, --0,0,0,0,0,0,1, --0,0,0,0,0,0,3, --0,0,0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --
- R14) 0,0,0,0,0,1, -->0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5, --
- R15) 0,0,0,0,0,3, -->0,0,0,0,1, --0,0,0,0,1, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5, --
- R16) 0,0,0,0,0,4, -->0,0,0,1, --0,0,0,1, --0,0,0,1, --0,0,0,0,0,4, --0,0,0,0,0,5, --
- R17) 0,0,0,0,0,5, -->0,0,1, --0,0,1, --0,0,1, --0,0,1, --0,0,0,0,0,5, --
- R18) 0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,1, --0,0,0,0,0,0,0,1, --0,0,0,0,0,0,0,3, --0,0,0,0,0,0,0,4, --0,0,0,0,0,0,0,5, --0,0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --
- R19) 0,0,0,0,0,0,1, -->0,0,0,0,0,0,1, --0,0,0,0,0,0,1, --0,0,0,0,0,0,3, --0,0,0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --
- R20) 0,0,0,0,0,0,3, -->0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,0,0,3, --0,0,0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --
- R21) 0,0,0,0,0,0,4, -->0,0,0,0,1, --0,0,0,0,1, --0,0,0,0,1, --0,0,0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --

R22)

0,0,0,0,0,0,5,-->0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R23) 0,0,0,0,0,0,6,-->0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,0,0,0,0,6,--

R24)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R25)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R26)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R27)

0,0,0,0,0,0,0,4,-->0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R28)

0,0,0,0,0,0,0,5,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R29)

0,0,0,0,0,0,0,6,-->0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R30)

0,0,0,0,0,0,0,7,-->0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,0,0,0,0,0,7,--

R31)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R32)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R33)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R34)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R35)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R36)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R37)

0,0,0,0,0,0,0,0,7,-->0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,

0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--  
R38)  
0,0,0,0,0,0,0,8,-->0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,0,  
0,0,0,0,0,8,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, :  
LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,3, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,3, : 0,0,0,0,4, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, :  
0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, :  
0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,3, :  
0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7, :  
0,0,0,0,0,0,0,0,8, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,3, :  
0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, :  
0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, :  
Number new nodes in level n is given by : 1,2,2,3,4,5,6,7,8,9,

-----Class

909-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][120][201][210]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R5) 0,0,1,-->0,0,1,--0,0,2,--
- R6) 0,0,2,-->0,0,1,--0,1,--
- R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R8) 0,0,0,1,-->0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R9) 0,0,0,2,-->0,0,0,1,--0,0,1,--0,0,2,--
- R10) 0,0,0,3,-->0,0,1,--0,0,1,--0,1,--
- R11)  
0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--
- R12) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R13) 0,0,0,0,2,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--
- R14) 0,0,0,0,3,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,2,--
- R15) 0,0,0,0,4,-->0,0,1,--0,0,1,--0,0,1,--0,1,--
- R16)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--
- R17)

0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,  
--  
R18) 0,0,0,0,0,2,-->0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
R19) 0,0,0,0,0,3,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--  
R20) 0,0,0,0,0,4,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--  
R21) 0,0,0,0,0,5,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--  
R22)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--  
R23)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,  
0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--  
R24)  
0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,  
0,4,--0,0,0,0,0,0,5,--  
R25)  
0,0,0,0,0,0,3,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,  
0,0,0,0,4,--  
R26)  
0,0,0,0,0,0,4,-->0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--  
R27) 0,0,0,0,0,0,5,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--  
R28) 0,0,0,0,0,0,6,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--  
R29)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,  
0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--  
R30)  
0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,  
0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--  
R31)  
0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,  
--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--  
R32)  
0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,  
0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--  
R33)  
0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,2,  
--0,0,0,0,0,3,--0,0,0,0,0,4,--  
R34)  
0,0,0,0,0,0,0,5,-->0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,  
2,--0,0,0,0,3,--  
R35)  
0,0,0,0,0,0,0,6,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,  
--  
R36) 0,0,0,0,0,0,0,7,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--  
R37)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,  
0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--  
R38)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R39)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

R40)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--

R41)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--

R42)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--

R43)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--

R44)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--

R45)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,0, : 0,0,1, : 0,0,2, :

LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,2, : 0,0,0,3, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, :

Number new nodes in level n is given by : 1,2,3,4,5,6,7,8,9,10,

-----Class

910-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][012][021][100][101]]

-----

--

Rules of T[L]:

R1)  $0 \rightarrow 0,0,--0,1,--$

R2)  $0,0 \rightarrow 0,0,0,--0,1,--0,1,--$

R3)  $0,1 \rightarrow 0,1,--$

R4)  $0,0,0 \rightarrow 0,0,0,0,--0,1,--0,1,--0,1,--$

R5)  $0,0,0,0 \rightarrow 0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--$

R6)  $0,0,0,0,0 \rightarrow 0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--$

R7)  $0,0,0,0,0,0 \rightarrow 0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--$

R8)  $0,0,0,0,0,0,0 \rightarrow 0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--$

R9)

$0,0,0,0,0,0,0,0 \rightarrow 0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--$

R10)

$0,0,0,0,0,0,0,0,0 \rightarrow 0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0,0, : 0,1, :$

LEN=3)  $0,0,0, :$

LEN=4)  $0,0,0,0, :$

LEN=5)  $0,0,0,0,0, :$

LEN=6)  $0,0,0,0,0,0, :$

LEN=7)  $0,0,0,0,0,0,0, :$

LEN=8)  $0,0,0,0,0,0,0,0, :$

LEN=9)  $0,0,0,0,0,0,0,0,0, :$

LEN=10)  $0,0,0,0,0,0,0,0,0,0, :$

Number new nodes in level n is given by :  $1,2,1,1,1,1,1,1,1,1,$

-----Class

911-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][100][102]]$

-----

--

Rules of T[L]:

R1)  $0 \rightarrow 0,0,--0,1,--$

R2)  $0,0 \rightarrow 0,0,0,--0,1,--0,1,--$

R3)  $0,1 \rightarrow 0,1,--$

R4)  $0,0,0 \rightarrow 0,0,0,0,--0,1,--0,1,--0,1,--$

R5)  $0,0,0,0 \rightarrow 0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--$

R6)  $0,0,0,0,0 \rightarrow 0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--$

R7)  $0,0,0,0,0,0 \rightarrow 0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--$

R8)  $0,0,0,0,0,0,0 \rightarrow 0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--$

R9)

$0,0,0,0,0,0,0,0 \rightarrow 0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--$

R10)

$0,0,0,0,0,0,0,0,0 \rightarrow 0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2) 0,0,: 0,1,:  
 LEN=3) 0,0,0,:  
 LEN=4) 0,0,0,0,:  
 LEN=5) 0,0,0,0,0,:  
 LEN=6) 0,0,0,0,0,0,:  
 LEN=7) 0,0,0,0,0,0,0,:  
 LEN=8) 0,0,0,0,0,0,0,0,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,:  
 Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class

912-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][100][110]]$

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,1,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--
- R5) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--
- R6) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R7) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R8) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R9) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R10) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0,:  
 LEN=2) 0,0,: 0,1,:  
 LEN=3) 0,0,0,:  
 LEN=4) 0,0,0,0,:  
 LEN=5) 0,0,0,0,0,:  
 LEN=6) 0,0,0,0,0,0,:  
 LEN=7) 0,0,0,0,0,0,0,:  
 LEN=8) 0,0,0,0,0,0,0,0,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,:  
 Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class

913-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][100][120]]$

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,1,--0,1,--  
 R3) 0,1,-->0,1,--  
 R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--  
 R5) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--  
 R6) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R7) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R8) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R9)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 1,--  
 R10)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 --0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, :  
 LEN=4) 0,0,0,0, :  
 LEN=5) 0,0,0,0,0, :  
 LEN=6) 0,0,0,0,0,0, :  
 LEN=7) 0,0,0,0,0,0,0, :  
 LEN=8) 0,0,0,0,0,0,0,0, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, :  
 Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class

914-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][100][201]]$

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,1,--0,1,--  
 R3) 0,1,-->0,1,--  
 R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--  
 R5) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--  
 R6) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R7) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R8) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R9)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 1,--  
 R10)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 --0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :



LEN=3) 0,0,0,:  
 LEN=4) 0,0,0,0,:  
 LEN=5) 0,0,0,0,0,:  
 LEN=6) 0,0,0,0,0,0,:  
 LEN=7) 0,0,0,0,0,0,0,:  
 LEN=8) 0,0,0,0,0,0,0,0,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,:  
 Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class

915-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][100][210]]$

-----  
 --  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,1,--0,1,--  
 R3) 0,1,-->0,1,--  
 R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--  
 R5) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--  
 R6) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R7) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R8) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R9)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 1,--  
 R10)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 --0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0,:  
 LEN=2) 0,0,: 0,1,:  
 LEN=3) 0,0,0,:  
 LEN=4) 0,0,0,0,:  
 LEN=5) 0,0,0,0,0,:  
 LEN=6) 0,0,0,0,0,0,:  
 LEN=7) 0,0,0,0,0,0,0,:  
 LEN=8) 0,0,0,0,0,0,0,0,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,:  
 Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class

916-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][101][102]]$

-----  
 --  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,1,--  
 R3) 0,1,-->0,1,--  
 R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--  
 R5) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--  
 R6) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R7) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R8) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R9)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,  
 1,--  
 R10)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,  
 --0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, :  
 LEN=4) 0,0,0,0, :  
 LEN=5) 0,0,0,0,0, :  
 LEN=6) 0,0,0,0,0,0, :  
 LEN=7) 0,0,0,0,0,0,0, :  
 LEN=8) 0,0,0,0,0,0,0,0, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, :  
 Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class

917-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][101][110]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,1,--0,1,--  
 R3) 0,1,-->0,1,--  
 R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--  
 R5) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--  
 R6) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R7) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R8) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R9)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,  
 1,--  
 R10)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,  
 --0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, :

LEN=4) 0,0,0,0, :  
 LEN=5) 0,0,0,0,0, :  
 LEN=6) 0,0,0,0,0,0, :  
 LEN=7) 0,0,0,0,0,0,0, :  
 LEN=8) 0,0,0,0,0,0,0,0, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, :  
 Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class

918-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][101][120]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,1,--0,1,--  
 R3) 0,1,-->0,1,--  
 R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--  
 R5) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--  
 R6) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R7) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R8) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R9) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R10) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 --0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, :  
 LEN=4) 0,0,0,0, :  
 LEN=5) 0,0,0,0,0, :  
 LEN=6) 0,0,0,0,0,0, :  
 LEN=7) 0,0,0,0,0,0,0, :  
 LEN=8) 0,0,0,0,0,0,0,0, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, :  
 Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class

919-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][101][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,1,--0,1,--

R3) 0,1,-->0,1,--  
 R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--  
 R5) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--  
 R6) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R7) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R8) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R9)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 1,--  
 R10)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 --0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, :  
 LEN=4) 0,0,0,0, :  
 LEN=5) 0,0,0,0,0, :  
 LEN=6) 0,0,0,0,0,0, :  
 LEN=7) 0,0,0,0,0,0,0, :  
 LEN=8) 0,0,0,0,0,0,0,0, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, :  
 Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class

920-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][101][210]]$

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,1,--0,1,--  
 R3) 0,1,-->0,1,--  
 R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--  
 R5) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--  
 R6) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R7) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R8) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R9)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 1,--  
 R10)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 --0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, :  
 LEN=4) 0,0,0,0, :

LEN=5) 0,0,0,0,0, :  
 LEN=6) 0,0,0,0,0,0, :  
 LEN=7) 0,0,0,0,0,0,0, :  
 LEN=8) 0,0,0,0,0,0,0,0, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, :  
 Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class

921-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][102][110]]$

-----  
 --  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,1,--0,1,--  
 R3) 0,1,-->0,1,--  
 R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--  
 R5) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--  
 R6) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R7) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R8) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R9)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,  
 1,--  
 R10)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 --0,1,--0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, :  
 LEN=4) 0,0,0,0, :  
 LEN=5) 0,0,0,0,0, :  
 LEN=6) 0,0,0,0,0,0, :  
 LEN=7) 0,0,0,0,0,0,0, :  
 LEN=8) 0,0,0,0,0,0,0,0, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, :  
 Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class

922-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][102][120]]$

-----  
 --  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,1,--0,1,--  
 R3) 0,1,-->0,1,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--  
R5) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--  
R6) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R7) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R8) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R9)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
1,--  
R10)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
--0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, :  
LEN=4) 0,0,0,0, :  
LEN=5) 0,0,0,0,0, :  
LEN=6) 0,0,0,0,0,0, :  
LEN=7) 0,0,0,0,0,0,0, :  
LEN=8) 0,0,0,0,0,0,0,0, :  
LEN=9) 0,0,0,0,0,0,0,0,0, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, :  
Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class

923-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][102][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,1,--0,1,--  
R3) 0,1,-->0,1,--  
R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--  
R5) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--  
R6) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R7) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R8) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R9)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
1,--  
R10)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
--0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, :  
LEN=4) 0,0,0,0, :  
LEN=5) 0,0,0,0,0, :

LEN=6) 0,0,0,0,0,0,:  
 LEN=7) 0,0,0,0,0,0,0,:  
 LEN=8) 0,0,0,0,0,0,0,0,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,:  
 Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class

924-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][102][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,1,--0,1,--  
 R3) 0,1,-->0,1,--  
 R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--  
 R5) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--  
 R6) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R7) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R8) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R9)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 1,--  
 R10)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 --0,1,--0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0,:  
 LEN=2) 0,0,: 0,1,:  
 LEN=3) 0,0,0,:  
 LEN=4) 0,0,0,0,:  
 LEN=5) 0,0,0,0,0,:  
 LEN=6) 0,0,0,0,0,0,:  
 LEN=7) 0,0,0,0,0,0,0,:  
 LEN=8) 0,0,0,0,0,0,0,0,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,:  
 Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class

925-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][110][120]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,1,--0,1,--  
 R3) 0,1,-->0,1,--  
 R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--

R5) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--  
R6) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R7) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R8) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R9) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R10) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, :  
LEN=4) 0,0,0,0, :  
LEN=5) 0,0,0,0,0, :  
LEN=6) 0,0,0,0,0,0, :  
LEN=7) 0,0,0,0,0,0,0, :  
LEN=8) 0,0,0,0,0,0,0,0, :  
LEN=9) 0,0,0,0,0,0,0,0,0, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, :  
Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class  
926-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][110][201]]$   
-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,1,--0,1,--  
R3) 0,1,-->0,1,--  
R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--  
R5) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--  
R6) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R7) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R8) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R9) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R10) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, :  
LEN=4) 0,0,0,0, :  
LEN=5) 0,0,0,0,0, :  
LEN=6) 0,0,0,0,0,0, :



LEN=7) 0,0,0,0,0,0,0,0, :  
 LEN=8) 0,0,0,0,0,0,0,0,0, :  
 LEN=9) 0,0,0,0,0,0,0,0,0,0, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,0, :  
 Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class

927-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][110][210]]$

-----

--  
Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,1,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--
- R5) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--
- R6) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R7) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R8) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R9) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R10) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, : 0,1, :
- LEN=3) 0,0,0, :
- LEN=4) 0,0,0,0, :
- LEN=5) 0,0,0,0,0, :
- LEN=6) 0,0,0,0,0,0, :
- LEN=7) 0,0,0,0,0,0,0, :
- LEN=8) 0,0,0,0,0,0,0,0, :
- LEN=9) 0,0,0,0,0,0,0,0,0, :
- LEN=10) 0,0,0,0,0,0,0,0,0,0, :  
 Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class

928-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][120][201]]$

-----

--  
Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,1,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--
- R5) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--

R6) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R7) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R8) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R9)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 1,--  
 R10)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 --0,1,--0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, :  
 LEN=4) 0,0,0,0, :  
 LEN=5) 0,0,0,0,0, :  
 LEN=6) 0,0,0,0,0,0, :  
 LEN=7) 0,0,0,0,0,0,0, :  
 LEN=8) 0,0,0,0,0,0,0,0, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, :  
 Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class

929-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][120][210]]$

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,1,--0,1,--  
 R3) 0,1,-->0,1,--  
 R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--  
 R5) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--  
 R6) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R7) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R8) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R9)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 1,--  
 R10)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 --0,1,--0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, :  
 LEN=4) 0,0,0,0, :  
 LEN=5) 0,0,0,0,0, :  
 LEN=6) 0,0,0,0,0,0, :  
 LEN=7) 0,0,0,0,0,0,0, :

LEN=8) 0,0,0,0,0,0,0,0,0, :  
LEN=9) 0,0,0,0,0,0,0,0,0,0, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0,0, :  
Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,1,

-----Class  
930-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[010][012][021][201][210]]  
-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,1,--0,1,--  
R3) 0,1,-->0,1,--  
R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--  
R5) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--  
R6) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R7) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R8) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R9)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,  
1,--  
R10)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,  
--0,1,--0,1,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, :  
LEN=4) 0,0,0,0, :  
LEN=5) 0,0,0,0,0, :  
LEN=6) 0,0,0,0,0,0, :  
LEN=7) 0,0,0,0,0,0,0, :  
LEN=8) 0,0,0,0,0,0,0,0, :  
LEN=9) 0,0,0,0,0,0,0,0,0, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, :  
Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class  
931-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[010][012][100][101][102]]  
-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,1,--0,0,2,--  
R3) 0,1,-->0,1,--  
R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--  
R5) 0,0,2,-->0,0,2,1,--0,0,2,--  
R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R7) 0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,3,--  
R8) 0,0,2,1,-->  
R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
R10) 0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,4,--  
R11) 0,0,0,3,2,-->0,0,2,1,--  
R12)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--  
R13)  
0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,5,--  
R14) 0,0,0,0,4,3,-->0,0,2,1,--0,0,0,3,2,--  
R15)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R16)  
0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,6,  
5,--0,0,0,0,0,6,--  
R17) 0,0,0,0,0,5,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--  
R18)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--  
R19)  
0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,  
6,5,--0,0,0,0,0,0,7,6,--0,0,0,0,0,0,7,--  
R20) 0,0,0,0,0,0,6,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--  
R21)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--0,0,0,0,0,0,9,  
,--  
R22)  
0,0,0,0,0,0,0,8,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--0,0,0,0,0,0,7,6,--0,0,0,0,0,0,8,7,--0,0,0,0,0,0,8,--  
R23)  
0,0,0,0,0,0,0,7,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,2, :  
LEN=4) 0,0,0,0, : 0,0,0,3, : 0,0,2,1, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,4, : 0,0,0,3,2, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, : 0,0,0,0,4,3, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,4, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,5, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,6, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,8,7, :  
Number new nodes in level n is given by : 1,2,2,3,3,3,3,3,3,3,

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][100][101][110]]$

-----  
--

Rules of  $T[L]$ :

- R1) 0, -->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--
- R5) 0,0,2,-->0,0,2,1,--0,1,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R7) 0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,1,--
- R8) 0,0,2,1,-->
- R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--
- R10) 0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,4,3,--0,1,--
- R11) 0,0,0,3,2,-->0,0,2,1,--
- R12)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--0,0,0,0,6,--
- R13) 0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,5,4,--0,1,--
- R14) 0,0,0,0,4,3,-->0,0,2,1,--0,0,0,3,2,--
- R15)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--0,0,0,0,6,--0,0,0,0,7,--
- R16)  
0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,5,4,--0,0,0,0,6,5,--0,1,--
- R17) 0,0,0,0,0,5,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--
- R18)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--0,0,0,0,6,--0,0,0,0,7,--0,0,0,0,8,--
- R19)  
0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,5,4,--0,0,0,0,6,5,--0,0,0,0,7,6,--0,1,--
- R20) 0,0,0,0,0,0,6,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,5,4,--
- R21)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--0,0,0,0,6,--0,0,0,0,7,--0,0,0,0,8,--0,0,0,0,9,--
- R22)  
0,0,0,0,0,0,0,0,8,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,5,4,--0,0,0,0,6,5,--0,0,0,0,7,6,--0,0,0,0,8,7,--0,1,--
- R23)  
0,0,0,0,0,0,0,7,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,5,4,--0,0,0,0,6,5,--

List of different nodes in  $T[L]$

- LEN=1) 0, :
- LEN=2) 0,0, : 0,1, :
- LEN=3) 0,0,0, : 0,0,2, :
- LEN=4) 0,0,0,0, : 0,0,0,3, : 0,0,2,1, :
- LEN=5) 0,0,0,0,0, : 0,0,0,0,4, : 0,0,0,3,2, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, : 0,0,0,0,4,3, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,4, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,5, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,6, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,8,7, :  
 Number new nodes in level n is given by : 1,2,2,3,3,3,3,3,3,3,

-----Class

933-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][100][101][120]]$

-----

--

Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,0, --0,1, --0,0,2, --
- R3) 0,1, -->0,1, --
- R4) 0,0,0, -->0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --
- R5) 0,0,2, -->0,0,2,1, --0,0,2, --
- R6) 0,0,0,0, -->0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --
- R7) 0,0,0,3, -->0,0,2,1, --0,0,0,3,2, --0,0,0,3, --
- R8) 0,0,2,1, -->
- R9) 0,0,0,0,0, -->0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --
- R10) 0,0,0,0,4, -->0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,4, --
- R11) 0,0,0,3,2, -->0,0,2,1, --
- R12) 0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --
- R13) 0,0,0,0,0,5, -->0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,0,5,4, --0,0,0,0,0,5, --
- R14) 0,0,0,0,4,3, -->0,0,2,1, --0,0,0,3,2, --
- R15) 0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --0,0,0,0,0,0,7, --
- R16) 0,0,0,0,0,0,6, -->0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,0,5,4, --0,0,0,0,0,0,6, 5, --0,0,0,0,0,0,6, --
- R17) 0,0,0,0,0,5,4, -->0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --
- R18) 0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,0,8, --
- R19) 0,0,0,0,0,0,0,7, -->0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,0,5,4, --0,0,0,0,0,0,6,5, --0,0,0,0,0,0,0,7,6, --0,0,0,0,0,0,0,7, --
- R20) 0,0,0,0,0,0,6,5, -->0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,0,5,4, --
- R21) 0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,0,8, --0,0,0,0,0,0,0,0,9, --
- R22) 0,0,0,0,0,0,0,0,8, -->0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,0,5,4, --0,0,0,0,0,0,

0,6,5,--0,0,0,0,0,0,7,6,--0,0,0,0,0,0,8,7,--0,0,0,0,0,0,8,--  
R23)  
0,0,0,0,0,0,7,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,2, :  
LEN=4) 0,0,0,0, : 0,0,0,3, : 0,0,2,1, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,4, : 0,0,0,3,2, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, : 0,0,0,0,4,3, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,4, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,5, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,6, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,8,7, :  
Number new nodes in level n is given by : 1,2,2,3,3,3,3,3,3,3,

-----Class

934-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][100][101][201]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--
- R5) 0,0,2,-->0,0,2,1,--0,0,2,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R7) 0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,3,--
- R8) 0,0,2,1,-->
- R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--
- R10) 0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,4,--
- R11) 0,0,0,3,2,-->0,0,2,1,--
- R12)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--0,  
0,0,0,0,0,6,--
- R13)  
0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,5,4,--0,0,0,0,5,--
- R14) 0,0,0,0,4,3,-->0,0,2,1,--0,0,0,3,2,--
- R15)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,  
--0,0,0,0,0,6,--0,0,0,0,0,7,--
- R16)  
0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,5,4,--0,0,0,0,6,  
5,--0,0,0,0,6,--
- R17) 0,0,0,0,0,5,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--
- R18)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,6,--0,0,0,0,0,7,--0,0,0,0,0,8,--

R19) 0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,7,--  
R20) 0,0,0,0,0,0,6,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--  
R21) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--  
R22) 0,0,0,0,0,0,0,0,8,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,0,8,7,--0,0,0,0,0,0,0,0,8,--  
R23) 0,0,0,0,0,0,0,7,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,2, :  
LEN=4) 0,0,0,0, : 0,0,0,3, : 0,0,2,1, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,4, : 0,0,0,3,2, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, : 0,0,0,0,4,3, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,4, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,5, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,6, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,8,7, :  
Number new nodes in level n is given by : 1,2,2,3,3,3,3,3,3,3,

-----Class

935-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][100][101][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,1,--0,0,2,--  
R3) 0,1,-->0,1,--  
R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--  
R5) 0,0,2,-->0,0,2,1,--0,0,2,--  
R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--  
R7) 0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,3,--  
R8) 0,0,2,1,-->  
R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
R10) 0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,4,--  
R11) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--  
R12) 0,0,0,0,0,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,5,--  
R13) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--



R14)  
0,0,0,0,0,0,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,6,--  
R15)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--  
R16)  
0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,  
0,0,0,0,0,7,--  
R17)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,9  
,--  
R18)  
0,0,0,0,0,0,0,0,8,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,  
0,2,1,--0,0,0,0,0,0,0,8,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,2, :  
LEN=4) 0,0,0,0, : 0,0,0,3, : 0,0,2,1, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,4, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :  
Number new nodes in level n is given by : 1,2,2,3,2,2,2,2,2,2,

-----Class

936-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][100][102][110]]$

-----  
Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,1,--0,0,2,--  
R3) 0,1,-->0,1,--  
R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--  
R5) 0,0,2,-->0,0,2,1,--0,1,--  
R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--  
R7) 0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,1,--  
R8) 0,0,2,1,-->  
R9) 0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
R10) 0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,--  
R11) 0,0,0,3,2,-->0,0,2,1,--  
R12)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--  
R13) 0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,1,--  
R14) 0,0,0,0,4,3,-->0,0,2,1,--0,0,0,3,2,--

R15)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R16)  
0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,  
5,--0,1,--

R17) 0,0,0,0,0,5,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--

R18)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R19)  
0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,  
6,5,--0,0,0,0,0,0,7,6,--0,1,--

R20) 0,0,0,0,0,0,6,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--

R21)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9  
,--

R22)  
0,0,0,0,0,0,0,0,8,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,8,7,--0,1,--

R23)  
0,0,0,0,0,0,0,7,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--

List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,2, :  
LEN=4) 0,0,0,0, : 0,0,0,3, : 0,0,2,1, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,4, : 0,0,0,3,2, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, : 0,0,0,0,4,3, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,4, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,5, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,6, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,8,7, :  
Number new nodes in level n is given by : 1,2,2,3,3,3,3,3,3,3,

-----Class

937-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][100][102][120]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--
- R5) 0,0,2,-->0,0,2,1,--0,0,2,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R7) 0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,3,--

R8) 0,0,2,1,-->  
R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
R10) 0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,4,--  
R11) 0,0,0,3,2,-->0,0,2,1,--  
R12) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--  
R13) 0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,5,--  
R14) 0,0,0,0,4,3,-->0,0,2,1,--0,0,0,3,2,--  
R15) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,7,--  
R16) 0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,6,5,--0,0,0,0,0,6,--  
R17) 0,0,0,0,0,5,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--  
R18) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,7,--0,0,0,0,0,8,--  
R19) 0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,6,5,--0,0,0,0,0,7,6,--0,0,0,0,0,7,--  
R20) 0,0,0,0,0,0,6,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--  
R21) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,7,--0,0,0,0,0,8,--0,0,0,0,0,9,--  
R22) 0,0,0,0,0,0,0,8,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,6,5,--0,0,0,0,0,7,6,--0,0,0,0,0,8,7,--0,0,0,0,0,8,--  
R23) 0,0,0,0,0,0,7,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,6,5,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,2, :  
LEN=4) 0,0,0,0, : 0,0,0,3, : 0,0,2,1, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,4, : 0,0,0,3,2, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, : 0,0,0,0,4,3, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,4, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,5, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,6, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,8,7, :  
Number new nodes in level n is given by : 1,2,2,3,3,3,3,3,3,3,

-----Class

938-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][100][102][201]]$

-----  
--  
Rules of T[L]:

R1) 0, -->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->0,1,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,0,2,1,--0,0,2,--

R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R7) 0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,3,--

R8) 0,0,2,1,-->

R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R10) 0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,4,--

R11) 0,0,0,3,2,-->0,0,2,1,--

R12)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--

R13)

0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,5,--

R14) 0,0,0,0,4,3,-->0,0,2,1,--0,0,0,3,2,--

R15)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R16)

0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--0,0,0,0,0,0,6,--

R17) 0,0,0,0,0,5,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--

R18)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R19)

0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,7,--

R20) 0,0,0,0,0,0,6,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--

R21)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R22)

0,0,0,0,0,0,0,0,8,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,0,8,7,--0,0,0,0,0,0,0,0,8,--

R23)

0,0,0,0,0,0,0,7,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,0, : 0,0,2, :

LEN=4) 0,0,0,0, : 0,0,0,3, : 0,0,2,1, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,4, : 0,0,0,3,2, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, : 0,0,0,0,4,3, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,4, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,5, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,6, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,8,7, :  
 Number new nodes in level n is given by : 1,2,2,3,3,3,3,3,3,3,

-----Class

939-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][100][102][210]]$

-----  
 --

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--
- R5) 0,0,2,-->0,0,2,1,--0,0,2,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R7) 0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,3,--
- R8) 0,0,2,1,-->
- R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
- R10) 0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,4,--
- R11) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--
- R12) 0,0,0,0,0,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,5,--
- R13) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--
- R14) 0,0,0,0,0,0,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,6,--
- R15) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--
- R16) 0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,7,--
- R17) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--
- R18) 0,0,0,0,0,0,0,0,8,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,8,--

List of different nodes in  $T[L]$

- LEN=1) 0, :
- LEN=2) 0,0, : 0,1, :
- LEN=3) 0,0,0, : 0,0,2, :
- LEN=4) 0,0,0,0, : 0,0,0,3, : 0,0,2,1, :

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:  
 LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:  
 LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:  
 LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:  
 Number new nodes in level n is given by : 1,2,2,3,2,2,2,2,2,2,

-----Class

940-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][100][110][120]]$

-----  
 --  
 Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--
- R5) 0,0,2,-->0,0,2,1,--0,1,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R7) 0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,1,--
- R8) 0,0,2,1,-->
- R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
- R10) 0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,--
- R11) 0,0,0,3,2,-->0,0,2,1,--
- R12) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--
- R13) 0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,1,--
- R14) 0,0,0,0,4,3,-->0,0,2,1,--0,0,0,3,2,--
- R15) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--
- R16) 0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--0,1,--
- R17) 0,0,0,0,0,5,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--
- R18) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--
- R19) 0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--0,0,0,0,0,0,0,7,6,--0,1,--
- R20) 0,0,0,0,0,0,6,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--
- R21) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--
- R22) 0,0,0,0,0,0,0,0,8,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,

0,6,5,--0,0,0,0,0,0,7,6,--0,0,0,0,0,0,8,7,--0,1,--  
R23)  
0,0,0,0,0,0,7,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,2, :  
LEN=4) 0,0,0,0, : 0,0,0,3, : 0,0,2,1, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,4, : 0,0,0,3,2, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, : 0,0,0,0,4,3, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,4, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,5, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,6, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,8,7, :  
Number new nodes in level n is given by : 1,2,2,3,3,3,3,3,3,3,

-----Class

941-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][100][110][201]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--
- R5) 0,0,2,-->0,0,2,1,--0,1,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R7) 0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,1,--
- R8) 0,0,2,1,-->
- R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--
- R10) 0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,--
- R11) 0,0,0,3,2,-->0,0,2,1,--
- R12)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--0,  
0,0,0,0,0,6,--
- R13) 0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,5,4,--0,1,--
- R14) 0,0,0,0,4,3,-->0,0,2,1,--0,0,0,3,2,--
- R15)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,  
--0,0,0,0,0,6,--0,0,0,0,0,0,7,--
- R16)  
0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,5,4,--0,0,0,0,0,6,  
5,--0,1,--
- R17) 0,0,0,0,0,5,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--
- R18)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--
- R19)

0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--0,0,0,0,0,0,7,6,--0,1,--

R20) 0,0,0,0,0,0,6,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--  
R21)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--0,0,0,0,0,0,9,--

R22)

0,0,0,0,0,0,0,8,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--0,0,0,0,0,0,7,6,--0,0,0,0,0,0,8,7,--0,1,--

R23)

0,0,0,0,0,0,7,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,3,: 0,0,2,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,: 0,0,0,3,2,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,: 0,0,0,0,4,3,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,: 0,0,0,0,0,5,4,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,6,5,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,7,6,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,8,7,:

Number new nodes in level n is given by : 1,2,2,3,3,3,3,3,3,3,

-----Class

942-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][100][110][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->0,1,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,0,2,1,--0,1,--

R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R7) 0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,1,--

R8) 0,0,2,1,-->

R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--

R10) 0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,--

R11)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--0,0,0,0,6,--

R12) 0,0,0,0,0,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,--

R13)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--0,0,0,0,6,--0,0,0,0,7,--

R14) 0,0,0,0,0,0,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,--



R15)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
 0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--

R16)  
 0,0,0,0,0,0,7,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,  
 --

R17)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
 0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--0,0,0,0,0,0,9,  
 ,--

R18)  
 0,0,0,0,0,0,0,8,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,  
 0,2,1,--0,1,--

List of different nodes in T[L]

- LEN=1) 0, :
  - LEN=2) 0,0, : 0,1, :
  - LEN=3) 0,0,0, : 0,0,2, :
  - LEN=4) 0,0,0,0, : 0,0,0,3, : 0,0,2,1, :
  - LEN=5) 0,0,0,0,0, : 0,0,0,0,4, :
  - LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, :
  - LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :
  - LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :
  - LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :
  - LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :
- Number new nodes in level n is given by : 1,2,2,3,2,2,2,2,2,2,

-----Class

943-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][100][120][201]]$

-----

--

Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,0, --0,1, --0,0,2, --
- R3) 0,1, -->0,1, --
- R4) 0,0,0, -->0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --
- R5) 0,0,2, -->0,0,2,1, --0,0,2, --
- R6) 0,0,0,0, -->0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --
- R7) 0,0,0,3, -->0,0,2,1, --0,0,0,3,2, --0,0,0,3, --
- R8) 0,0,2,1, -->
- R9) 0,0,0,0,0, -->0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --
- R10) 0,0,0,0,4, -->0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,4, --
- R11) 0,0,0,3,2, -->0,0,2,1, --
- R12)  
 0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,  
 0,0,0,0,0,6, --
- R13)  
 0,0,0,0,0,5, -->0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,0,5,4, --0,0,0,0,0,5, --
- R14) 0,0,0,0,4,3, -->0,0,2,1, --0,0,0,3,2, --
- R15)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R16)

0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,  
5,--0,0,0,0,0,6,--

R17) 0,0,0,0,0,5,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--

R18)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R19)

0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,  
6,5,--0,0,0,0,0,0,7,6,--0,0,0,0,0,0,7,--

R20) 0,0,0,0,0,0,6,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--

R21)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,9

,--

R22)

0,0,0,0,0,0,0,0,8,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,8,7,--0,0,0,0,0,0,0,8,--

R23)

0,0,0,0,0,0,7,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,3,: 0,0,2,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,: 0,0,0,3,2,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,: 0,0,0,0,4,3,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,: 0,0,0,0,0,5,4,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,6,5,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,7,6,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,8,7,:

Number new nodes in level n is given by : 1,2,2,3,3,3,3,3,3,3,

-----Class

944-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][100][120][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->0,1,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,0,2,1,--0,0,2,--

R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R7) 0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,3,--

R8) 0,0,2,1,-->

R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
R10) 0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,4,--  
R11) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--  
R12) 0,0,0,0,0,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,5,--  
R13) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R14) 0,0,0,0,0,0,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,6,--  
R15) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--  
R16) 0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,7,--  
R17) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--  
R18) 0,0,0,0,0,0,0,0,8,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,8,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,2, :  
LEN=4) 0,0,0,0, : 0,0,0,3, : 0,0,2,1, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,4, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :  
Number new nodes in level n is given by : 1,2,2,3,2,2,2,2,2,2,

-----Class

945-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding L=[[010][012][100][201][210]]

-----

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,1,--0,0,2,--  
R3) 0,1,-->0,1,--  
R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--  
R5) 0,0,2,-->0,0,2,1,--0,0,2,--  
R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--  
R7) 0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,3,--

R8) 0,0,2,1,-->  
R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
R10) 0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,4,--  
R11)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--  
R12) 0,0,0,0,0,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,5,--  
R13)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R14)  
0,0,0,0,0,0,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,6,--  
R15)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--  
R16)  
0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,  
0,0,0,0,0,7,--  
R17)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,  
,--  
R18)  
0,0,0,0,0,0,0,0,8,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,  
0,2,1,--0,0,0,0,0,0,0,8,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,2, :  
LEN=4) 0,0,0,0, : 0,0,0,3, : 0,0,2,1, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,4, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :  
Number new nodes in level n is given by : 1,2,2,3,2,2,2,2,2,2,

-----Class

946-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][101][102][110]]$

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,1,--0,0,2,--  
R3) 0,1,-->0,1,--  
R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--  
R5) 0,0,2,-->0,1,--0,1,--  
R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

- R7) 0,0,0,3,-->0,1,--0,0,2,--0,1,--
- R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
- R9) 0,0,0,0,4,-->0,1,--0,0,2,--0,0,0,3,--0,1,--
- R10) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--
- R11) 0,0,0,0,0,5,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,1,--
- R12) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--
- R13) 0,0,0,0,0,0,6,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,1,--
- R14) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--
- R15) 0,0,0,0,0,0,0,7,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,1,--
- R16) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--
- R17) 0,0,0,0,0,0,0,0,8,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,1,--

List of different nodes in T[L]

- LEN=1) 0, :
  - LEN=2) 0,0, : 0,1, :
  - LEN=3) 0,0,0, : 0,0,2, :
  - LEN=4) 0,0,0,0, : 0,0,0,3, :
  - LEN=5) 0,0,0,0,0, : 0,0,0,0,4, :
  - LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, :
  - LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :
  - LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :
  - LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :
  - LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :
- Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,

-----Class

947-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][101][102][120]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--
- R5) 0,0,2,-->0,1,--0,0,2,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R7) 0,0,0,3,-->0,1,--0,0,2,--0,0,0,3,--

- R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
- R9) 0,0,0,0,4,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R10) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--
- R11) 0,0,0,0,0,5,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
- R12) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--
- R13) 0,0,0,0,0,0,6,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--
- R14) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--
- R15) 0,0,0,0,0,0,0,7,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--
- R16) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,9,--
- R17) 0,0,0,0,0,0,0,0,8,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

List of different nodes in T[L]

- LEN=1) 0, :
  - LEN=2) 0,0, : 0,1, :
  - LEN=3) 0,0,0, : 0,0,2, :
  - LEN=4) 0,0,0,0, : 0,0,0,3, :
  - LEN=5) 0,0,0,0,0, : 0,0,0,0,4, :
  - LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, :
  - LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :
  - LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :
  - LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :
  - LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :
- Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

948-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][101][102][201]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--
- R5) 0,0,2,-->0,1,--0,0,2,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R7) 0,0,0,3,-->0,1,--0,0,2,--0,0,0,3,--

- R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
- R9) 0,0,0,0,4,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R10) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--
- R11) 0,0,0,0,0,5,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
- R12) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--
- R13) 0,0,0,0,0,0,6,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--
- R14) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--
- R15) 0,0,0,0,0,0,0,7,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--
- R16) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--
- R17) 0,0,0,0,0,0,0,0,8,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

List of different nodes in T[L]

- LEN=1) 0, :
  - LEN=2) 0,0, : 0,1, :
  - LEN=3) 0,0,0, : 0,0,2, :
  - LEN=4) 0,0,0,0, : 0,0,0,3, :
  - LEN=5) 0,0,0,0,0, : 0,0,0,0,4, :
  - LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, :
  - LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :
  - LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :
  - LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :
  - LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :
- Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

949-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][101][102][210]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--
- R5) 0,0,2,-->0,1,--0,0,2,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R7) 0,0,0,3,-->0,1,--0,1,--0,0,0,3,--

R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
R9) 0,0,0,0,4,-->0,1,--0,1,--0,1,--0,0,0,0,4,--  
R10)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--  
R11) 0,0,0,0,0,5,-->0,1,--0,1,--0,1,--0,1,--0,0,0,0,0,5,--  
R12)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R13) 0,0,0,0,0,0,6,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,0,0,0,0,6,--  
R14)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--  
R15) 0,0,0,0,0,0,0,7,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,0,0,0,0,0,7,--  
R16)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,9  
,--  
R17)  
0,0,0,0,0,0,0,0,8,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,0,0,0,0,0,0,8,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,2, :  
LEN=4) 0,0,0,0, : 0,0,0,3, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,4, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :  
Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

950-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][101][110][120]]$   
-----

--  
Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,1,--0,0,2,--  
R3) 0,1,-->0,1,--  
R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--  
R5) 0,0,2,-->0,1,--0,1,--  
R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--  
R7) 0,0,0,3,-->0,1,--0,0,2,--0,1,--  
R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
R9) 0,0,0,0,4,-->0,1,--0,0,2,--0,0,0,3,--0,1,--  
R10)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,



0,0,0,0,0,6,--  
 R11) 0,0,0,0,0,5,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,1,--  
 R12)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
 --0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
 R13) 0,0,0,0,0,0,6,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,1,--  
 R14)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
 0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--  
 R15)  
 0,0,0,0,0,0,0,7,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,  
 --0,1,--  
 R16)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
 0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,9,  
 ,--  
 R17)  
 0,0,0,0,0,0,0,0,8,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,  
 6,--0,0,0,0,0,0,7,--0,1,--

List of different nodes in T[L]

LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,2, :  
 LEN=4) 0,0,0,0, : 0,0,0,3, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,4, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

951-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][101][110][201]]$

--  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,1,--0,0,2,--  
 R3) 0,1,-->0,1,--  
 R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--  
 R5) 0,0,2,-->0,1,--0,1,--  
 R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--  
 R7) 0,0,0,3,-->0,1,--0,0,2,--0,1,--  
 R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
 R9) 0,0,0,0,4,-->0,1,--0,0,2,--0,0,0,3,--0,1,--  
 R10)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
 0,0,0,0,0,6,--

R11) 0,0,0,0,0,5,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,1,--  
R12)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,6,--0,0,0,0,0,7,--  
R13) 0,0,0,0,0,0,6,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,1,--  
R14)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--  
R15)  
0,0,0,0,0,0,0,7,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,  
--0,1,--  
R16)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--0,0,0,0,0,0,9  
,--  
R17)  
0,0,0,0,0,0,0,0,8,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,  
6,--0,0,0,0,0,7,--0,1,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,2, :  
LEN=4) 0,0,0,0, : 0,0,0,3, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,4, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :  
Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

952-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][101][110][210]]$

-----

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,1,--0,0,2,--  
R3) 0,1,-->0,1,--  
R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--  
R5) 0,0,2,-->0,1,--0,1,--  
R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--  
R7) 0,0,0,3,-->0,1,--0,1,--0,1,--  
R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
R9) 0,0,0,0,4,-->0,1,--0,1,--0,1,--0,1,--  
R10)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--  
R11) 0,0,0,0,0,5,-->0,1,--0,1,--0,1,--0,1,--0,1,--

R12)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
 --0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
 R13) 0,0,0,0,0,0,6,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R14)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
 0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--  
 R15) 0,0,0,0,0,0,0,7,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R16)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
 0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,9  
 ,--  
 R17) 0,0,0,0,0,0,0,0,8,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,2, :  
 LEN=4) 0,0,0,0, : 0,0,0,3, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,4, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,

-----Class

953-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][101][120][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,1,--0,0,2,--  
 R3) 0,1,-->0,1,--  
 R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--  
 R5) 0,0,2,-->0,1,--0,0,2,--  
 R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--  
 R7) 0,0,0,3,-->0,1,--0,0,2,--0,0,0,3,--  
 R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
 R9) 0,0,0,0,4,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--  
 R10)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
 0,0,0,0,0,6,--  
 R11) 0,0,0,0,0,5,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
 R12)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
 --0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
 R13)  
 0,0,0,0,0,0,6,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R14)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--

R15)  
0,0,0,0,0,0,0,7,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,  
--0,0,0,0,0,0,7,--

R16)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--0,0,0,0,0,0,0,9,  
,--

R17)  
0,0,0,0,0,0,0,0,8,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,  
6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,3,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

954-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][101][120][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->0,1,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,1,--0,0,2,--

R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R7) 0,0,0,3,-->0,1,--0,1,--0,0,0,3,--

R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R9) 0,0,0,0,4,-->0,1,--0,1,--0,1,--0,0,0,0,4,--

R10)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--

R11) 0,0,0,0,0,5,-->0,1,--0,1,--0,1,--0,1,--0,0,0,0,5,--

R12)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R13) 0,0,0,0,0,0,6,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,0,0,0,0,6,--

R14)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
 0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--  
 R15) 0,0,0,0,0,0,0,7,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,0,0,0,0,0,7,--  
 R16)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
 0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--0,0,0,0,0,0,0,9  
 ,--  
 R17)  
 0,0,0,0,0,0,0,0,8,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,0,0,0,0,0,0,8,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,2, :  
 LEN=4) 0,0,0,0, : 0,0,0,3, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,4, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

955-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][101][201][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,1,--0,0,2,--  
 R3) 0,1,-->0,1,--  
 R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--  
 R5) 0,0,2,-->0,1,--0,0,2,--  
 R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--  
 R7) 0,0,0,3,-->0,1,--0,1,--0,0,0,3,--  
 R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
 R9) 0,0,0,0,4,-->0,1,--0,1,--0,1,--0,0,0,0,4,--  
 R10)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
 0,0,0,0,0,6,--  
 R11) 0,0,0,0,0,5,-->0,1,--0,1,--0,1,--0,1,--0,0,0,0,0,5,--  
 R12)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
 --0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
 R13) 0,0,0,0,0,0,6,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,0,0,0,0,6,--  
 R14)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
 0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--  
 R15) 0,0,0,0,0,0,0,7,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,0,0,0,0,0,7,--  
 R16)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
 0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--0,0,0,0,0,0,0,9  
 ,--  
 R17)  
 0,0,0,0,0,0,0,0,8,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,0,0,0,0,0,8,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,2, :  
 LEN=4) 0,0,0,0, : 0,0,0,3, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,4, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

956-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][102][110][120]]$

--  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,1,--0,0,2,--  
 R3) 0,1,-->0,1,--  
 R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--  
 R5) 0,0,2,-->0,1,--0,1,--  
 R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--  
 R7) 0,0,0,3,-->0,1,--0,0,2,--0,1,--  
 R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
 R9) 0,0,0,0,4,-->0,1,--0,0,2,--0,0,0,3,--0,1,--  
 R10)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
 0,0,0,0,0,6,--  
 R11) 0,0,0,0,0,5,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,1,--  
 R12)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
 --0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
 R13) 0,0,0,0,0,0,6,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,1,--  
 R14)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
 0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--  
 R15)  
 0,0,0,0,0,0,0,7,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,  
 --0,1,--  
 R16)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
 0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9

```

,--
R17)
0,0,0,0,0,0,0,0,8,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,
6,--0,0,0,0,0,0,7,--0,1,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,0,0,: 0,0,2,:
LEN=4) 0,0,0,0,: 0,0,0,3,:
LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:
LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:
LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:
LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:
LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:
LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:
Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

```

-----Class

957-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][102][110][201]]$

-----

--

Rules of T[L]:

```

R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
R3) 0,1,-->0,1,--
R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--
R5) 0,0,2,-->0,1,--0,1,--
R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
R7) 0,0,0,3,-->0,1,--0,0,2,--0,1,--
R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
R9) 0,0,0,0,4,-->0,1,--0,0,2,--0,0,0,3,--0,1,--
R10)
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,
0,0,0,0,0,6,--
R11) 0,0,0,0,0,5,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,1,--
R12)
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,
--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--
R13) 0,0,0,0,0,0,6,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,1,--
R14)
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,
0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--
R15)
0,0,0,0,0,0,0,7,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,
--0,1,--
R16)
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,
0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9
,--

```

R17)  
0,0,0,0,0,0,0,0,8,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,1,--

List of different nodes in T[L]

- LEN=1) 0,:
  - LEN=2) 0,0,: 0,1,:
  - LEN=3) 0,0,0,: 0,0,2,:
  - LEN=4) 0,0,0,0,: 0,0,0,3,:
  - LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:
  - LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:
  - LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:
  - LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:
  - LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:
  - LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:
- Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

958-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][102][110][210]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--
- R5) 0,0,2,-->0,1,--0,1,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R7) 0,0,0,3,-->0,1,--0,1,--0,1,--
- R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
- R9) 0,0,0,0,4,-->0,1,--0,1,--0,1,--0,1,--
- R10)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--
- R11) 0,0,0,0,0,5,-->0,1,--0,1,--0,1,--0,1,--0,1,--
- R12)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--
- R13) 0,0,0,0,0,0,6,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R14)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--
- R15) 0,0,0,0,0,0,0,7,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R16)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--
- R17) 0,0,0,0,0,0,0,0,8,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

List of different nodes in T[L]

- LEN=1) 0,:



LEN=2) 0,0,: 0,1,:  
 LEN=3) 0,0,0,: 0,0,2,:  
 LEN=4) 0,0,0,0,: 0,0,0,3,:  
 LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:  
 LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:  
 LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:  
 LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

959-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][102][120][201]]$

-----

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--
- R5) 0,0,2,-->0,1,--0,0,2,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R7) 0,0,0,3,-->0,1,--0,0,2,--0,0,0,3,--
- R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
- R9) 0,0,0,0,4,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R10) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--
- R11) 0,0,0,0,0,0,5,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
- R12) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--
- R13) 0,0,0,0,0,0,6,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--
- R14) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--
- R15) 0,0,0,0,0,0,0,7,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--
- R16) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--
- R17) 0,0,0,0,0,0,0,0,8,-->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

List of different nodes in  $T[L]$

LEN=1) 0,:

LEN=2) 0,0: 0,1,  
 LEN=3) 0,0,0: 0,0,2,  
 LEN=4) 0,0,0,0: 0,0,0,3,  
 LEN=5) 0,0,0,0,0: 0,0,0,0,4,  
 LEN=6) 0,0,0,0,0,0: 0,0,0,0,0,5,  
 LEN=7) 0,0,0,0,0,0,0: 0,0,0,0,0,0,6,  
 LEN=8) 0,0,0,0,0,0,0,0: 0,0,0,0,0,0,0,7,  
 LEN=9) 0,0,0,0,0,0,0,0,0: 0,0,0,0,0,0,0,0,8,  
 LEN=10) 0,0,0,0,0,0,0,0,0,0: 0,0,0,0,0,0,0,0,0,9,  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

960-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][102][120][210]]$

-----

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--
- R5) 0,0,2,-->0,1,--0,0,2,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R7) 0,0,0,3,-->0,1,--0,1,--0,0,0,3,--
- R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
- R9) 0,0,0,0,4,-->0,1,--0,1,--0,1,--0,0,0,0,4,--
- R10) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--
- R11) 0,0,0,0,0,5,-->0,1,--0,1,--0,1,--0,1,--0,0,0,0,0,5,--
- R12) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--
- R13) 0,0,0,0,0,0,6,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,0,0,0,0,0,6,--
- R14) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--
- R15) 0,0,0,0,0,0,0,7,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,0,0,0,0,0,7,--
- R16) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,9,--
- R17) 0,0,0,0,0,0,0,0,8,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,0,0,0,0,0,0,8,--

List of different nodes in  $T[L]$

- LEN=1) 0,:
- LEN=2) 0,0: 0,1,:
- LEN=3) 0,0,0: 0,0,2,:
- LEN=4) 0,0,0,0: 0,0,0,3,:
- LEN=5) 0,0,0,0,0: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,

-----Class

961-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][102][201][210]]$

-----

--

Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,0, --0,1, --0,0,2, --
- R3) 0,1, -->0,1, --
- R4) 0,0,0, -->0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --
- R5) 0,0,2, -->0,1, --0,0,2, --
- R6) 0,0,0,0, -->0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --
- R7) 0,0,0,3, -->0,1, --0,1, --0,0,0,3, --
- R8) 0,0,0,0,0, -->0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --
- R9) 0,0,0,0,4, -->0,1, --0,1, --0,1, --0,0,0,0,4, --
- R10) 0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --
- R11) 0,0,0,0,0,5, -->0,1, --0,1, --0,1, --0,1, --0,0,0,0,0,5, --
- R12) 0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,0,6, --0,0,0,0,0,0,7, --
- R13) 0,0,0,0,0,0,6, -->0,1, --0,1, --0,1, --0,1, --0,1, --0,0,0,0,0,0,6, --
- R14) 0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,8, --
- R15) 0,0,0,0,0,0,0,7, -->0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,0,0,0,0,0,0,7, --
- R16) 0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,5, --0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,0,8, --0,0,0,0,0,0,0,0,9, --
- R17) 0,0,0,0,0,0,0,0,8, -->0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,0,0,0,0,0,0,0,8, --

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, : 0,1, :
- LEN=3) 0,0,0, : 0,0,2, :
- LEN=4) 0,0,0,0, : 0,0,0,3, :
- LEN=5) 0,0,0,0,0, : 0,0,0,0,4, :
- LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, :
- LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :
- LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :
- LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :

LEN=10) 0,0,0,0,0,0,0,0,0,0,0,0,0,0,9, :  
Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

962-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][110][120][201]]$

-----  
--  
Rules of  $T[L]$ :  
R1) 0, -->0,0,--0,1,--  
R2) 0,0, -->0,0,0,--0,1,--0,0,2,--  
R3) 0,1, -->0,1,--  
R4) 0,0,0, -->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--  
R5) 0,0,2, -->0,1,--0,1,--  
R6) 0,0,0,0, -->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--  
R7) 0,0,0,3, -->0,1,--0,0,2,--0,1,--  
R8) 0,0,0,0,0, -->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
R9) 0,0,0,0,4, -->0,1,--0,0,2,--0,0,0,3,--0,1,--  
R10)  
0,0,0,0,0,0, -->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--  
R11) 0,0,0,0,0,5, -->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,1,--  
R12)  
0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R13) 0,0,0,0,0,0,6, -->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,1,--  
R14)  
0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--  
R15)  
0,0,0,0,0,0,0,7, -->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,1,--  
R16)  
0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--  
R17)  
0,0,0,0,0,0,0,0,8, -->0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,1,--  
List of different nodes in  $T[L]$

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,2, :  
LEN=4) 0,0,0,0, : 0,0,0,3, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,4, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :

Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,

-----Class

963-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][110][120][210]]$

-----

--

Rules of  $T[L]$ :

R1)  $0, \rightarrow 0,0, \rightarrow 0,1, \rightarrow$

R2)  $0,0, \rightarrow 0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow$

R3)  $0,1, \rightarrow 0,1, \rightarrow$

R4)  $0,0,0, \rightarrow 0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow$

R5)  $0,0,2, \rightarrow 0,1, \rightarrow 0,1, \rightarrow$

R6)  $0,0,0,0, \rightarrow 0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow$

R7)  $0,0,0,3, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow$

R8)  $0,0,0,0,0, \rightarrow 0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,0,5, \rightarrow$

R9)  $0,0,0,0,4, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow$

R10)

$0,0,0,0,0,0, \rightarrow 0,0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,0,5, \rightarrow 0,0,0,0,0,6, \rightarrow$

R11)  $0,0,0,0,0,5, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow$

R12)

$0,0,0,0,0,0,0, \rightarrow 0,0,0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,0,5, \rightarrow 0,0,0,0,0,0,6, \rightarrow 0,0,0,0,0,0,0,7, \rightarrow$

R13)  $0,0,0,0,0,0,6, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow$

R14)

$0,0,0,0,0,0,0,0, \rightarrow 0,0,0,0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,0,5, \rightarrow 0,0,0,0,0,0,6, \rightarrow 0,0,0,0,0,0,0,7, \rightarrow 0,0,0,0,0,0,0,0,8, \rightarrow$

R15)  $0,0,0,0,0,0,0,7, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow$

R16)

$0,0,0,0,0,0,0,0,0, \rightarrow 0,0,0,0,0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,0,5, \rightarrow 0,0,0,0,0,0,6, \rightarrow 0,0,0,0,0,0,0,7, \rightarrow 0,0,0,0,0,0,0,0,8, \rightarrow 0,0,0,0,0,0,0,0,9, \rightarrow$

--

R17)  $0,0,0,0,0,0,0,0,8, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow$

List of different nodes in  $T[L]$

LEN=1)  $0, :$

LEN=2)  $0,0, : 0,1, :$

LEN=3)  $0,0,0, : 0,0,2, :$

LEN=4)  $0,0,0,0, : 0,0,0,3, :$

LEN=5)  $0,0,0,0,0, : 0,0,0,0,4, :$

LEN=6)  $0,0,0,0,0,0, : 0,0,0,0,0,5, :$

LEN=7)  $0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :$

LEN=8)  $0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :$

LEN=9)  $0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :$

LEN=10)  $0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :$

Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,

-----Class

964-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][110][201][210]]$

```

-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
R3) 0,1,-->0,1,--
R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--
R5) 0,0,2,-->0,1,--0,1,--
R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
R7) 0,0,0,3,-->0,1,--0,1,--0,1,--
R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
R9) 0,0,0,0,4,-->0,1,--0,1,--0,1,--0,1,--
R10)
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,
0,0,0,0,0,6,--
R11) 0,0,0,0,0,5,-->0,1,--0,1,--0,1,--0,1,--0,1,--
R12)
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,
--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--
R13) 0,0,0,0,0,0,6,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
R14)
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,
0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--
R15) 0,0,0,0,0,0,0,0,7,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
R16)
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,
0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9
,--
R17) 0,0,0,0,0,0,0,0,0,8,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

```

List of different nodes in T[L]

```

LEN=1) 0, :
LEN=2) 0,0, : 0,1, :
LEN=3) 0,0,0, : 0,0,2, :
LEN=4) 0,0,0,0, : 0,0,0,3, :
LEN=5) 0,0,0,0,0, : 0,0,0,0,4, :
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, :
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :
Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,

```

-----Class

965-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][012][120][201][210]]

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

```

R3) 0,1,-->0,1,--  
 R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--  
 R5) 0,0,2,-->0,1,--0,0,2,--  
 R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--  
 R7) 0,0,0,3,-->0,1,--0,1,--0,0,0,3,--  
 R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
 R9) 0,0,0,0,4,-->0,1,--0,1,--0,1,--0,0,0,0,4,--  
 R10)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
 0,0,0,0,0,6,--  
 R11) 0,0,0,0,0,5,-->0,1,--0,1,--0,1,--0,1,--0,0,0,0,0,5,--  
 R12)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
 --0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
 R13) 0,0,0,0,0,0,6,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,0,0,0,0,6,--  
 R14)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
 0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--  
 R15) 0,0,0,0,0,0,0,7,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,0,0,0,0,0,7,--  
 R16)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
 0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--0,0,0,0,0,0,9  
 ,--  
 R17)  
 0,0,0,0,0,0,0,0,8,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,0,0,0,0,0,0,8,--

List of different nodes in T[L]

LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,2, :  
 LEN=4) 0,0,0,0, : 0,0,0,3, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,4, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,

-----Class

966-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][021][100][101][102]]$

--  
 Rules of T[L]:

R1) 0,-->0,0,--0,--  
 R2) 0,0,-->0,0,0,--0,0,--0,--  
 R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,--0,--  
 R4) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--  
 R5) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,--0,--  
 R6)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,--0,0,0,--0,--0,  
--

R7)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,  
0,--0,0,0,--0,0,--0,--

R8)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,  
0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--

R9)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,  
0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

LEN=3) 0,0,0,:

LEN=4) 0,0,0,0,:

LEN=5) 0,0,0,0,0,:

LEN=6) 0,0,0,0,0,0,:

LEN=7) 0,0,0,0,0,0,0,:

LEN=8) 0,0,0,0,0,0,0,0,:

LEN=9) 0,0,0,0,0,0,0,0,0,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,:

Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,1,

-----Class

967-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][021][100][101][110]]

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,0,--0,0,--0,--

R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,--0,--

R4) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--

R5) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--

R6)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--

--

R7)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,  
0,--0,0,0,--0,0,--0,--

R8)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,  
0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--

R9)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,  
0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:





--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,0,--0,0,--0,--

R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,--0,--

R4) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--

R5) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,--

R6)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--

--

R7)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--

0,--0,0,0,--0,0,--0,--

R8)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,--0,0,0,--0,0,--0,--

0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--

R9)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,--0,0,--0,--

0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

LEN=3) 0,0,0,:

LEN=4) 0,0,0,0,:

LEN=5) 0,0,0,0,0,:

LEN=6) 0,0,0,0,0,0,:

LEN=7) 0,0,0,0,0,0,0,:

LEN=8) 0,0,0,0,0,0,0,0,:

LEN=9) 0,0,0,0,0,0,0,0,0,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,:

Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

970-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][021][100][101][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,0,--0,0,--0,--

R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,--0,--

R4) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--

R5) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--

R6)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--

--

R7)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--

0,--0,0,0,--0,0,--0,--

R8)



LEN=9) 0,0,0,0,0,0,0,0,0,:  
LEN=10) 0,0,0,0,0,0,0,0,0,0,:  
Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,

-----Class  
972-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[010][021][100][102][120]]  
-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,0,--0,0,--0,--  
R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,--0,--  
R4) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--  
R5) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--  
R6)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--0,--  
--  
R7)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,  
0,--0,0,0,--0,0,--0,--  
R8)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,  
0,--0,0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,--0,--  
R9)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,  
0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--  
List of different nodes in T[L]  
LEN=1) 0,:  
LEN=2) 0,0,:  
LEN=3) 0,0,0,:  
LEN=4) 0,0,0,0,:  
LEN=5) 0,0,0,0,0,:  
LEN=6) 0,0,0,0,0,0,:  
LEN=7) 0,0,0,0,0,0,0,:  
LEN=8) 0,0,0,0,0,0,0,0,:  
LEN=9) 0,0,0,0,0,0,0,0,0,:  
LEN=10) 0,0,0,0,0,0,0,0,0,0,:  
Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,

-----Class  
973-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[010][021][100][102][201]]  
-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,0,--0,0,--0,--  
R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,--0,--  
R4) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--

R5) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--  
R6)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,  
--  
R7)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,--0,0,0,  
0,--0,0,0,--0,0,--0,--  
R8)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,  
0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--  
R9)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,  
0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
LEN=3) 0,0,0, :  
LEN=4) 0,0,0,0, :  
LEN=5) 0,0,0,0,0, :  
LEN=6) 0,0,0,0,0,0, :  
LEN=7) 0,0,0,0,0,0,0, :  
LEN=8) 0,0,0,0,0,0,0,0, :  
LEN=9) 0,0,0,0,0,0,0,0,0, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, :  
Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,

-----Class

974-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][021][100][102][210]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,0,--0,0,--0,--  
R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,--0,--  
R4) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--  
R5) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--  
R6)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,  
--  
R7)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,  
0,--0,0,0,--0,0,--0,--  
R8)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,  
0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--  
R9)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,  
0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,--0,0,0,--0,0,--0,--  
List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, :  
LEN=3) 0,0,0, :  
LEN=4) 0,0,0,0, :  
LEN=5) 0,0,0,0,0, :  
LEN=6) 0,0,0,0,0,0, :  
LEN=7) 0,0,0,0,0,0,0, :  
LEN=8) 0,0,0,0,0,0,0,0, :  
LEN=9) 0,0,0,0,0,0,0,0,0, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, :  
Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,

-----Class

975-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][021][100][110][120]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,0,--0,0,--0,--  
R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,--0,--  
R4) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,--0,--  
R5) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,--0,--  
R6)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,--0,--  
--  
R7)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,--0,0,0,  
0,--0,0,0,--0,0,--0,--  
R8)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,  
0,--0,0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,--0,--  
R9)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,  
0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,--0,0,0,--0,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, :  
LEN=3) 0,0,0, :  
LEN=4) 0,0,0,0, :  
LEN=5) 0,0,0,0,0, :  
LEN=6) 0,0,0,0,0,0, :  
LEN=7) 0,0,0,0,0,0,0, :  
LEN=8) 0,0,0,0,0,0,0,0, :  
LEN=9) 0,0,0,0,0,0,0,0,0, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, :  
Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,

-----Class

976-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][021][100][110][201]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,0,--0,0,--0,--  
R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,--0,--  
R4) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,--0,--  
R5) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,--0,--  
R6)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,--0,--  
--  
R7)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,--0,0,0,  
0,--0,0,0,--0,0,--0,--  
R8)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,  
0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--  
R9)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,  
0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,--0,0,--0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
LEN=3) 0,0,0, :  
LEN=4) 0,0,0,0, :  
LEN=5) 0,0,0,0,0, :  
LEN=6) 0,0,0,0,0,0, :  
LEN=7) 0,0,0,0,0,0,0, :  
LEN=8) 0,0,0,0,0,0,0,0, :  
LEN=9) 0,0,0,0,0,0,0,0,0, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, :  
Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

977-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][021][100][110][210]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,0,--0,0,--0,--  
R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,--0,--  
R4) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,--0,--  
R5) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,--  
R6)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,--0,--  
--  
R7)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,

0,--0,0,0,--0,0,--0,--

R8)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,  
0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--

R9)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,  
0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,--0,0,--0,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, :

LEN=3) 0,0,0, :

LEN=4) 0,0,0,0, :

LEN=5) 0,0,0,0,0, :

LEN=6) 0,0,0,0,0,0, :

LEN=7) 0,0,0,0,0,0,0, :

LEN=8) 0,0,0,0,0,0,0,0, :

LEN=9) 0,0,0,0,0,0,0,0,0, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

978-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][021][100][120][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,0,--0,0,--0,--

R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,--0,--

R4) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--

R5) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--

R6)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,  
--

R7)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,--0,0,0,  
0,--0,0,0,--0,0,--0,--

R8)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,  
0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--

R9)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,  
0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,--0,0,--0,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, :

LEN=3) 0,0,0, :

LEN=4) 0,0,0,0, :

LEN=5) 0,0,0,0,0, :

LEN=6) 0,0,0,0,0,0, :





R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,--0,--  
R4) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--  
R5) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--  
R6)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,  
--  
R7)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,  
0,--0,0,0,--0,0,--0,--  
R8)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,  
0,--0,0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,--0,--  
R9)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,  
0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, :  
LEN=3) 0,0,0, :  
LEN=4) 0,0,0,0, :  
LEN=5) 0,0,0,0,0, :  
LEN=6) 0,0,0,0,0,0, :  
LEN=7) 0,0,0,0,0,0,0, :  
LEN=8) 0,0,0,0,0,0,0,0, :  
LEN=9) 0,0,0,0,0,0,0,0,0, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

981-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][021][101][102][110]]

-----  
Rules of T[L]:

R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,0,--0,0,--0,--  
R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,--0,--  
R4) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--  
R5) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--  
R6)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,  
--  
R7)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,  
0,--0,0,0,--0,0,--0,--  
R8)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,  
0,--0,0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,--0,--  
R9)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,

0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,--0,0,--0,--

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, :
- LEN=3) 0,0,0, :
- LEN=4) 0,0,0,0, :
- LEN=5) 0,0,0,0,0, :
- LEN=6) 0,0,0,0,0,0, :
- LEN=7) 0,0,0,0,0,0,0, :
- LEN=8) 0,0,0,0,0,0,0,0, :
- LEN=9) 0,0,0,0,0,0,0,0,0, :
- LEN=10) 0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,

-----Class

982-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][021][101][102][120]]$

-----  
--

Rules of T[L]:

- R1) 0,-->0,0,--0,--
- R2) 0,0,-->0,0,0,--0,0,--0,--
- R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,--0,--
- R4) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--
- R5) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--
- R6) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--
- R7) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--
- R8) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--
- R9) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,--0,0,--0,--

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, :
- LEN=3) 0,0,0, :
- LEN=4) 0,0,0,0, :
- LEN=5) 0,0,0,0,0, :
- LEN=6) 0,0,0,0,0,0, :
- LEN=7) 0,0,0,0,0,0,0, :
- LEN=8) 0,0,0,0,0,0,0,0, :
- LEN=9) 0,0,0,0,0,0,0,0,0, :
- LEN=10) 0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,

-----Class

983-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][021][101][102][201]]$

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,0,--0,0,--0,--

R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,--0,--

R4) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--

R5) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--

R6)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--

R7)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--

R8)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,--0,0,0,--0,0,--0,--

R9)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,--0,0,0,--0,0,--0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

LEN=3) 0,0,0,:

LEN=4) 0,0,0,0,:

LEN=5) 0,0,0,0,0,:

LEN=6) 0,0,0,0,0,0,:

LEN=7) 0,0,0,0,0,0,0,:

LEN=8) 0,0,0,0,0,0,0,0,:

LEN=9) 0,0,0,0,0,0,0,0,0,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,:

Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,

-----Class

984-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][021][101][102][210]]$

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,0,--0,0,--0,--

R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,--0,--

R4) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--

R5) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--

R6)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--

--

R7)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,  
0,--0,0,0,--0,0,--0,--

R8)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,  
0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--

R9)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,  
0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,--0,0,0,--0,--

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, :
- LEN=3) 0,0,0, :
- LEN=4) 0,0,0,0, :
- LEN=5) 0,0,0,0,0, :
- LEN=6) 0,0,0,0,0,0, :
- LEN=7) 0,0,0,0,0,0,0, :
- LEN=8) 0,0,0,0,0,0,0,0, :
- LEN=9) 0,0,0,0,0,0,0,0,0, :
- LEN=10) 0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,

-----Class

985-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][021][101][110][120]]$

-----

--  
Rules of T[L]:

- R1) 0,-->0,0,--0,--
- R2) 0,0,-->0,0,0,--0,0,--0,--
- R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,--0,--
- R4) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--
- R5) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--
- R6)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,--0,0,--0,  
--

R7)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,  
0,--0,0,0,0,--0,0,0,--0,--

R8)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,  
0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,--

R9)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,  
0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,--0,0,0,--0,--

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, :
- LEN=3) 0,0,0, :
- LEN=4) 0,0,0,0, :

LEN=5) 0,0,0,0,0,:  
 LEN=6) 0,0,0,0,0,0,:  
 LEN=7) 0,0,0,0,0,0,0,:  
 LEN=8) 0,0,0,0,0,0,0,0,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,:  
 Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,

-----Class

986-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][021][101][110][201]]$

-----  
 --  
 Rules of  $T[L]$ :  
 R1) 0,-->0,0,--0,--  
 R2) 0,0,-->0,0,0,--0,0,--0,--  
 R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,--0,--  
 R4) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--  
 R5) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--  
 R6)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--  
 --  
 R7)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,  
 0,--0,0,0,--0,0,--0,--  
 R8)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,  
 0,--0,0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,--0,--  
 R9)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,  
 0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,--  
 List of different nodes in  $T[L]$   
 LEN=1) 0,:  
 LEN=2) 0,0,:  
 LEN=3) 0,0,0,:  
 LEN=4) 0,0,0,0,:  
 LEN=5) 0,0,0,0,0,:  
 LEN=6) 0,0,0,0,0,0,:  
 LEN=7) 0,0,0,0,0,0,0,:  
 LEN=8) 0,0,0,0,0,0,0,0,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,:  
 Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,

-----Class

987-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][021][101][110][210]]$

-----  
 --  
 Rules of  $T[L]$ :

R1) 0, -->0,0, --0, --  
 R2) 0,0, -->0,0,0, --0,0, --0, --  
 R3) 0,0,0, -->0,0,0,0, --0,0,0, --0,0, --0, --  
 R4) 0,0,0,0, -->0,0,0,0,0, --0,0,0,0, --0,0,0, --0,0, --0, --  
 R5) 0,0,0,0,0, -->0,0,0,0,0,0, --0,0,0,0,0, --0,0,0,0, --0,0,0, --0,0, --0, --  
 R6)  
 0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,0,0,0,0,0, --0,0,0,0,0, --0,0,0,0, --0,0,0, --0,0, --0, --  
 --  
 R7)  
 0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0, --0,0,0,0,0,0, --0,0,0,0,0, --0,0,0,0,  
 0, --0,0,0, --0,0, --0, --  
 R8)  
 0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0, --0,0,0,0,0,0,  
 0, --0,0,0,0,0, --0,0,0,0, --0,0,0, --0,0, --0, --  
 R9)  
 0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0, --0,  
 0,0,0,0,0,0,0, --0,0,0,0,0,0, --0,0,0,0,0, --0,0,0,0, --0,0,0, --0,0, --0, --

List of different nodes in T[L]

LEN=1) 0, :  
 LEN=2) 0,0, :  
 LEN=3) 0,0,0, :  
 LEN=4) 0,0,0,0, :  
 LEN=5) 0,0,0,0,0, :  
 LEN=6) 0,0,0,0,0,0, :  
 LEN=7) 0,0,0,0,0,0,0, :  
 LEN=8) 0,0,0,0,0,0,0,0, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

988-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][021][101][120][201]]$

-----

--

Rules of T[L]:

R1) 0, -->0,0, --0, --  
 R2) 0,0, -->0,0,0, --0,0, --0, --  
 R3) 0,0,0, -->0,0,0,0, --0,0,0, --0,0, --0, --  
 R4) 0,0,0,0, -->0,0,0,0,0, --0,0,0,0, --0,0,0, --0,0, --0, --  
 R5) 0,0,0,0,0, -->0,0,0,0,0,0, --0,0,0,0,0, --0,0,0,0, --0,0,0, --0,0, --0, --  
 R6)  
 0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,0,0,0,0,0, --0,0,0,0,0, --0,0,0,0, --0,0,0, --0,0, --0, --  
 --  
 R7)  
 0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0, --0,0,0,0,0,0, --0,0,0,0,0, --0,0,0,0,  
 0, --0,0,0, --0,0, --0, --  
 R8)  
 0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0, --0,0,0,0,0,0,  
 0, --0,0,0,0,0,0, --0,0,0,0,0, --0,0,0, --0,0, --0, --





Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,

-----Class

990-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][021][101][201][210]]

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,0,--0,0,--0,--

R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,--

R4) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--

R5) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--

R6)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--

--

R7)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,--

0,--0,0,0,--0,0,--0,--

R8)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--

0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--

R9)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--

0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

LEN=3) 0,0,0,:

LEN=4) 0,0,0,0,:

LEN=5) 0,0,0,0,0,:

LEN=6) 0,0,0,0,0,0,:

LEN=7) 0,0,0,0,0,0,0,:

LEN=8) 0,0,0,0,0,0,0,0,:

LEN=9) 0,0,0,0,0,0,0,0,0,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,:

Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,

-----Class

991-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][021][102][110][120]]

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,0,--0,0,--0,--

R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,--

R4) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--

R5) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--

R6)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,--0,  
--

R7)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,  
0,--0,0,0,0,--0,0,--0,--

R8)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,  
0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,--

R9)

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,  
0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,--0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

LEN=3) 0,0,0,:

LEN=4) 0,0,0,0,:

LEN=5) 0,0,0,0,0,:

LEN=6) 0,0,0,0,0,0,:

LEN=7) 0,0,0,0,0,0,0,:

LEN=8) 0,0,0,0,0,0,0,0,:

LEN=9) 0,0,0,0,0,0,0,0,0,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,:

Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

992-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][021][102][110][201]]$

-----

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,0,--0,0,--0,--

R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,--0,--

R4) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--

R5) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--

R6)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,  
--

R7)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,  
0,--0,0,0,0,--0,0,--0,--

R8)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,  
0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,--

R9)

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,  
0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

LEN=3) 0,0,0, :  
 LEN=4) 0,0,0,0, :  
 LEN=5) 0,0,0,0,0, :  
 LEN=6) 0,0,0,0,0,0, :  
 LEN=7) 0,0,0,0,0,0,0, :  
 LEN=8) 0,0,0,0,0,0,0,0, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, :  
 Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,

-----Class

993-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][021][102][110][210]]$

-----  
 --  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,--  
 R2) 0,0,-->0,0,0,--0,0,--0,--  
 R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,--0,--  
 R4) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--  
 R5) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--  
 R6)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--  
 --  
 R7)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,  
 0,--0,0,0,0,--0,0,0,--0,0,--0,--  
 R8)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,  
 0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--  
 R9)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,  
 0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--

List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, :  
 LEN=3) 0,0,0, :  
 LEN=4) 0,0,0,0, :  
 LEN=5) 0,0,0,0,0, :  
 LEN=6) 0,0,0,0,0,0, :  
 LEN=7) 0,0,0,0,0,0,0, :  
 LEN=8) 0,0,0,0,0,0,0,0, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, :  
 Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,

-----Class

994-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][021][102][120][201]]$

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,--
R2) 0,0,-->0,0,0,--0,0,--0,--
R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,--0,--
R4) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,--0,--
R5) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,--0,--
R6)
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,--0,--
--
R7)
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,
0,--0,0,0,--0,0,--0,--
R8)
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,
0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--
R9)
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,
0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,:
LEN=3) 0,0,0,:
LEN=4) 0,0,0,0,:
LEN=5) 0,0,0,0,0,:
LEN=6) 0,0,0,0,0,0,:
LEN=7) 0,0,0,0,0,0,0,:
LEN=8) 0,0,0,0,0,0,0,0,:
LEN=9) 0,0,0,0,0,0,0,0,0,:
LEN=10) 0,0,0,0,0,0,0,0,0,0,:
Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

```

-----Class

995-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][021][102][120][210]]$

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,--
R2) 0,0,-->0,0,0,--0,0,--0,--
R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,--0,--
R4) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,--0,--
R5) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,--
R6)
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,--
--
R7)
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,
0,--0,0,0,--0,0,--0,--
R8)

```



LEN=9) 0,0,0,0,0,0,0,0,0,0, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0,0, :  
Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

997-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][021][110][120][201]]

-----  
--  
Rules of T[L]:

- R1) 0,-->0,0,--0,--
- R2) 0,0,-->0,0,0,--0,0,--0,--
- R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,--0,--
- R4) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--
- R5) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--
- R6) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--
- 
- R7) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--
- R8) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--
- R9) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,--0,0,--0,--

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, :
- LEN=3) 0,0,0, :
- LEN=4) 0,0,0,0, :
- LEN=5) 0,0,0,0,0, :
- LEN=6) 0,0,0,0,0,0, :
- LEN=7) 0,0,0,0,0,0,0, :
- LEN=8) 0,0,0,0,0,0,0,0, :
- LEN=9) 0,0,0,0,0,0,0,0,0, :
- LEN=10) 0,0,0,0,0,0,0,0,0,0, :  
Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

998-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][021][110][120][210]]

-----  
--  
Rules of T[L]:

- R1) 0,-->0,0,--0,--
- R2) 0,0,-->0,0,0,--0,0,--0,--
- R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,--0,--
- R4) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--

R5) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--  
R6)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,--0,  
--  
R7)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,  
0,--0,0,0,--0,0,--0,--  
R8)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,  
0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--  
R9)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,  
0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
LEN=3) 0,0,0, :  
LEN=4) 0,0,0,0, :  
LEN=5) 0,0,0,0,0, :  
LEN=6) 0,0,0,0,0,0, :  
LEN=7) 0,0,0,0,0,0,0, :  
LEN=8) 0,0,0,0,0,0,0,0, :  
LEN=9) 0,0,0,0,0,0,0,0,0, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, :  
Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,

-----Class  
999-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][021][110][201][210]]  
-----

Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,0,--0,0,--0,--  
R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,--0,--  
R4) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--  
R5) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--  
R6)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,  
--  
R7)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,  
0,--0,0,0,--0,0,--0,--  
R8)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,  
0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--  
R9)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,  
0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--  
List of different nodes in T[L]

```

LEN=1) 0, :
LEN=2) 0,0, :
LEN=3) 0,0,0, :
LEN=4) 0,0,0,0, :
LEN=5) 0,0,0,0,0, :
LEN=6) 0,0,0,0,0,0, :
LEN=7) 0,0,0,0,0,0,0, :
LEN=8) 0,0,0,0,0,0,0,0, :
LEN=9) 0,0,0,0,0,0,0,0,0, :
LEN=10) 0,0,0,0,0,0,0,0,0,0, :
  Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,

```

-----Class

```

1000-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[010][021][120][201][210]]
-----

```

Rules of T[L]:

```

R1) 0,-->0,0,--0,--
R2) 0,0,-->0,0,0,--0,0,--0,--
R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,--0,--
R4) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,--0,--
R5) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,--0,--
R6)
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,--0,
--
R7)
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,
0,--0,0,0,--0,0,--0,--
R8)
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,
0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--
R9)
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,
0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,--

```

List of different nodes in T[L]

```

LEN=1) 0, :
LEN=2) 0,0, :
LEN=3) 0,0,0, :
LEN=4) 0,0,0,0, :
LEN=5) 0,0,0,0,0, :
LEN=6) 0,0,0,0,0,0, :
LEN=7) 0,0,0,0,0,0,0, :
LEN=8) 0,0,0,0,0,0,0,0, :
LEN=9) 0,0,0,0,0,0,0,0,0, :
LEN=10) 0,0,0,0,0,0,0,0,0,0, :
  Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,

```

-----Class

```

1001-----

```



Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][100][101][102][110]]$

-----  
--

Rules of  $T[L]$ :

- R1)  $0, -->0,0,--0,--$
- R2)  $0,0,-->0,0,0,--0,0,--0,0,2,--$
- R3)  $0,0,0,-->0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--$
- R4)  $0,0,2,-->0,0,2,1,--0,0,--0,0,2,--$
- R5)  $0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--$
- R6)  $0,0,0,2,-->0,0,2,1,--0,0,0,--0,0,0,2,--0,0,0,2,4,--$
- R7)  $0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,--0,0,0,3,--$
- R8)  $0,0,2,1,-->$
- R9)  
 $0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--$
- R10)  $0,0,0,0,2,-->0,0,2,1,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,2,4,--0,0,0,0,2,5,--$
- R11)  $0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,--0,0,0,0,3,--0,0,0,0,3,5,--$
- R12)  $0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,--0,0,0,0,4,--$
- R13)  $0,0,0,2,4,-->0,0,2,1,--0,0,0,3,1,--0,0,--0,0,0,2,4,--$
- R14)  $0,0,0,3,1,-->0,0,2,1,--$
- R15)  
 $0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--$
- R16)  
 $0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,2,4,--0,0,0,0,0,0,2,5,--0,0,0,0,0,0,2,6,--$
- R17)  
 $0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,--0,0,0,0,0,3,--0,0,0,0,0,3,5,--0,0,0,0,0,3,6,--$
- R18)  
 $0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,--0,0,0,0,0,4,--0,0,0,0,0,4,6,--$
- R19)  
 $0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--0,0,--0,0,0,0,0,5,--$
- R20)  $0,0,0,0,2,4,-->0,0,2,1,--0,0,0,3,1,--0,0,0,--0,0,0,0,2,4,--0,0,0,0,2,4,6,--$
- R21)  $0,0,0,0,2,5,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,--0,0,0,0,2,5,--$
- R22)  $0,0,0,0,3,5,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,--0,0,0,0,3,5,--$
- R23)  $0,0,0,0,4,1,-->0,0,0,3,1,--0,0,0,3,1,--$
- R24)  $0,0,0,0,4,2,-->0,0,2,1,--0,0,0,3,1,--$
- R25)  
 $0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--$
- R26)  
 $0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,2,4,--0,0,0,0,0,0,2,5,--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,2,7,--$
- R27)  
 $0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,--0,0,0,0,0,0,3,--0,0,0,0,0,0,3,5,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,7,--$
- R28)

0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,--0,0,0,0,0,0,4,  
--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,7,--

R29)

0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--0,  
0,0,--0,0,0,0,0,0,5,--0,0,0,0,0,0,5,7,--

R30)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,  
6,4,--0,0,0,0,0,0,6,1,--0,0,--0,0,0,0,0,0,6,--

R31)

0,0,0,0,0,2,4,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,--0,0,0,0,0,2,4,--0,0,0,0,0,2,4,6,--  
0,0,0,0,0,2,4,7,--

R32)

0,0,0,0,0,2,5,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,--0,0,0,0,0,2,5,--0,0,  
0,0,0,2,5,7,--

R33)

0,0,0,0,0,2,6,-->0,0,2,1,--0,0,0,0,0,5,2,--0,0,0,0,0,2,6,4,--0,0,0,0,0,5,2,--0,0,--  
0,0,0,0,0,2,6,--

R34)

0,0,0,0,0,3,5,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,--0,0,0,0,0,3,5,--0,0,  
0,0,0,3,5,7,--

R35)

0,0,0,0,0,3,6,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,5,3,--0,0,0,0,0,5,3,--0,0,--0,0,  
0,0,0,3,6,--

R36)

0,0,0,0,0,4,6,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,5,1,--0,0,--0,  
0,0,0,0,4,6,--

R37) 0,0,0,0,0,5,1,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--

R38) 0,0,0,0,0,5,2,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--

R39) 0,0,0,0,0,5,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--

R40) 0,0,0,0,2,4,6,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,4,2,--0,0,--0,0,0,0,2,4,6,--

R41)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,  
,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R42)

0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,2,4,--  
0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,2,8,--

R43)

0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,3,--0,0,0,0,  
0,0,0,3,5,--0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,3,8,--

R44)

0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,--0,0,0,0,0,  
0,0,4,--0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,4,8,--

R45)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--  
0,0,0,0,0,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,5,8,--

R46)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,  
0,6,4,--0,0,0,0,0,0,6,1,--0,0,0,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,6,8,--

R47)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,7,2,--0,0,0,0,0,0,0,7,3,--0,0,0,0,0,0,0,7,4,--0,0,0,0,0,0,0,7,5,--0,0,0,0,0,0,0,7,1,--0,0,--0,0,0,0,0,0,0,7,--  
R48)

0,0,0,0,0,0,2,4,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,0,--0,0,0,0,0,0,2,4,--0,0,0,0,0,0,2,4,6,--0,0,0,0,0,0,2,4,7,--0,0,0,0,0,0,2,4,8,--  
R49)

0,0,0,0,0,0,2,5,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,--0,0,0,0,0,0,2,5,--0,0,0,0,0,0,2,5,7,--0,0,0,0,0,0,2,5,8,--  
R50)

0,0,0,0,0,0,2,6,-->0,0,2,1,--0,0,0,0,0,5,2,--0,0,0,0,0,2,6,4,--0,0,0,0,0,5,2,--0,0,0,--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,2,6,8,--  
R51)

0,0,0,0,0,0,2,7,-->0,0,2,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,2,7,4,--0,0,0,0,0,0,2,7,5,--0,0,0,0,0,0,6,2,--0,0,--0,0,0,0,0,0,2,7,--  
R52)

0,0,0,0,0,0,3,5,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,--0,0,0,0,0,0,3,5,--0,0,0,0,0,0,3,5,7,--0,0,0,0,0,0,3,5,8,--  
R53)

0,0,0,0,0,0,3,6,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,5,3,--0,0,0,0,0,5,3,--0,0,0,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,6,8,--  
R54)

0,0,0,0,0,0,3,7,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,3,7,5,--0,0,0,0,0,0,6,3,--0,0,--0,0,0,0,0,0,3,7,--  
R55)

0,0,0,0,0,0,4,6,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,5,1,--0,0,0,--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,6,8,--  
R56)

0,0,0,0,0,0,4,7,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,4,--0,0,--0,0,0,0,0,0,4,7,--  
R57)

0,0,0,0,0,0,5,7,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--0,0,0,0,0,0,6,1,--0,0,--0,0,0,0,0,0,5,7,--  
R58)

0,0,0,0,0,0,6,1,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--  
R59)

0,0,0,0,0,0,6,2,-->0,0,2,1,--0,0,0,0,0,5,2,--0,0,0,0,0,2,6,4,--0,0,0,0,0,5,2,--  
R60) 0,0,0,0,0,0,6,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,5,3,--0,0,0,0,0,5,3,--  
R61) 0,0,0,0,0,0,6,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,5,1,--  
R62)

0,0,0,0,0,2,4,6,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,4,2,--0,0,0,--0,0,0,0,0,2,4,6,--0,0,0,0,0,2,4,6,8,--  
R63)

0,0,0,0,0,2,4,7,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,0,2,6,4,--0,0,0,0,0,2,6,4,--0,0,--0,0,0,0,0,2,4,7,--  
R64)

0,0,0,0,0,2,5,7,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,5,2,--0,0,--0,0,0,0,2,5,7,--  
R65) 0,0,0,0,0,2,6,4,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,4,2,--  
R66)

0,0,0,0,0,3,5,7,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,0,5,3,--0,0,--0,0,

0,0,0,3,5,7,--

R67)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,2,  
--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,  
,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R68)

0,0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,  
0,2,4,--0,0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,  
,0,0,0,2,8,--0,0,0,0,0,0,0,0,2,9,--

R69)

0,0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,3,--0,  
0,0,0,0,0,0,0,3,5,--0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,3,8,  
,--0,0,0,0,0,0,0,3,9,--

R70)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,0,--0,0,0,  
0,0,0,0,0,4,--0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,4,8,--0,0,  
,0,0,0,0,0,4,9,--

R71)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,  
--0,0,0,0,0,--0,0,0,0,0,0,5,--0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,5,8,--0,0,0,  
,0,0,0,0,0,5,9,--

R72)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,  
0,0,6,4,--0,0,0,0,0,0,6,1,--0,0,0,0,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,6,8,--0,0,  
,0,0,0,0,0,6,9,--

R73)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,7,2,--0,0,0,0,0,0,0,7,3,--0,  
0,0,0,0,0,0,7,4,--0,0,0,0,0,0,0,7,5,--0,0,0,0,0,0,0,7,1,--0,0,0,--0,0,0,0,0,0,0,7,  
,--0,0,0,0,0,0,0,7,9,--

R74)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,1,--0,0,0,0,0,0,0,8,2,--0,0,0,0,0,0,0,8,3,--0,0,0,0,  
3,--0,0,0,0,0,0,0,8,4,--0,0,0,0,0,0,0,8,5,--0,0,0,0,0,0,0,8,6,--0,0,0,0,0,0,0,  
,0,8,1,--0,0,--0,0,0,0,0,0,0,8,--

R75)

0,0,0,0,0,0,0,2,4,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,0,0,--0,0,0,0,0,0,0,2,4,--0,0,0,  
0,0,0,0,2,4,6,--0,0,0,0,0,0,0,2,4,7,--0,0,0,0,0,0,0,2,4,8,--0,0,0,0,0,0,0,2,4,9,--

R76)

0,0,0,0,0,0,0,2,5,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,--0,0,0,0,0,0,  
0,2,5,--0,0,0,0,0,0,0,2,5,7,--0,0,0,0,0,0,0,2,5,8,--0,0,0,0,0,0,0,2,5,9,--

R77)

0,0,0,0,0,0,0,2,6,-->0,0,2,1,--0,0,0,0,5,2,--0,0,0,0,0,2,6,4,--0,0,0,0,0,5,2,--0,  
0,0,0,--0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,2,6,8,--0,0,0,0,0,0,0,2,6,9,--

R78)

0,0,0,0,0,0,0,2,7,-->0,0,2,1,--0,0,0,0,0,6,2,--0,0,0,0,0,0,2,7,4,--0,0,0,0,0,0,2,  
7,5,--0,0,0,0,0,0,6,2,--0,0,0,--0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,2,7,9,--

R79)

0,0,0,0,0,0,0,2,8,-->0,0,2,1,--0,0,0,0,0,0,7,2,--0,0,0,0,0,0,0,2,8,4,--0,0,0,0,0,  
0,0,2,8,5,--0,0,0,0,0,0,0,2,8,6,--0,0,0,0,0,0,0,7,2,--0,0,--0,0,0,0,0,0,2,8,--

R80)

0,0,0,0,0,0,0,3,5,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,0,--0,0,0,0,0,0,

0,3,5,--0,0,0,0,0,0,3,5,7,--0,0,0,0,0,0,3,5,8,--0,0,0,0,0,0,3,5,9,--  
R81)  
0,0,0,0,0,0,0,3,6,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,5,3,--0,0,0,0,0,5,3,--0,0,0,  
0,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,6,8,--0,0,0,0,0,0,3,6,9,--  
R82)  
0,0,0,0,0,0,0,3,7,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,6,3,--0,0,0,0,0,3,7,5,--  
0,0,0,0,0,0,6,3,--0,0,0,--0,0,0,0,0,0,3,7,--0,0,0,0,0,0,3,7,9,--  
R83)  
0,0,0,0,0,0,0,3,8,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,7,3,--0,0,0,0,0,0,3,8,  
5,--0,0,0,0,0,0,3,8,6,--0,0,0,0,0,0,7,3,--0,0,--0,0,0,0,0,0,3,8,--  
R84)  
0,0,0,0,0,0,0,4,6,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,5,1,--0,0,  
0,0,--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,6,8,--0,0,0,0,0,0,4,6,9,--  
R85)  
0,0,0,0,0,0,0,4,7,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,6,4,--0,  
0,0,0,0,0,6,4,--0,0,0,--0,0,0,0,0,0,4,7,--0,0,0,0,0,0,4,7,9,--  
R86)  
0,0,0,0,0,0,0,4,8,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,0,7,4,--  
0,0,0,0,0,0,4,8,6,--0,0,0,0,0,0,7,4,--0,0,--0,0,0,0,0,0,4,8,--  
R87)  
0,0,0,0,0,0,0,5,7,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,  
--0,0,0,0,0,0,6,1,--0,0,0,--0,0,0,0,0,0,5,7,--0,0,0,0,0,0,5,7,9,--  
R88)  
0,0,0,0,0,0,0,5,8,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,  
--0,0,0,0,0,0,7,5,--0,0,0,0,0,0,7,5,--0,0,--0,0,0,0,0,0,5,8,--  
R89)  
0,0,0,0,0,0,0,6,8,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,  
0,0,6,4,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,7,1,--0,0,--0,0,0,0,0,0,6,8,--  
R90)  
0,0,0,0,0,0,0,7,1,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,  
0,0,6,4,--0,0,0,0,0,0,6,1,--  
R91)  
0,0,0,0,0,0,0,7,2,-->0,0,2,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,2,7,4,--0,0,0,0,0,0,2,  
7,5,--0,0,0,0,0,0,6,2,--  
R92)  
0,0,0,0,0,0,0,7,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,3,7,5,--  
0,0,0,0,0,0,6,3,--  
R93)  
0,0,0,0,0,0,0,7,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,0,6,4,--0,  
0,0,0,0,0,6,4,--  
R94)  
0,0,0,0,0,0,0,7,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,  
--0,0,0,0,0,0,6,1,--  
R95)  
0,0,0,0,0,0,2,4,6,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,4,2,--0,0,0,0,--0,0,0,0,0,0,2,4,  
6,--0,0,0,0,0,0,2,4,6,8,--0,0,0,0,0,0,2,4,6,9,--  
R96)  
0,0,0,0,0,0,2,4,7,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,0,2,6,4,--0,0,0,0,0,2,6,4,--0,0,  
0,--0,0,0,0,0,0,2,4,7,--0,0,0,0,0,0,2,4,7,9,--  
R97)

0,0,0,0,0,0,2,4,8,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,0,0,2,7,4,--0,0,0,0,0,0,2,4,8,6,  
--0,0,0,0,0,0,2,7,4,--0,0,--0,0,0,0,0,0,2,4,8,--

R98)

0,0,0,0,0,0,2,5,7,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,5,2,--0,0,0,--  
0,0,0,0,0,0,2,5,7,--0,0,0,0,0,0,2,5,7,9,--

R99)

0,0,0,0,0,0,2,5,8,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,0,2,7,5,--0,0,  
0,0,0,0,2,7,5,--0,0,--0,0,0,0,0,0,2,5,8,--

R100)

0,0,0,0,0,0,2,6,8,-->0,0,2,1,--0,0,0,0,0,5,2,--0,0,0,0,0,2,6,4,--0,0,0,0,0,5,2,--0,  
0,0,0,0,0,6,2,--0,0,--0,0,0,0,0,0,2,6,8,--

R101)

0,0,0,0,0,0,2,7,4,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,0,2,6,4,--0,0,0,0,0,2,6,4,--

R102) 0,0,0,0,0,0,2,7,5,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,5,2,--

R103)

0,0,0,0,0,0,3,5,7,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,0,5,3,--0,0,0,--  
0,0,0,0,0,0,3,5,7,--0,0,0,0,0,0,3,5,7,9,--

R104)

0,0,0,0,0,0,3,5,8,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,0,0,3,7,5,--0,0,  
0,0,0,0,3,7,5,--0,0,--0,0,0,0,0,0,3,5,8,--

R105)

0,0,0,0,0,0,3,6,8,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,5,3,--0,0,0,0,0,5,3,--0,0,0,  
0,0,0,6,3,--0,0,--0,0,0,0,0,0,3,6,8,--

R106) 0,0,0,0,0,0,3,7,5,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,0,5,3,--

R107)

0,0,0,0,0,0,4,6,8,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,5,1,--0,0,  
0,0,0,0,6,4,--0,0,--0,0,0,0,0,0,4,6,8,--

R108)

0,0,0,0,0,2,4,6,8,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,4,2,--0,0,0,0,0,2,6,4,--0,0,--0,  
0,0,0,0,2,4,6,8,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, :

LEN=3) 0,0,0, : 0,0,2, :

LEN=4) 0,0,0,0, : 0,0,0,2, : 0,0,0,3, : 0,0,2,1, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,2,4, : 0,0,0,3,1, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :

0,0,0,0,2,4, : 0,0,0,0,2,5, : 0,0,0,0,3,5, : 0,0,0,0,4,1, : 0,0,0,0,4,2, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, :

0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,2,4, : 0,0,0,0,0,2,5, : 0,0,0,0,0,2,6, :

0,0,0,0,0,3,5, : 0,0,0,0,0,3,6, : 0,0,0,0,0,4,6, : 0,0,0,0,0,5,1, : 0,0,0,0,0,5,2, :

0,0,0,0,0,5,3, : 0,0,0,0,2,4,6, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, :

0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,2,4, :

0,0,0,0,0,0,2,5, : 0,0,0,0,0,0,2,6, : 0,0,0,0,0,0,2,7, : 0,0,0,0,0,0,3,5, :

0,0,0,0,0,0,3,6, : 0,0,0,0,0,0,3,7, : 0,0,0,0,0,0,4,6, : 0,0,0,0,0,0,4,7, :

0,0,0,0,0,0,5,7, : 0,0,0,0,0,0,6,1, : 0,0,0,0,0,0,6,2, : 0,0,0,0,0,0,6,3, :

0,0,0,0,0,0,6,4, : 0,0,0,0,0,2,4,6, : 0,0,0,0,0,2,4,7, : 0,0,0,0,0,2,5,7, :

0,0,0,0,0,2,6,4, : 0,0,0,0,0,3,5,7, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,3, :

0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,7,:  
 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,2,4,: 0,0,0,0,0,0,0,2,5,: 0,0,0,0,0,0,0,2,6,:  
 0,0,0,0,0,0,0,2,7,: 0,0,0,0,0,0,0,2,8,: 0,0,0,0,0,0,0,3,5,: 0,0,0,0,0,0,0,3,6,:  
 0,0,0,0,0,0,0,3,7,: 0,0,0,0,0,0,0,3,8,: 0,0,0,0,0,0,0,4,6,: 0,0,0,0,0,0,0,4,7,:  
 0,0,0,0,0,0,0,4,8,: 0,0,0,0,0,0,0,5,7,: 0,0,0,0,0,0,0,5,8,: 0,0,0,0,0,0,0,6,8,:  
 0,0,0,0,0,0,0,7,1,: 0,0,0,0,0,0,0,7,2,: 0,0,0,0,0,0,0,7,3,: 0,0,0,0,0,0,0,7,4,:  
 0,0,0,0,0,0,0,7,5,: 0,0,0,0,0,0,2,4,6,: 0,0,0,0,0,0,2,4,7,: 0,0,0,0,0,0,2,4,8,:  
 0,0,0,0,0,0,2,5,7,: 0,0,0,0,0,0,2,5,8,: 0,0,0,0,0,0,2,6,8,: 0,0,0,0,0,0,2,7,4,:  
 0,0,0,0,0,0,2,7,5,: 0,0,0,0,0,0,3,5,7,: 0,0,0,0,0,0,3,5,8,: 0,0,0,0,0,0,3,6,8,:  
 0,0,0,0,0,0,3,7,5,: 0,0,0,0,0,0,4,6,8,: 0,0,0,0,0,2,4,6,8,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,0,0,3,:  
 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,0,6,:  
 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,0,0,9,:  
 0,0,0,0,0,0,0,0,2,4,: 0,0,0,0,0,0,0,0,2,5,: 0,0,0,0,0,0,0,0,2,6,:  
 0,0,0,0,0,0,0,0,2,7,: 0,0,0,0,0,0,0,0,2,8,: 0,0,0,0,0,0,0,0,2,9,:  
 0,0,0,0,0,0,0,0,3,5,: 0,0,0,0,0,0,0,0,3,6,: 0,0,0,0,0,0,0,0,3,7,:  
 0,0,0,0,0,0,0,0,3,8,: 0,0,0,0,0,0,0,0,3,9,: 0,0,0,0,0,0,0,0,4,6,:  
 0,0,0,0,0,0,0,0,4,7,: 0,0,0,0,0,0,0,0,4,8,: 0,0,0,0,0,0,0,0,4,9,:  
 0,0,0,0,0,0,0,0,5,7,: 0,0,0,0,0,0,0,0,5,8,: 0,0,0,0,0,0,0,0,5,9,:  
 0,0,0,0,0,0,0,0,6,8,: 0,0,0,0,0,0,0,0,6,9,: 0,0,0,0,0,0,0,0,7,9,:  
 0,0,0,0,0,0,0,0,8,1,: 0,0,0,0,0,0,0,0,8,2,: 0,0,0,0,0,0,0,0,8,3,:  
 0,0,0,0,0,0,0,0,8,4,: 0,0,0,0,0,0,0,0,8,5,: 0,0,0,0,0,0,0,0,8,6,:  
 0,0,0,0,0,0,0,2,4,6,: 0,0,0,0,0,0,0,2,4,7,: 0,0,0,0,0,0,0,2,4,8,:  
 0,0,0,0,0,0,0,2,4,9,: 0,0,0,0,0,0,0,2,5,7,: 0,0,0,0,0,0,0,2,5,8,:  
 0,0,0,0,0,0,0,2,5,9,: 0,0,0,0,0,0,0,2,6,8,: 0,0,0,0,0,0,0,2,6,9,:  
 0,0,0,0,0,0,0,2,7,9,: 0,0,0,0,0,0,0,2,8,4,: 0,0,0,0,0,0,0,2,8,5,:  
 0,0,0,0,0,0,0,2,8,6,: 0,0,0,0,0,0,0,3,5,7,: 0,0,0,0,0,0,0,3,5,8,:  
 0,0,0,0,0,0,0,3,5,9,: 0,0,0,0,0,0,0,3,6,8,: 0,0,0,0,0,0,0,3,6,9,:  
 0,0,0,0,0,0,0,3,7,9,: 0,0,0,0,0,0,0,3,8,5,: 0,0,0,0,0,0,0,3,8,6,:  
 0,0,0,0,0,0,0,4,6,8,: 0,0,0,0,0,0,0,4,6,9,: 0,0,0,0,0,0,0,4,7,9,:  
 0,0,0,0,0,0,0,4,8,6,: 0,0,0,0,0,0,0,5,7,9,: 0,0,0,0,0,0,2,4,6,8,:  
 0,0,0,0,0,0,2,4,6,9,: 0,0,0,0,0,0,2,4,7,9,: 0,0,0,0,0,0,2,4,8,6,:  
 0,0,0,0,0,0,2,5,7,9,: 0,0,0,0,0,0,3,5,7,9,:

Number new nodes in level n is given by : 1,1,2,4,6,10,16,26,42,68,

-----Class

1002-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][100][101][102][120]]$

- 
- Rules of T[L]:
- R1) 0,-->0,0,--0,--
  - R2) 0,0,-->0,0,0,--0,0,--0,0,2,--
  - R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--
  - R4) 0,0,2,-->0,0,2,1,--0,0,0,2,--0,--
  - R5) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
  - R6) 0,0,0,2,-->0,0,2,1,--0,0,0,0,2,--0,0,--0,0,2,--
  - R7) 0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,3,--0,--
  - R8) 0,0,2,1,-->
  - R9)

0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,5,--  
R10) 0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,2,--0,0,0,--0,0,0,2,--0,0,0,3,--  
R11) 0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,3,--0,0,--0,0,2,--  
R12) 0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,4,--0,--  
R13) 0,0,0,3,1,-->0,0,2,1,--  
R14)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R15)  
0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,2,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R16)  
0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,3,--0,0,0,--0,0,0,2,--0,0,0,3,--  
R17)  
0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,0,4,--0,0,--0,0,2,--  
R18)  
0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--0,0,0,0,0,5,--0,--  
R19) 0,0,0,0,4,1,-->0,0,0,3,1,--0,0,0,3,1,--  
R20) 0,0,0,0,4,2,-->0,0,2,1,--0,0,2,1,--  
R21)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R22)  
0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R23)  
0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,0,3,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R24)  
0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,0,0,4,--0,0,0,0,--0,0,0,2,--0,0,0,3,--  
R25)  
0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--0,0,0,0,0,0,0,5,--0,0,--0,0,2,--  
R26)  
0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,--0,--  
R27) 0,0,0,0,0,5,1,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--  
R28) 0,0,0,0,0,5,2,-->0,0,2,1,--0,0,0,3,1,--0,0,0,3,1,--  
R29) 0,0,0,0,0,5,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,2,1,--  
R30)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--  
R31)  
0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--



R32)

0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,--0,0,0,0,  
0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R33)

0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,0,0,0,4,--0,  
0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R34)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--  
0,0,0,0,0,0,0,5,--0,0,0,--0,0,0,2,--0,0,0,3,--

R35)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,  
0,6,4,--0,0,0,0,0,6,1,--0,0,0,0,0,0,6,--0,0,--0,0,2,--

R36)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,7,1,--0,0,0,0,0,0,7,2,--0,0,0,0,0,0,7,3,--0,0,  
0,0,0,0,0,7,4,--0,0,0,0,0,0,7,5,--0,0,0,0,0,0,7,1,--0,0,0,0,0,0,7,--0,--

R37)

0,0,0,0,0,0,6,1,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--

R38) 0,0,0,0,0,0,6,2,-->0,0,2,1,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--

R39) 0,0,0,0,0,0,6,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,3,1,--0,0,0,3,1,--

R40) 0,0,0,0,0,0,6,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,2,1,--

R41)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,2,  
--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,  
0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R42)

0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,  
0,0,0,7,--

R43)

0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,--0,  
0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--

R44)

0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,0,0,0,4,  
--0,0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--

R45)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,  
--0,0,0,0,0,0,0,5,--0,0,0,0,--0,0,0,2,--0,0,0,3,--0,0,0,4,--

R46)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,  
0,0,6,4,--0,0,0,0,0,6,1,--0,0,0,0,0,0,6,--0,0,0,--0,0,2,--0,0,3,--

R47)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,7,1,--0,0,0,0,0,0,7,2,--0,0,0,0,0,0,7,3,--0,  
0,0,0,0,0,0,7,4,--0,0,0,0,0,0,7,5,--0,0,0,0,0,0,7,1,--0,0,0,0,0,0,7,--0,0,  
--0,0,2,--

R48)

0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,1,--0,0,0,0,0,0,0,8,2,--0,0,0,0,0,0,0,8,  
3,--0,0,0,0,0,0,8,4,--0,0,0,0,0,0,8,5,--0,0,0,0,0,0,8,6,--0,0,0,0,0,0,  
0,8,1,--0,0,0,0,0,0,0,8,--0,--

R49)

0,0,0,0,0,0,0,7,1,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,

0,0,6,4,--0,0,0,0,0,0,6,1,--  
 R50)  
 0,0,0,0,0,0,0,7,2,-->0,0,2,1,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,  
 0,0,0,5,1,--  
 R51)  
 0,0,0,0,0,0,0,7,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,  
 1,--  
 R52)  
 0,0,0,0,0,0,0,7,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,0,3,  
 1,--  
 R53)  
 0,0,0,0,0,0,0,7,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,  
 --0,0,2,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, :  
 LEN=3) 0,0,0, : 0,0,2, :  
 LEN=4) 0,0,0,0, : 0,0,0,2, : 0,0,0,3, : 0,0,2,1, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,3,1, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :  
 0,0,0,0,4,1, : 0,0,0,0,4,2, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, :  
 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,1, : 0,0,0,0,0,5,2, : 0,0,0,0,0,5,3, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, :  
 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,1, :  
 0,0,0,0,0,0,6,2, : 0,0,0,0,0,0,6,3, : 0,0,0,0,0,0,6,4, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7, :  
 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,1, : 0,0,0,0,0,0,0,7,2, : 0,0,0,0,0,0,0,7,3, :  
 0,0,0,0,0,0,0,7,4, : 0,0,0,0,0,0,0,7,5, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, :  
 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, :  
 0,0,0,0,0,0,0,0,8,1, : 0,0,0,0,0,0,0,0,8,2, : 0,0,0,0,0,0,0,0,8,3, :  
 0,0,0,0,0,0,0,0,8,4, : 0,0,0,0,0,0,0,0,8,5, : 0,0,0,0,0,0,0,0,8,6, :  
 Number new nodes in level n is given by : 1,1,2,4,5,7,9,11,13,15,

-----Class

1003-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][100][101][102][201]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,--
- R2) 0,0,-->0,0,0,--0,0,--0,0,2,--
- R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--
- R4) 0,0,2,-->0,0,2,1,--0,0,0,2,--0,0,2,--
- R5) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R6) 0,0,0,2,-->0,0,2,1,--0,0,0,0,2,--0,0,0,2,--0,0,0,3,--
- R7) 0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,3,--0,0,0,3,--

R8) 0,0,2,1,-->  
R9)  
0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,  
0,0,0,0,5,--  
R10) 0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,2,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R11) 0,0,0,0,3,-->0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,0,3,--0,0,0,0,3,--0,0,0,0,4,--  
R12) 0,0,0,0,4,-->0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,4,--0,0,0,0,4,--  
R13) 0,0,0,3,2,-->0,0,2,1,--  
R14)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,  
0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R15)  
0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,2,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--  
R16)  
0,0,0,0,0,3,-->0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,0,0,3,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,  
0,0,0,0,5,--  
R17)  
0,0,0,0,0,4,-->0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,4,--0,0,0,0,0,4,--0,  
0,0,0,0,5,--  
R18)  
0,0,0,0,0,5,-->0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,5,--  
0,0,0,0,0,5,--  
R19) 0,0,0,0,4,3,-->0,0,2,1,--0,0,0,0,3,2,--  
R20)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R21)  
0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,  
0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R22)  
0,0,0,0,0,0,3,-->0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,3,--0,0,0,0,0,  
0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R23)  
0,0,0,0,0,0,4,-->0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,  
4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R24)  
0,0,0,0,0,0,5,-->0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,0,  
5,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R25)  
0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,  
5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,6,--  
R26) 0,0,0,0,0,5,4,-->0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,4,3,--  
R27)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,  
0,0,0,7,--0,0,0,0,0,0,0,0,8,--  
R28)  
0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,  
--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R29)

0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R30)

0,0,0,0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R31)

0,0,0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R32)

0,0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,0,6,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R33)

0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,7,--

R34) 0,0,0,0,0,0,0,6,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--

R35)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R36)

0,0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R37)

0,0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R38)

0,0,0,0,0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R39)

0,0,0,0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R40)

0,0,0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R41)

0,0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R42)

0,0,0,0,0,0,0,0,8,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,8,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,8,--

R43)

0,0,0,0,0,0,0,7,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,

0,6,5,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

LEN=3) 0,0,0,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,2,: 0,0,0,3,: 0,0,2,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,: 0,0,0,3,2,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,: 0,0,0,0,0,5,:  
0,0,0,0,4,3,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,: 0,0,0,0,0,0,4,:

0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,: 0,0,0,0,0,5,4,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,4,:

0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,6,5,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,7,:

0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,7,6,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,0,6,:

0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,0,9,:

0,0,0,0,0,0,0,0,8,7,:

Number new nodes in level n is given by : 1,1,2,4,5,6,7,8,9,10,

-----Class

1004-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][100][101][102][210]]$

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,0,--0,0,--0,0,2,--

R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--

R4) 0,0,2,-->0,0,2,1,--0,0,0,2,--0,0,2,--

R5) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R6) 0,0,0,2,-->0,0,2,1,--0,0,0,0,2,--0,0,0,2,--0,0,0,2,4,--

R7) 0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,3,--0,0,0,3,--

R8) 0,0,2,1,-->

R9)

0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,  
0,0,0,0,5,--

R10) 0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,2,--0,0,0,0,2,--0,0,0,0,2,4,--0,0,0,0,2,5,--

R11) 0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,3,--0,0,0,0,3,--0,0,0,0,3,5,--

R12) 0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,4,--0,0,0,0,4,--

R13) 0,0,0,2,4,-->0,0,2,1,--0,0,2,1,--0,0,0,0,2,4,--0,0,0,2,4,--

R14) 0,0,0,3,1,-->0,0,2,1,--

R15)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,  
0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R16)

0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,2,--0,0,0,0,0,2,--0,0,0,0,0,2,4,--0,0,0,0,0,2,  
5,--0,0,0,0,0,2,6,--

R17)

0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,3,--0,0,0,0,0,3,--0,0,0,0,0,3,5,--  
0,0,0,0,0,3,6,--

R18)

0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,4,--0,0,0,0,0,4,--0,  
0,0,0,0,4,6,--

R19)

0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,5,--  
0,0,0,0,0,5,--

R20)

0,0,0,0,2,4,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,2,4,--0,0,0,0,2,4,--0,0,0,0,2,4,6,--

R21) 0,0,0,0,2,5,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,2,5,--0,0,0,0,2,5,--

R22) 0,0,0,0,3,5,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,3,5,--0,0,0,0,3,5,--

R23) 0,0,0,0,4,1,-->0,0,0,3,1,--0,0,2,1,--

R24)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R25)

0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,2,--0,0,0,0,0,0,2,4,--0,0,  
0,0,0,0,2,5,--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,2,7,--

R26)

0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,3,--0,0,0,0,0,  
0,3,5,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,7,--

R27)

0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,  
4,--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,7,--

R28)

0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,  
5,--0,0,0,0,0,0,5,--0,0,0,0,0,0,5,7,--

R29)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,  
1,--0,0,0,0,0,0,6,--0,0,0,0,0,0,6,--

R30)

0,0,0,0,0,2,4,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,2,4,--0,0,0,0,0,2,4,--0,0,0,0,0,2,  
4,6,--0,0,0,0,0,2,4,7,--

R31)

0,0,0,0,0,2,5,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,2,5,--0,0,0,0,0,2,5,--  
0,0,0,0,0,2,5,7,--

R32)

0,0,0,0,0,2,6,-->0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,2,6,--0,  
0,0,0,0,2,6,--

R33)

0,0,0,0,0,3,5,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,3,5,--0,0,0,0,0,3,5,--  
0,0,0,0,0,3,5,7,--

R34)

0,0,0,0,0,3,6,-->0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,3,6,--0,0,  
0,0,0,3,6,--

R35)

0,0,0,0,0,4,6,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,4,6,--0,  
0,0,0,0,4,6,--

R36) 0,0,0,0,0,5,1,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--  
R37)  
0,0,0,0,2,4,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,2,4,6,--0,0,0,0,2,4,6,--  
R38)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,  
,0,0,0,7,--0,0,0,0,0,0,0,8,--  
R39)  
0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,2,  
4,--0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,2,8,--  
-  
R40)  
0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,3,--0,0,  
0,0,0,0,0,3,5,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,7,--0,0,0,0,0,0,3,8,--  
R41)  
0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,4,--0,0,0,0,  
0,0,0,4,--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,7,--0,0,0,0,0,0,4,8,--  
R42)  
0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,  
0,0,5,--0,0,0,0,0,0,5,--0,0,0,0,0,0,5,7,--0,0,0,0,0,0,5,8,--  
R43)  
0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,  
2,1,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,6,8,--  
R44)  
0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,  
1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,7,--  
R45)  
0,0,0,0,0,0,2,4,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,2,4,--0,0,0,0,0,0,2,4,--0,0,0,  
0,0,0,2,4,6,--0,0,0,0,0,0,2,4,7,--0,0,0,0,0,0,2,4,8,--  
R46)  
0,0,0,0,0,0,2,5,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,  
2,5,--0,0,0,0,0,0,2,5,7,--0,0,0,0,0,0,2,5,8,--  
R47)  
0,0,0,0,0,0,2,6,-->0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,2,6,  
--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,2,6,8,--  
R48)  
0,0,0,0,0,0,2,7,-->0,0,2,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,  
0,0,0,0,0,0,2,7,--0,0,0,0,0,0,2,7,--  
R49)  
0,0,0,0,0,0,3,5,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,3,5,--0,0,0,0,0,0,  
3,5,--0,0,0,0,0,0,3,5,7,--0,0,0,0,0,0,3,5,8,--  
R50)  
0,0,0,0,0,0,3,6,-->0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,3,6,--  
0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,6,8,--  
R51)  
0,0,0,0,0,0,3,7,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,  
0,0,0,0,3,7,--0,0,0,0,0,0,3,7,--  
R52)  
0,0,0,0,0,0,4,6,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,4,6,  
--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,6,8,--

R53)

0,0,0,0,0,0,4,7,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,4,7,--

R54)

0,0,0,0,0,0,5,7,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,5,7,--0,0,0,0,0,0,5,7,--

R55) 0,0,0,0,0,0,6,1,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--

R56)

0,0,0,0,0,2,4,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,2,4,6,--0,0,0,0,0,2,4,6,--0,0,0,0,0,2,4,6,8,--

R57)

0,0,0,0,0,2,4,7,-->0,0,2,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,2,4,7,--0,0,0,0,0,2,4,7,--

R58)

0,0,0,0,0,2,5,7,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,2,5,7,--0,0,0,0,0,2,5,7,--

R59)

0,0,0,0,0,3,5,7,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,3,5,7,--0,0,0,0,0,3,5,7,--

R60)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R61)

0,0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,2,4,--0,0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,0,2,8,--0,0,0,0,0,0,0,0,2,9,--

R62)

0,0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,3,5,--0,0,0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,0,0,3,8,--0,0,0,0,0,0,0,0,0,3,9,--

R63)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,0,4,8,--0,0,0,0,0,0,0,0,4,9,--

R64)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,0,5,8,--0,0,0,0,0,0,0,0,5,9,--

R65)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,0,6,9,--

R66)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,7,9,--

R67)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,1,--0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,8,--



,0,0,8,--

R68)

0,0,0,0,0,0,0,2,4,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,2,4,--0,0,0,0,0,0,0,2,4,--  
0,0,0,0,0,0,0,2,4,6,--0,0,0,0,0,0,2,4,7,--0,0,0,0,0,0,2,4,8,--0,0,0,0,0,0,2,4,  
9,--

R69)

0,0,0,0,0,0,0,2,5,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,2,5,--0,0,0,0,  
0,0,0,2,5,--0,0,0,0,0,0,0,2,5,7,--0,0,0,0,0,0,0,2,5,8,--0,0,0,0,0,0,0,2,5,9,--

R70)

0,0,0,0,0,0,0,2,6,-->0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,  
2,6,--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,2,6,8,--0,0,0,0,0,0,2,6,9,--

R71)

0,0,0,0,0,0,0,2,7,-->0,0,2,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--  
0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,2,7,--0,0,0,0,0,0,2,7,9,--

R72)

0,0,0,0,0,0,0,2,8,-->0,0,2,1,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,  
0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,2,8,--0,0,0,0,0,0,2,8,--

R73)

0,0,0,0,0,0,0,3,5,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,3,5,--0,0,0,0,  
0,0,0,3,5,--0,0,0,0,0,0,0,3,5,7,--0,0,0,0,0,0,0,3,5,8,--0,0,0,0,0,0,0,3,5,9,--

R74)

0,0,0,0,0,0,0,3,6,-->0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,3,  
6,--0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,3,6,8,--0,0,0,0,0,0,0,3,6,9,--

R75)

0,0,0,0,0,0,0,3,7,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,  
0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,3,7,9,--

R76)

0,0,0,0,0,0,0,3,8,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,  
--0,0,2,1,--0,0,0,0,0,0,0,3,8,--0,0,0,0,0,0,0,3,8,--

R77)

0,0,0,0,0,0,0,4,6,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,  
4,6,--0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,4,6,8,--0,0,0,0,0,0,0,4,6,9,--

R78)

0,0,0,0,0,0,0,4,7,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,  
0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,4,7,9,--

R79)

0,0,0,0,0,0,0,4,8,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--  
0,0,2,1,--0,0,0,0,0,0,0,4,8,--0,0,0,0,0,0,0,4,8,--

R80)

0,0,0,0,0,0,0,5,7,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--  
0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,5,7,9,--

R81)

0,0,0,0,0,0,0,5,8,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,  
--0,0,2,1,--0,0,0,0,0,0,0,5,8,--0,0,0,0,0,0,0,5,8,--

R82)

0,0,0,0,0,0,0,6,8,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,  
0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,6,8,--

R83)

0,0,0,0,0,0,0,7,1,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,  
0,2,1,--

R84)

0,0,0,0,0,0,2,4,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,2,4,6,--0,0,0,0,0,  
0,2,4,6,--0,0,0,0,0,0,2,4,6,8,--0,0,0,0,0,0,2,4,6,9,--

R85)

0,0,0,0,0,0,2,4,7,-->0,0,2,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,2,4,7,  
--0,0,0,0,0,0,2,4,7,--0,0,0,0,0,0,2,4,7,9,--

R86)

0,0,0,0,0,0,2,4,8,-->0,0,2,1,--0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,  
0,0,0,0,2,4,8,--0,0,0,0,0,0,2,4,8,--

R87)

0,0,0,0,0,0,2,5,7,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,2,5,7,  
--0,0,0,0,0,0,2,5,7,--0,0,0,0,0,0,2,5,7,9,--

R88)

0,0,0,0,0,0,2,5,8,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,  
0,0,0,2,5,8,--0,0,0,0,0,0,2,5,8,--

R89)

0,0,0,0,0,0,2,6,8,-->0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,  
0,0,0,0,2,6,8,--0,0,0,0,0,0,2,6,8,--

R90)

0,0,0,0,0,0,3,5,7,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,3,5,7,  
--0,0,0,0,0,0,3,5,7,--0,0,0,0,0,0,3,5,7,9,--

R91)

0,0,0,0,0,0,3,5,8,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,  
0,0,0,3,5,8,--0,0,0,0,0,0,3,5,8,--

R92)

0,0,0,0,0,0,3,6,8,-->0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,  
0,0,0,3,6,8,--0,0,0,0,0,0,3,6,8,--

R93)

0,0,0,0,0,0,4,6,8,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,  
0,0,0,0,4,6,8,--0,0,0,0,0,0,4,6,8,--

R94)

0,0,0,0,0,2,4,6,8,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,2,4,6,8,--  
0,0,0,0,0,2,4,6,8,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

LEN=3) 0,0,0,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,2,: 0,0,0,3,: 0,0,2,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,: 0,0,0,2,4,: 0,0,0,3,1,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,: 0,0,0,0,0,5,:

0,0,0,0,2,4,: 0,0,0,0,2,5,: 0,0,0,0,3,5,: 0,0,0,0,4,1,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,: 0,0,0,0,0,0,4,:

0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,: 0,0,0,0,0,2,4,: 0,0,0,0,0,2,5,: 0,0,0,0,0,2,6,:

0,0,0,0,0,3,5,: 0,0,0,0,0,3,6,: 0,0,0,0,0,4,6,: 0,0,0,0,0,5,1,: 0,0,0,0,2,4,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,4,:

0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,2,4,:

0,0,0,0,0,0,2,5,: 0,0,0,0,0,0,2,6,: 0,0,0,0,0,0,2,7,: 0,0,0,0,0,0,3,5,:

0,0,0,0,0,0,3,6,: 0,0,0,0,0,0,3,7,: 0,0,0,0,0,0,4,6,: 0,0,0,0,0,0,4,7,:

0,0,0,0,0,0,5,7,: 0,0,0,0,0,0,6,1,: 0,0,0,0,0,2,4,6,: 0,0,0,0,0,2,4,7,:

0,0,0,0,0,2,5,7,: 0,0,0,0,0,3,5,7,:

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,3, :  
0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7, :  
0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,2,4, : 0,0,0,0,0,0,0,2,5, : 0,0,0,0,0,0,0,2,6, :  
0,0,0,0,0,0,0,2,7, : 0,0,0,0,0,0,0,2,8, : 0,0,0,0,0,0,0,3,5, : 0,0,0,0,0,0,0,3,6, :  
0,0,0,0,0,0,0,3,7, : 0,0,0,0,0,0,0,3,8, : 0,0,0,0,0,0,0,4,6, : 0,0,0,0,0,0,0,4,7, :  
0,0,0,0,0,0,0,4,8, : 0,0,0,0,0,0,0,5,7, : 0,0,0,0,0,0,0,5,8, : 0,0,0,0,0,0,0,6,8, :  
0,0,0,0,0,0,0,7,1, : 0,0,0,0,0,0,2,4,6, : 0,0,0,0,0,0,2,4,7, : 0,0,0,0,0,0,2,4,8, :  
0,0,0,0,0,0,2,5,7, : 0,0,0,0,0,0,2,5,8, : 0,0,0,0,0,0,2,6,8, : 0,0,0,0,0,0,3,5,7, :  
0,0,0,0,0,0,3,5,8, : 0,0,0,0,0,0,3,6,8, : 0,0,0,0,0,0,4,6,8, : 0,0,0,0,0,2,4,6,8, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,0,3, :  
0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, :  
0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, :  
0,0,0,0,0,0,0,0,2,4, : 0,0,0,0,0,0,0,0,2,5, : 0,0,0,0,0,0,0,0,2,6, :  
0,0,0,0,0,0,0,0,2,7, : 0,0,0,0,0,0,0,0,2,8, : 0,0,0,0,0,0,0,0,2,9, :  
0,0,0,0,0,0,0,0,3,5, : 0,0,0,0,0,0,0,0,3,6, : 0,0,0,0,0,0,0,0,3,7, :  
0,0,0,0,0,0,0,0,3,8, : 0,0,0,0,0,0,0,0,3,9, : 0,0,0,0,0,0,0,0,4,6, :  
0,0,0,0,0,0,0,0,4,7, : 0,0,0,0,0,0,0,0,4,8, : 0,0,0,0,0,0,0,0,4,9, :  
0,0,0,0,0,0,0,0,5,7, : 0,0,0,0,0,0,0,0,5,8, : 0,0,0,0,0,0,0,0,5,9, :  
0,0,0,0,0,0,0,0,6,8, : 0,0,0,0,0,0,0,0,6,9, : 0,0,0,0,0,0,0,0,7,9, :  
0,0,0,0,0,0,0,0,8,1, : 0,0,0,0,0,0,0,2,4,6, : 0,0,0,0,0,0,0,2,4,7, :  
0,0,0,0,0,0,0,2,4,8, : 0,0,0,0,0,0,0,2,4,9, : 0,0,0,0,0,0,0,2,5,7, :  
0,0,0,0,0,0,0,2,5,8, : 0,0,0,0,0,0,0,2,5,9, : 0,0,0,0,0,0,0,2,6,8, :  
0,0,0,0,0,0,0,2,6,9, : 0,0,0,0,0,0,0,2,7,9, : 0,0,0,0,0,0,0,3,5,7, :  
0,0,0,0,0,0,0,3,5,8, : 0,0,0,0,0,0,0,3,5,9, : 0,0,0,0,0,0,0,3,6,8, :  
0,0,0,0,0,0,0,3,6,9, : 0,0,0,0,0,0,0,3,7,9, : 0,0,0,0,0,0,0,4,6,8, :  
0,0,0,0,0,0,0,4,6,9, : 0,0,0,0,0,0,0,4,7,9, : 0,0,0,0,0,0,0,5,7,9, :  
0,0,0,0,0,0,2,4,6,8, : 0,0,0,0,0,0,2,4,6,9, : 0,0,0,0,0,0,2,4,7,9, :  
0,0,0,0,0,0,2,5,7,9, : 0,0,0,0,0,0,3,5,7,9, :

Number new nodes in level n is given by : 1,1,2,4,6,9,14,22,35,56,

-----Class

1005-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][100][101][110][120]]$

-----

--

Rules of  $T[L]$ :

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,0,--0,0,--0,0,2,--

R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--

R4) 0,0,2,-->0,0,2,1,--0,0,--0,--

R5) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R6) 0,0,0,2,-->0,0,0,2,1,--0,0,0,--0,0,--0,0,2,--

R7) 0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,--0,--

R8) 0,0,2,1,-->0,0,--0,0,2,--

R9)

0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,

0,0,0,0,5,--

R10) 0,0,0,0,2,-->0,0,0,0,2,1,--0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--

R11) 0,0,0,0,3,-->0,0,0,0,3,1,--0,0,0,0,3,1,--0,0,0,--0,0,--0,0,2,--

R12) 0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,--0,--

R13) 0,0,0,2,1,-->0,0,0,--0,0,0,2,--0,0,0,3,--  
R14) 0,0,0,3,1,-->0,0,0,2,1,--0,0,--0,0,2,--  
R15)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,  
0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R16)  
0,0,0,0,0,2,-->0,0,0,0,0,2,1,--0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,  
0,4,--  
R17)  
0,0,0,0,0,3,-->0,0,0,0,0,3,1,--0,0,0,0,0,3,1,--0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,  
--  
R18)  
0,0,0,0,0,4,-->0,0,0,0,0,4,1,--0,0,0,0,0,4,2,--0,0,0,0,0,4,1,--0,0,0,--0,0,--0,0,2,  
--  
R19)  
0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,1,--0,0,  
--0,--  
R20) 0,0,0,0,2,1,-->0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R21) 0,0,0,0,3,1,-->0,0,0,0,2,1,--0,0,0,--0,0,0,2,--0,0,0,3,--  
R22) 0,0,0,0,4,1,-->0,0,0,0,3,1,--0,0,0,0,3,1,--0,0,--0,0,2,--  
R23) 0,0,0,0,4,2,-->0,0,0,0,3,1,--0,0,0,2,1,--0,0,--0,0,2,--  
R24)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R25)  
0,0,0,0,0,0,2,-->0,0,0,0,0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,  
0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R26)  
0,0,0,0,0,0,3,-->0,0,0,0,0,0,3,1,--0,0,0,0,0,0,3,1,--0,0,0,0,0,--0,0,0,0,--0,0,0,0,  
2,--0,0,0,0,3,--0,0,0,0,4,--  
R27)  
0,0,0,0,0,0,4,-->0,0,0,0,0,0,4,1,--0,0,0,0,0,0,4,2,--0,0,0,0,0,0,4,1,--0,0,0,0,--0,  
0,0,--0,0,0,2,--0,0,0,3,--  
R28)  
0,0,0,0,0,0,5,-->0,0,0,0,0,0,5,1,--0,0,0,0,0,0,5,2,--0,0,0,0,0,0,5,3,--0,0,0,0,0,0,  
5,1,--0,0,0,--0,0,--0,0,2,--  
R29)  
0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,  
6,4,--0,0,0,0,0,6,1,--0,0,--0,0,--  
R30)  
0,0,0,0,0,2,1,-->0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,  
--  
R31)  
0,0,0,0,0,3,1,-->0,0,0,0,0,2,1,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R32) 0,0,0,0,0,4,1,-->0,0,0,0,0,3,1,--0,0,0,0,0,3,1,--0,0,0,--0,0,0,2,--0,0,0,3,--  
R33) 0,0,0,0,0,4,2,-->0,0,0,0,0,3,1,--0,0,0,0,2,1,--0,0,0,--0,0,0,2,--0,0,0,3,--  
R34)  
0,0,0,0,0,5,1,-->0,0,0,0,0,4,1,--0,0,0,0,0,4,2,--0,0,0,0,0,4,1,--0,0,--0,0,2,--  
R35) 0,0,0,0,0,5,2,-->0,0,0,0,0,4,1,--0,0,0,0,3,1,--0,0,0,0,3,1,--0,0,--0,0,2,--  
R36) 0,0,0,0,0,5,3,-->0,0,0,0,0,4,2,--0,0,0,0,0,4,2,--0,0,0,2,1,--0,0,--0,0,2,--

R37)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R38)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--

R39)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--

R40)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,4,1,--0,0,0,0,0,0,0,0,4,2,--0,0,0,0,0,0,0,0,4,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--

R41)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,0,5,1,--0,0,0,0,0,0,0,0,5,2,--0,0,0,0,0,0,0,0,5,3,--0,0,0,0,0,0,0,0,5,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--

R42)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,0,6,1,--0,0,0,0,0,0,0,0,6,2,--0,0,0,0,0,0,0,0,6,3,--0,0,0,0,0,0,0,0,6,4,--0,0,0,0,0,0,0,0,6,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,2,--

R43)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,0,7,2,--0,0,0,0,0,0,0,0,7,3,--0,0,0,0,0,0,0,0,7,4,--0,0,0,0,0,0,0,0,7,5,--0,0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,--

R44)

0,0,0,0,0,0,0,0,2,1,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--

R45)

0,0,0,0,0,0,0,0,3,1,-->0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--

R46)

0,0,0,0,0,0,0,0,4,1,-->0,0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--

R47)

0,0,0,0,0,0,0,0,4,2,-->0,0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--

R48)

0,0,0,0,0,0,0,0,5,1,-->0,0,0,0,0,0,0,0,4,1,--0,0,0,0,0,0,0,0,4,2,--0,0,0,0,0,0,0,0,4,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--

R49)

0,0,0,0,0,0,0,0,5,2,-->0,0,0,0,0,0,0,0,4,1,--0,0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,3,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--

R50)

0,0,0,0,0,0,0,0,5,3,-->0,0,0,0,0,0,0,0,4,2,--0,0,0,0,0,0,0,0,4,2,--0,0,0,0,0,0,2,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--

R51)

0,0,0,0,0,0,0,0,6,1,-->0,0,0,0,0,0,0,0,5,1,--0,0,0,0,0,0,0,0,5,2,--0,0,0,0,0,0,0,0,5,3,--0,0,0,0,0,0,5,1,--0,0,0,0,0,0,2,--

R52)

0,0,0,0,0,0,0,0,6,2,-->0,0,0,0,0,0,0,0,5,1,--0,0,0,0,0,0,0,0,4,1,--0,0,0,0,0,0,0,0,4,2,--0,0,0,0,0,0,0,0,4,1,--0,0,0,0,0,0,2,--

R53)

0,0,0,0,0,0,6,3,-->0,0,0,0,0,0,5,2,--0,0,0,0,0,0,5,2,--0,0,0,0,3,1,--0,0,0,0,3,1,--  
0,0,--0,0,2,--

R54)

0,0,0,0,0,0,6,4,-->0,0,0,0,0,0,5,3,--0,0,0,0,0,0,6,4,2,--0,0,0,0,0,0,5,3,--0,0,0,2,  
1,--0,0,--0,0,2,--

R55)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,2,  
--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,  
0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R56)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,  
0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,-  
-0,0,0,0,0,0,0,7,--

R57)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,0,0,--0,  
0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,  
0,0,6,--

R58)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,4,1,--0,0,0,0,0,0,0,0,4,2,--0,0,0,0,0,0,0,0,4,  
1,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,  
,--

R59)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,0,5,1,--0,0,0,0,0,0,0,0,5,2,--0,0,0,0,0,0,0,0,5,  
3,--0,0,0,0,0,0,0,0,5,1,--0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,-  
-

R60)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,0,6,1,--0,0,0,0,0,0,0,0,6,2,--0,0,0,0,0,0,0,0,6,  
3,--0,0,0,0,0,0,0,0,6,4,--0,0,0,0,0,0,0,0,6,1,--0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,  
,--

R61)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,0,7,2,--0,0,0,0,0,0,0,0,7,  
3,--0,0,0,0,0,0,0,0,7,4,--0,0,0,0,0,0,0,0,7,5,--0,0,0,0,0,0,0,0,7,1,--0,0,0,--0,0,-  
-0,0,2,--

R62)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,8,1,--0,0,0,0,0,0,0,0,8,2,--0,0,0,0,0,0,0,0,8,  
3,--0,0,0,0,0,0,0,0,8,4,--0,0,0,0,0,0,0,0,8,5,--0,0,0,0,0,0,0,0,8,6,--0,0,0,0,0,0,0,  
0,8,1,--0,0,--0,--

R63)

0,0,0,0,0,0,0,0,2,1,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,  
0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R64)

0,0,0,0,0,0,0,0,3,1,-->0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,  
3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R65)

0,0,0,0,0,0,0,0,4,1,-->0,0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,0,0,3,1,--0,0,0,0,0,--0,0,0,0,0,  
2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R66)

0,0,0,0,0,0,0,0,4,2,-->0,0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,0,2,1,--0,0,0,0,0,--0,0,0,0,0,2,  
--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R67)

0,0,0,0,0,0,0,5,1,-->0,0,0,0,0,0,0,4,1,--0,0,0,0,0,0,0,4,2,--0,0,0,0,0,0,0,4,1,--0,  
0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R68)

0,0,0,0,0,0,0,5,2,-->0,0,0,0,0,0,0,4,1,--0,0,0,0,0,0,3,1,--0,0,0,0,0,0,3,1,--0,0,0,  
0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R69)

0,0,0,0,0,0,0,5,3,-->0,0,0,0,0,0,0,4,2,--0,0,0,0,0,0,0,4,2,--0,0,0,0,0,2,1,--0,0,0,  
0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R70)

0,0,0,0,0,0,0,6,1,-->0,0,0,0,0,0,0,5,1,--0,0,0,0,0,0,0,5,2,--0,0,0,0,0,0,0,5,3,--0,  
0,0,0,0,0,0,5,1,--0,0,0,--0,0,0,2,--0,0,0,3,--

R71)

0,0,0,0,0,0,0,6,2,-->0,0,0,0,0,0,0,5,1,--0,0,0,0,0,0,4,1,--0,0,0,0,0,0,4,2,--0,0,0,  
0,0,0,4,1,--0,0,0,--0,0,0,2,--0,0,0,3,--

R72)

0,0,0,0,0,0,0,6,3,-->0,0,0,0,0,0,0,5,2,--0,0,0,0,0,0,0,5,2,--0,0,0,0,0,3,1,--0,0,0,  
0,0,3,1,--0,0,0,--0,0,0,2,--0,0,0,3,--

R73)

0,0,0,0,0,0,0,6,4,-->0,0,0,0,0,0,0,5,3,--0,0,0,0,0,0,0,6,4,2,--0,0,0,0,0,0,0,5,3,--  
0,0,0,0,2,1,--0,0,0,--0,0,0,2,--0,0,0,3,--

R74)

0,0,0,0,0,0,0,7,1,-->0,0,0,0,0,0,0,6,1,--0,0,0,0,0,0,0,6,2,--0,0,0,0,0,0,0,6,3,--0,  
0,0,0,0,0,0,6,4,--0,0,0,0,0,0,0,6,1,--0,0,0,--0,0,2,--

R75)

0,0,0,0,0,0,0,7,2,-->0,0,0,0,0,0,0,6,1,--0,0,0,0,0,0,0,5,1,--0,0,0,0,0,0,0,5,2,--0,0,0,  
0,0,0,5,3,--0,0,0,0,0,0,5,1,--0,0,0,--0,0,2,--

R76)

0,0,0,0,0,0,0,7,3,-->0,0,0,0,0,0,0,6,2,--0,0,0,0,0,0,0,6,2,--0,0,0,0,0,4,1,--0,0,0,  
0,0,4,2,--0,0,0,0,0,4,1,--0,0,0,--0,0,2,--

R77)

0,0,0,0,0,0,0,7,4,-->0,0,0,0,0,0,0,6,3,--0,0,0,0,0,0,0,7,4,2,--0,0,0,0,0,0,0,6,3,--  
0,0,0,0,3,1,--0,0,0,0,3,1,--0,0,0,--0,0,2,--

R78)

0,0,0,0,0,0,0,7,5,-->0,0,0,0,0,0,0,6,4,--0,0,0,0,0,0,0,7,5,2,--0,0,0,0,0,0,0,7,5,3,  
--0,0,0,0,0,0,6,4,--0,0,0,2,1,--0,0,0,--0,0,2,--

R79)

0,0,0,0,0,0,6,4,2,-->0,0,0,0,0,0,4,2,--0,0,0,0,0,3,1,--0,0,0,0,2,1,--0,0,0,--0,0,0,  
2,--0,0,0,3,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, :

LEN=3) 0,0,0, : 0,0,2, :

LEN=4) 0,0,0,0, : 0,0,0,2, : 0,0,0,3, : 0,0,2,1, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,2,1, : 0,0,0,3,1, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :

0,0,0,0,2,1, : 0,0,0,0,3,1, : 0,0,0,0,4,1, : 0,0,0,0,4,2, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, :

0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,2,1, : 0,0,0,0,0,3,1, : 0,0,0,0,0,4,1, :

0,0,0,0,0,4,2, : 0,0,0,0,0,5,1, : 0,0,0,0,0,5,2, : 0,0,0,0,0,5,3, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, :

0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,2,1,:  
 0,0,0,0,0,0,3,1,: 0,0,0,0,0,0,4,1,: 0,0,0,0,0,0,4,2,: 0,0,0,0,0,0,5,1,:  
 0,0,0,0,0,0,5,2,: 0,0,0,0,0,0,5,3,: 0,0,0,0,0,0,6,1,: 0,0,0,0,0,0,6,2,:  
 0,0,0,0,0,0,6,3,: 0,0,0,0,0,0,6,4,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,0,3,:  
 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,7,:  
 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,2,1,: 0,0,0,0,0,0,0,3,1,: 0,0,0,0,0,0,0,4,1,:  
 0,0,0,0,0,0,0,4,2,: 0,0,0,0,0,0,0,5,1,: 0,0,0,0,0,0,0,5,2,: 0,0,0,0,0,0,0,5,3,:  
 0,0,0,0,0,0,0,6,1,: 0,0,0,0,0,0,0,6,2,: 0,0,0,0,0,0,0,6,3,: 0,0,0,0,0,0,0,6,4,:  
 0,0,0,0,0,0,0,7,1,: 0,0,0,0,0,0,0,7,2,: 0,0,0,0,0,0,0,7,3,: 0,0,0,0,0,0,0,7,4,:  
 0,0,0,0,0,0,0,7,5,: 0,0,0,0,0,0,6,4,2,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,0,0,3,:  
 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,0,6,:  
 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,0,0,9,:  
 0,0,0,0,0,0,0,0,2,1,: 0,0,0,0,0,0,0,0,3,1,: 0,0,0,0,0,0,0,0,4,1,:  
 0,0,0,0,0,0,0,0,4,2,: 0,0,0,0,0,0,0,0,5,1,: 0,0,0,0,0,0,0,0,5,2,:  
 0,0,0,0,0,0,0,0,5,3,: 0,0,0,0,0,0,0,0,6,1,: 0,0,0,0,0,0,0,0,6,2,:  
 0,0,0,0,0,0,0,0,6,3,: 0,0,0,0,0,0,0,0,6,4,: 0,0,0,0,0,0,0,0,7,1,:  
 0,0,0,0,0,0,0,0,7,2,: 0,0,0,0,0,0,0,0,7,3,: 0,0,0,0,0,0,0,0,7,4,:  
 0,0,0,0,0,0,0,0,7,5,: 0,0,0,0,0,0,0,0,8,1,: 0,0,0,0,0,0,0,0,8,2,:  
 0,0,0,0,0,0,0,0,8,3,: 0,0,0,0,0,0,0,0,8,4,: 0,0,0,0,0,0,0,0,8,5,:  
 0,0,0,0,0,0,0,0,8,6,: 0,0,0,0,0,0,0,6,4,2,: 0,0,0,0,0,0,0,7,4,2,:  
 0,0,0,0,0,0,0,7,5,2,: 0,0,0,0,0,0,0,7,5,3,:

Number new nodes in level n is given by : 1,1,2,4,6,9,13,18,25,35,

-----Class

1006-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][100][101][110][201]]$

-----

--

Rules of  $T[L]$ :

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,0,--0,0,--0,0,2,--

R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--

R4) 0,0,2,-->0,0,2,1,--0,0,--0,0,2,--

R5) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R6) 0,0,0,2,-->0,0,0,2,1,--0,0,0,--0,0,0,2,--0,0,0,3,--

R7) 0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,--0,0,0,3,--

R8) 0,0,2,1,-->0,0,--0,0,2,--

R9)

0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,5,--

R10) 0,0,0,0,2,-->0,0,0,0,2,1,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R11) 0,0,0,0,3,-->0,0,0,2,1,--0,0,0,0,3,2,--0,0,0,--0,0,0,0,3,--0,0,0,0,4,--

R12) 0,0,0,0,4,-->0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,4,3,--0,0,--0,0,0,0,4,--

R13) 0,0,0,2,1,-->0,0,0,--0,0,0,2,--0,0,0,3,--

R14) 0,0,0,3,2,-->0,0,0,2,1,--0,0,0,2,--0,0,0,3,--

R15)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--



R16)

0,0,0,0,0,2,-->0,0,0,0,0,2,1,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,  
--0,0,0,0,0,5,--

R17)

0,0,0,0,0,3,-->0,0,0,0,2,1,--0,0,0,0,0,3,2,--0,0,0,0,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--

R18)

0,0,0,0,0,4,-->0,0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,0,4,3,--0,0,0,--0,0,0,0,0,4,--0,0,  
0,0,0,5,--

R19)

0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,--0,0,0,0,0,  
5,--

R20) 0,0,0,0,2,1,-->0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R21) 0,0,0,0,3,2,-->0,0,0,0,2,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R22) 0,0,0,0,4,3,-->0,0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,3,--0,0,0,0,4,--

R23)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R24)

0,0,0,0,0,0,2,-->0,0,0,0,0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,  
0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R25)

0,0,0,0,0,0,3,-->0,0,0,0,0,2,1,--0,0,0,0,0,0,3,2,--0,0,0,0,0,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R26)

0,0,0,0,0,0,4,-->0,0,0,0,2,1,--0,0,0,0,0,3,2,--0,0,0,0,0,0,4,3,--0,0,0,0,--0,0,0,0,  
0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R27)

0,0,0,0,0,0,5,-->0,0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,0,4,3,--0,0,0,0,0,0,5,4,--0,0,0,  
--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R28)

0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,  
5,--0,0,--0,0,0,0,0,6,--

R29)

0,0,0,0,0,2,1,-->0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,  
--

R30)

0,0,0,0,0,3,2,-->0,0,0,0,0,2,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,  
0,5,--

R31)

0,0,0,0,0,4,3,-->0,0,0,0,2,1,--0,0,0,0,0,3,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,  
0,5,--

R32)

0,0,0,0,0,5,4,-->0,0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,0,4,3,--0,0,0,0,0,4,--0,0,0,0,0,  
5,--

R33)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,  
,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R34)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R35)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,3,2,--0,0,0,0,0,0,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R36)

0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,3,2,--0,0,0,0,0,0,0,4,3,--0,0,0,0,0,0,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R37)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,2,1,--0,0,0,0,0,0,3,2,--0,0,0,0,0,0,0,4,3,--0,0,0,0,0,0,0,0,5,4,--0,0,0,0,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R38)

0,0,0,0,0,0,0,6,-->0,0,0,0,2,1,--0,0,0,0,0,3,2,--0,0,0,0,0,0,4,3,--0,0,0,0,0,0,0,5,4,--0,0,0,0,0,0,0,6,5,--0,0,0,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R39)

0,0,0,0,0,0,0,7,-->0,0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,0,4,3,--0,0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,--0,0,0,0,0,0,0,7,--

R40)

0,0,0,0,0,0,2,1,-->0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R41)

0,0,0,0,0,0,3,2,-->0,0,0,0,0,0,2,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R42)

0,0,0,0,0,0,4,3,-->0,0,0,0,0,2,1,--0,0,0,0,0,0,3,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R43)

0,0,0,0,0,0,5,4,-->0,0,0,0,2,1,--0,0,0,0,0,3,2,--0,0,0,0,0,0,4,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R44)

0,0,0,0,0,0,6,5,-->0,0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,0,4,3,--0,0,0,0,0,0,5,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R45)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R46)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R47)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,3,2,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R48)

0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,3,2,--0,0,0,0,0,0,0,4,3,--0,0,0,0,0,0,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R49)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,2,1,--0,0,0,0,0,0,3,2,--0,0,0,0,0,0,4,3,--0,0,0,0,

0,0,0,0,5,4,--0,0,0,0,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,  
,--0,0,0,0,0,0,0,8,--

R50)

0,0,0,0,0,0,0,6,-->0,0,0,0,2,1,--0,0,0,0,0,3,2,--0,0,0,0,0,0,4,3,--0,0,0,0,0,0,0,  
5,4,--0,0,0,0,0,0,0,6,5,--0,0,0,0,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,  
,0,0,0,0,0,8,--

R51)

0,0,0,0,0,0,0,7,-->0,0,0,0,2,1,--0,0,0,0,0,3,2,--0,0,0,0,0,0,4,3,--0,0,0,0,0,0,5,4,--0,  
0,0,0,0,0,0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,0,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,  
,8,--

R52)

0,0,0,0,0,0,0,8,-->0,0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,8,7,--0,0,--0,0,0,0,0,0,0,8,--

R53)

0,0,0,0,0,0,0,2,1,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,  
0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R54)

0,0,0,0,0,0,0,3,2,-->0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,  
0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R55)

0,0,0,0,0,0,0,4,3,-->0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,3,2,--0,0,0,0,0,0,0,3,--0,0,0,  
0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R56)

0,0,0,0,0,0,0,5,4,-->0,0,0,0,0,2,1,--0,0,0,0,0,0,3,2,--0,0,0,0,0,0,0,4,3,--0,0,0,0,  
0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R57)

0,0,0,0,0,0,0,6,5,-->0,0,0,0,2,1,--0,0,0,0,0,3,2,--0,0,0,0,0,0,4,3,--0,0,0,0,0,0,0,  
5,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R58)

0,0,0,0,0,0,0,7,6,-->0,0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,0,4,3,--0,0,0,0,0,0,5,4,--0,  
0,0,0,0,0,0,6,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, :

LEN=3) 0,0,0, : 0,0,2, :

LEN=4) 0,0,0,0, : 0,0,0,2, : 0,0,0,3, : 0,0,2,1, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,2,1, : 0,0,0,3,2, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :

0,0,0,0,2,1, : 0,0,0,0,3,2, : 0,0,0,0,4,3, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, :

0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,2,1, : 0,0,0,0,0,3,2, : 0,0,0,0,0,4,3, :

0,0,0,0,0,5,4, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, :

0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,2,1, :

0,0,0,0,0,0,3,2, : 0,0,0,0,0,0,4,3, : 0,0,0,0,0,0,5,4, : 0,0,0,0,0,0,6,5, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,3, :

0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7, :

0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,2,1, : 0,0,0,0,0,0,0,3,2, : 0,0,0,0,0,0,0,4,3, :

0,0,0,0,0,0,0,5,4, : 0,0,0,0,0,0,0,6,5, : 0,0,0,0,0,0,0,7,6, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,0,3, :

0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,0,6,:  
 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,0,0,9,:  
 0,0,0,0,0,0,0,0,0,2,1,: 0,0,0,0,0,0,0,0,0,3,2,: 0,0,0,0,0,0,0,0,0,4,3,:  
 0,0,0,0,0,0,0,0,0,5,4,: 0,0,0,0,0,0,0,0,0,6,5,: 0,0,0,0,0,0,0,0,0,7,6,:  
 0,0,0,0,0,0,0,0,0,8,7,:

Number new nodes in level n is given by : 1,1,2,4,6,8,10,12,14,16,

-----Class

1007-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][100][101][110][210]]$

-----  
 --  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,--  
 R2) 0,0,-->0,0,0,--0,0,--0,0,2,--  
 R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--  
 R4) 0,0,2,-->0,0,2,1,--0,0,--0,0,2,--  
 R5) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
 R6) 0,0,0,2,-->0,0,0,2,1,--0,0,0,--0,0,0,2,--0,0,0,3,--  
 R7) 0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,--0,0,0,3,--  
 R8) 0,0,2,1,-->0,0,--0,0,2,--  
 R9)  
 0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,  
 0,0,0,0,0,5,--  
 R10) 0,0,0,0,2,-->0,0,0,0,2,1,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
 R11) 0,0,0,0,3,-->0,0,0,0,3,1,--0,0,0,0,2,1,--0,0,0,0,--0,0,0,0,3,--0,0,0,0,4,--  
 R12) 0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,3,1,--0,0,2,1,--0,0,--0,0,0,0,4,--  
 R13) 0,0,0,2,1,-->0,0,0,--0,0,0,2,--0,0,0,3,--  
 R14) 0,0,0,3,1,-->0,0,0,2,1,--0,0,0,2,--0,0,0,3,--  
 R15)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,  
 0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
 R16)  
 0,0,0,0,0,2,-->0,0,0,0,0,2,1,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,  
 --0,0,0,0,0,5,--  
 R17)  
 0,0,0,0,0,3,-->0,0,0,0,0,3,1,--0,0,0,0,2,1,--0,0,0,0,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
 0,0,0,0,0,5,--  
 R18)  
 0,0,0,0,0,4,-->0,0,0,0,0,4,1,--0,0,0,0,3,1,--0,0,0,2,1,--0,0,0,--0,0,0,0,0,4,--0,0,  
 0,0,0,5,--  
 R19)  
 0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,--0,0,0,0,0,  
 5,--  
 R20) 0,0,0,0,2,1,-->0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
 R21) 0,0,0,0,3,1,-->0,0,0,0,2,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
 R22) 0,0,0,0,4,1,-->0,0,0,0,3,1,--0,0,0,0,2,1,--0,0,0,0,3,--0,0,0,0,4,--  
 R23)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
 3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

R24)

0,0,0,0,0,0,2,-->0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R25)

0,0,0,0,0,0,3,-->0,0,0,0,0,0,3,1,--0,0,0,0,0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R26)

0,0,0,0,0,0,4,-->0,0,0,0,0,0,4,1,--0,0,0,0,0,0,3,1,--0,0,0,0,0,0,2,1,--0,0,0,0,0,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R27)

0,0,0,0,0,0,5,-->0,0,0,0,0,0,5,1,--0,0,0,0,0,0,4,1,--0,0,0,0,0,0,3,1,--0,0,0,0,0,2,1,--0,0,0,0,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R28)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,5,1,--0,0,0,0,0,0,4,1,--0,0,0,0,0,3,1,--0,0,0,2,1,--0,0,0,--0,0,0,0,0,0,6,--

R29)

0,0,0,0,0,0,2,1,-->0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--

R30)

0,0,0,0,0,0,3,1,-->0,0,0,0,0,0,2,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--

R31)

0,0,0,0,0,0,4,1,-->0,0,0,0,0,0,3,1,--0,0,0,0,0,0,2,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--

R32)

0,0,0,0,0,0,5,1,-->0,0,0,0,0,0,4,1,--0,0,0,0,0,0,3,1,--0,0,0,0,0,2,1,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--

R33)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R34)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

R35)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

R36)

0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,4,1,--0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R37)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,5,1,--0,0,0,0,0,0,0,4,1,--0,0,0,0,0,0,3,1,--0,0,0,0,0,2,1,--0,0,0,0,0,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R38)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,6,1,--0,0,0,0,0,0,0,5,1,--0,0,0,0,0,0,4,1,--0,0,0,0,0,3,1,--0,0,0,0,2,1,--0,0,0,0,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R39)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,6,1,--0,0,0,0,0,0,5,1,--0,0,0,0,0,4,1,--0,0,0,0,3,1,--0,0,2,1,--0,0,--0,0,0,0,0,0,0,7,--

R40)

0,0,0,0,0,0,2,1,-->0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R41)

0,0,0,0,0,0,3,1,-->0,0,0,0,0,0,2,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R42)

0,0,0,0,0,0,4,1,-->0,0,0,0,0,0,3,1,--0,0,0,0,0,0,2,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R43)

0,0,0,0,0,0,5,1,-->0,0,0,0,0,0,4,1,--0,0,0,0,0,0,3,1,--0,0,0,0,0,0,2,1,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R44)

0,0,0,0,0,0,6,1,-->0,0,0,0,0,0,5,1,--0,0,0,0,0,0,4,1,--0,0,0,0,0,0,3,1,--0,0,0,0,0,0,2,1,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R45)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,0,0,9,--

R46)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R47)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R48)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,4,1,--0,0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R49)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,0,5,1,--0,0,0,0,0,0,0,0,4,1,--0,0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R50)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,0,6,1,--0,0,0,0,0,0,0,0,5,1,--0,0,0,0,0,0,0,0,4,1,--0,0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R51)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,0,6,1,--0,0,0,0,0,0,0,0,5,1,--0,0,0,0,0,0,0,0,4,1,--0,0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R52)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,8,1,--0,0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,0,6,1,--0,0,0,0,0,0,0,0,5,1,--0,0,0,0,0,0,0,0,4,1,--0,0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,0,8,--

R53)

0,0,0,0,0,0,0,0,2,1,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

R54)

0,0,0,0,0,0,0,0,3,1,-->0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
 R55)  
 0,0,0,0,0,0,0,4,1,-->0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,3,--0,0,0,  
 0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
 R56)  
 0,0,0,0,0,0,0,5,1,-->0,0,0,0,0,0,0,4,1,--0,0,0,0,0,0,3,1,--0,0,0,0,2,1,--0,0,0,0,  
 0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
 R57)  
 0,0,0,0,0,0,0,6,1,-->0,0,0,0,0,0,0,5,1,--0,0,0,0,0,0,4,1,--0,0,0,0,0,3,1,--0,0,0,0,  
 2,1,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
 R58)  
 0,0,0,0,0,0,0,7,1,-->0,0,0,0,0,0,0,6,1,--0,0,0,0,0,0,5,1,--0,0,0,0,0,4,1,--0,0,0,0,  
 3,1,--0,0,0,2,1,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, :  
 LEN=3) 0,0,0, : 0,0,2, :  
 LEN=4) 0,0,0,0, : 0,0,0,2, : 0,0,0,3, : 0,0,2,1, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,2,1, : 0,0,0,3,1, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :  
 0,0,0,0,2,1, : 0,0,0,0,3,1, : 0,0,0,0,4,1, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, :  
 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,2,1, : 0,0,0,0,0,3,1, : 0,0,0,0,0,4,1, :  
 0,0,0,0,0,5,1, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, :  
 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,2,1, :  
 0,0,0,0,0,0,3,1, : 0,0,0,0,0,0,4,1, : 0,0,0,0,0,0,5,1, : 0,0,0,0,0,0,6,1, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7, :  
 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,2,1, : 0,0,0,0,0,0,0,3,1, : 0,0,0,0,0,0,0,4,1, :  
 0,0,0,0,0,0,0,5,1, : 0,0,0,0,0,0,0,6,1, : 0,0,0,0,0,0,0,7,1, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, :  
 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, :  
 0,0,0,0,0,0,0,0,2,1, : 0,0,0,0,0,0,0,0,3,1, : 0,0,0,0,0,0,0,0,4,1, :  
 0,0,0,0,0,0,0,0,5,1, : 0,0,0,0,0,0,0,0,6,1, : 0,0,0,0,0,0,0,0,7,1, :  
 0,0,0,0,0,0,0,0,8,1, :  
 Number new nodes in level n is given by : 1,1,2,4,6,8,10,12,14,16,

-----Class  
 1008-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][100][101][120][201]]$   
 -----  
 --  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,--  
 R2) 0,0,-->0,0,0,--0,0,--0,0,2,--  
 R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--  
 R4) 0,0,2,-->0,0,2,1,--0,0,0,2,--0,--  
 R5) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R6) 0,0,0,2,-->0,0,0,2,1,--0,0,0,0,2,--0,0,--0,0,2,--  
R7) 0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,3,--0,--  
R8) 0,0,2,1,-->0,0,--0,0,2,--  
R9)  
0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,  
0,0,0,0,5,--  
R10) 0,0,0,0,2,-->0,0,0,0,2,1,--0,0,0,0,0,2,--0,0,0,--0,0,0,2,--0,0,0,3,--  
R11) 0,0,0,0,3,-->0,0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,0,3,--0,0,--0,0,2,--  
R12) 0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,4,--0,--  
R13) 0,0,0,2,1,-->0,0,0,--0,0,0,2,--0,0,0,3,--  
R14) 0,0,0,3,2,-->0,0,0,2,1,--0,0,--0,0,2,--  
R15)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,  
0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R16)  
0,0,0,0,0,2,-->0,0,0,0,0,2,1,--0,0,0,0,0,0,2,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,  
0,0,0,4,--  
R17)  
0,0,0,0,0,3,-->0,0,0,0,2,1,--0,0,0,0,0,3,2,--0,0,0,0,0,0,3,--0,0,0,--0,0,0,2,--0,0,  
0,3,--  
R18)  
0,0,0,0,0,4,-->0,0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,0,4,3,--0,0,0,0,0,0,4,--0,0,--0,0,  
2,--  
R19)  
0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,5,--  
0,--  
R20) 0,0,0,0,2,1,-->0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R21) 0,0,0,0,3,2,-->0,0,0,0,2,1,--0,0,0,--0,0,0,2,--0,0,0,3,--  
R22) 0,0,0,0,4,3,-->0,0,0,2,1,--0,0,0,0,3,2,--0,0,--0,0,2,--  
R23)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R24)  
0,0,0,0,0,0,2,-->0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,  
0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R25)  
0,0,0,0,0,0,3,-->0,0,0,0,0,2,1,--0,0,0,0,0,0,3,2,--0,0,0,0,0,0,0,3,--0,0,0,0,--0,0,  
0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R26)  
0,0,0,0,0,0,4,-->0,0,0,0,2,1,--0,0,0,0,0,3,2,--0,0,0,0,0,0,4,3,--0,0,0,0,0,0,0,4,--  
0,0,0,--0,0,0,2,--0,0,0,3,--  
R27)  
0,0,0,0,0,0,5,-->0,0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,0,4,3,--0,0,0,0,0,0,5,4,--0,0,0,  
0,0,0,0,5,--0,0,--0,0,2,--  
R28)  
0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,  
5,--0,0,0,0,0,0,6,--0,--  
R29)  
0,0,0,0,0,2,1,-->0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,  
--



R30)

0,0,0,0,0,3,2,-->0,0,0,0,0,2,1,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R31) 0,0,0,0,0,4,3,-->0,0,0,0,2,1,--0,0,0,0,0,3,2,--0,0,0,--0,0,0,2,--0,0,0,3,--

R32) 0,0,0,0,0,5,4,-->0,0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,0,4,3,--0,0,--0,0,2,--

R33)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,  
,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R34)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,--0,0,0,0,0,  
0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R35)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,3,2,--0,0,0,0,0,0,0,0,3,--0,0,0,  
0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R36)

0,0,0,0,0,0,0,4,-->0,0,0,0,0,2,1,--0,0,0,0,0,0,3,2,--0,0,0,0,0,0,0,4,3,--0,0,0,0,0,  
0,0,0,4,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R37)

0,0,0,0,0,0,0,5,-->0,0,0,0,2,1,--0,0,0,0,0,3,2,--0,0,0,0,0,0,4,3,--0,0,0,0,0,0,0,5,  
4,--0,0,0,0,0,0,0,5,--0,0,0,--0,0,0,2,--0,0,0,3,--

R38)

0,0,0,0,0,0,0,6,-->0,0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,0,4,3,--0,0,0,0,0,0,5,4,--0,0,  
0,0,0,0,0,6,5,--0,0,0,0,0,0,0,6,--0,0,--0,0,2,--

R39)

0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,  
6,5,--0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,7,--0,--

R40)

0,0,0,0,0,0,2,1,-->0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,  
0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R41)

0,0,0,0,0,0,3,2,-->0,0,0,0,0,0,2,1,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,  
0,0,4,--0,0,0,0,0,5,--

R42)

0,0,0,0,0,0,4,3,-->0,0,0,0,0,2,1,--0,0,0,0,0,0,3,2,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,  
3,--0,0,0,0,4,--

R43)

0,0,0,0,0,0,5,4,-->0,0,0,0,2,1,--0,0,0,0,0,3,2,--0,0,0,0,0,0,4,3,--0,0,0,--0,0,0,2,  
--0,0,0,3,--

R44)

0,0,0,0,0,0,6,5,-->0,0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,0,4,3,--0,0,0,0,0,0,5,4,--0,0,  
--0,0,2,--

R45)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,  
--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,  
,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R46)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,--0,  
0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
,6,--0,0,0,0,0,0,7,--

R47)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,3,2,--0,0,0,0,0,0,0,0,3,  
--0,0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--0,0,  
,0,0,0,0,6,--

R48)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,2,1,--0,0,0,0,0,0,3,2,--0,0,0,0,0,0,0,4,3,--0,  
0,0,0,0,0,0,0,0,4,--0,0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
,5,--

R49)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,2,1,--0,0,0,0,0,0,3,2,--0,0,0,0,0,0,0,4,3,--0,0,0,0,  
0,0,0,0,5,4,--0,0,0,0,0,0,0,5,--0,0,0,0,--0,0,0,2,--0,0,0,3,--0,0,0,4,--

R50)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,2,1,--0,0,0,0,0,3,2,--0,0,0,0,0,0,4,3,--0,0,0,0,0,0,  
5,4,--0,0,0,0,0,0,0,6,5,--0,0,0,0,0,0,0,6,--0,0,0,--0,0,2,--0,0,3,--

R51)

0,0,0,0,0,0,0,0,7,-->0,0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,0,4,3,--0,0,0,0,0,0,5,4,--0,  
0,0,0,0,0,0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,7,--0,0,--0,0,2,--

R52)

0,0,0,0,0,0,0,0,8,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,8,7,--0,0,0,0,0,0,0,8,--0,0,--

R53)

0,0,0,0,0,0,2,1,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,  
0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R54)

0,0,0,0,0,0,0,3,2,-->0,0,0,0,0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,0,  
3,--0,0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--

R55)

0,0,0,0,0,0,0,4,3,-->0,0,0,0,0,2,1,--0,0,0,0,0,0,3,2,--0,0,0,0,0,--0,0,0,0,2,  
--0,0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--

R56)

0,0,0,0,0,0,0,5,4,-->0,0,0,0,0,2,1,--0,0,0,0,0,0,3,2,--0,0,0,0,0,0,4,3,--0,0,0,0,  
--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R57)

0,0,0,0,0,0,0,6,5,-->0,0,0,0,2,1,--0,0,0,0,0,3,2,--0,0,0,0,0,0,4,3,--0,0,0,0,0,0,0,  
5,4,--0,0,0,--0,0,2,--0,0,3,--

R58)

0,0,0,0,0,0,0,7,6,-->0,0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,0,4,3,--0,0,0,0,0,0,5,4,--0,  
0,0,0,0,0,0,6,5,--0,0,0,--0,0,2,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, :

LEN=3) 0,0,0, : 0,0,2, :

LEN=4) 0,0,0,0, : 0,0,0,2, : 0,0,0,3, : 0,0,2,1, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,2,1, : 0,0,0,3,2, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :

0,0,0,0,2,1, : 0,0,0,0,3,2, : 0,0,0,0,4,3, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, :

0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,2,1, : 0,0,0,0,0,3,2, : 0,0,0,0,0,4,3, :

0,0,0,0,0,5,4, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, :

0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,2,1, :

0,0,0,0,0,0,3,2,: 0,0,0,0,0,0,4,3,: 0,0,0,0,0,0,5,4,: 0,0,0,0,0,0,6,5,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,0,3,:  
 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,7,:  
 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,2,1,: 0,0,0,0,0,0,0,3,2,: 0,0,0,0,0,0,0,4,3,:  
 0,0,0,0,0,0,0,5,4,: 0,0,0,0,0,0,0,6,5,: 0,0,0,0,0,0,0,7,6,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,0,0,3,:  
 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,0,6,:  
 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,0,0,9,:  
 0,0,0,0,0,0,0,0,0,2,1,: 0,0,0,0,0,0,0,0,0,3,2,: 0,0,0,0,0,0,0,0,0,4,3,:  
 0,0,0,0,0,0,0,0,0,5,4,: 0,0,0,0,0,0,0,0,0,6,5,: 0,0,0,0,0,0,0,0,0,7,6,:  
 0,0,0,0,0,0,0,0,0,8,7,:

Number new nodes in level n is given by : 1,1,2,4,6,8,10,12,14,16,

-----Class

1009-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][100][101][120][210]]$

-----

--  
Rules of T[L]:

- R1) 0,-->0,0,--0,--
- R2) 0,0,-->0,0,0,--0,0,--0,0,2,--
- R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--
- R4) 0,0,2,-->0,0,2,1,--0,0,0,2,--0,--
- R5) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R6) 0,0,0,2,-->0,0,0,2,1,--0,0,0,0,2,--0,0,--0,0,2,--
- R7) 0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,3,--0,--
- R8) 0,0,2,1,-->0,0,--0,0,2,--
- R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,5,--
- R10) 0,0,0,0,2,-->0,0,0,0,2,1,--0,0,0,0,0,2,--0,0,0,--0,0,0,2,--0,0,0,3,--
- R11) 0,0,0,0,3,-->0,0,0,0,3,1,--0,0,0,0,2,1,--0,0,0,0,0,3,--0,0,--0,0,2,--
- R12) 0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,4,--0,--
- R13) 0,0,0,2,1,-->0,0,0,--0,0,0,2,--0,0,0,3,--
- R14) 0,0,0,3,1,-->0,0,0,2,1,--0,0,--0,0,2,--
- R15) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--
- R16) 0,0,0,0,0,2,-->0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R17) 0,0,0,0,0,3,-->0,0,0,0,0,0,3,1,--0,0,0,0,0,2,1,--0,0,0,0,0,0,3,--0,0,0,--0,0,0,2,--0,0,0,3,--
- R18) 0,0,0,0,0,4,-->0,0,0,0,0,0,4,1,--0,0,0,0,0,3,1,--0,0,0,0,2,1,--0,0,0,0,0,0,4,--0,0,--0,0,2,--
- R19) 0,0,0,0,0,5,-->0,0,0,0,0,0,5,1,--0,0,0,0,0,4,1,--0,0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,5,--0,--

R20) 0,0,0,0,2,1,-->0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R21) 0,0,0,0,3,1,-->0,0,0,0,2,1,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--  
R22) 0,0,0,0,4,1,-->0,0,0,0,3,1,--0,0,0,0,2,1,--0,0,0,0,2,--  
R23)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,  
3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--  
R24)  
0,0,0,0,0,0,2,-->0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,--0,0,0,0,0,2,--0,0,  
0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R25)  
0,0,0,0,0,0,3,-->0,0,0,0,0,0,3,1,--0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,3,--0,0,0,0,--0,0,  
0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R26)  
0,0,0,0,0,0,4,-->0,0,0,0,0,0,4,1,--0,0,0,0,0,0,3,1,--0,0,0,0,0,2,1,--0,0,0,0,0,0,0,4,--  
0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--  
R27)  
0,0,0,0,0,0,5,-->0,0,0,0,0,0,5,1,--0,0,0,0,0,0,4,1,--0,0,0,0,0,3,1,--0,0,0,0,2,1,--0,0,0,  
0,0,0,0,5,--0,0,0,0,2,--  
R28)  
0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,5,1,--0,0,0,0,0,4,1,--0,0,0,0,3,1,--0,0,0,2,  
1,--0,0,0,0,0,0,0,6,--0,0,0,0,--  
R29)  
0,0,0,0,0,0,2,1,-->0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,  
--  
R30)  
0,0,0,0,0,0,3,1,-->0,0,0,0,0,0,2,1,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
R31) 0,0,0,0,0,0,4,1,-->0,0,0,0,0,0,3,1,--0,0,0,0,0,2,1,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--  
R32) 0,0,0,0,0,0,5,1,-->0,0,0,0,0,0,4,1,--0,0,0,0,0,3,1,--0,0,0,0,2,1,--0,0,0,0,--0,0,2,--  
R33)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,  
,0,0,0,7,--0,0,0,0,0,0,0,0,8,--  
R34)  
0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,--0,0,0,0,0,0,  
0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R35)  
0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,3,--0,0,0,  
0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R36)  
0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,4,1,--0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,2,1,--0,0,0,0,0,0,  
0,0,0,4,--0,0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R37)  
0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,5,1,--0,0,0,0,0,0,0,4,1,--0,0,0,0,0,0,3,1,--0,0,0,0,0,2,  
1,--0,0,0,0,0,0,0,0,5,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--  
R38)  
0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,6,1,--0,0,0,0,0,0,0,5,1,--0,0,0,0,0,0,4,1,--0,0,0,0,0,3,  
1,--0,0,0,0,2,1,--0,0,0,0,0,0,0,6,--0,0,0,0,--0,0,2,--  
R39)  
0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,6,1,--0,0,0,0,0,0,5,1,--0,0,0,0,0,4,  
1,--0,0,0,0,3,1,--0,0,0,2,1,--0,0,0,0,0,0,0,0,7,--0,0,0,0,--

R40)

0,0,0,0,0,0,2,1,-->0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R41)

0,0,0,0,0,0,3,1,-->0,0,0,0,0,0,2,1,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R42)

0,0,0,0,0,0,4,1,-->0,0,0,0,0,0,3,1,--0,0,0,0,0,2,1,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R43)

0,0,0,0,0,0,5,1,-->0,0,0,0,0,0,4,1,--0,0,0,0,0,3,1,--0,0,0,0,2,1,--0,0,0,--0,0,0,2,--0,0,0,3,--

R44)

0,0,0,0,0,0,6,1,-->0,0,0,0,0,0,5,1,--0,0,0,0,0,4,1,--0,0,0,0,3,1,--0,0,0,2,1,--0,0,--0,0,2,--

R45)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,9,--

R46)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R47)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--

R48)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,4,1,--0,0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R49)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,0,5,1,--0,0,0,0,0,0,0,0,4,1,--0,0,0,0,0,0,3,1,--0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,5,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R50)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,0,6,1,--0,0,0,0,0,0,0,0,5,1,--0,0,0,0,0,0,4,1,--0,0,0,0,0,3,1,--0,0,0,0,2,1,--0,0,0,0,0,0,0,0,6,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--

R51)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,0,6,1,--0,0,0,0,0,0,5,1,--0,0,0,0,0,4,1,--0,0,0,0,3,1,--0,0,0,0,2,1,--0,0,0,0,0,0,0,0,7,--0,0,0,0,--0,0,2,--

R52)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,8,1,--0,0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,0,3,1,--0,0,0,2,1,--0,0,0,0,0,0,0,0,8,--0,0,0,0,--

R53)

0,0,0,0,0,0,0,0,2,1,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R54)

0,0,0,0,0,0,0,0,3,1,-->0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R55)

0,0,0,0,0,0,0,4,1,-->0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,2,1,--0,0,0,0,0,--0,0,0,0,0,2,  
--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R56)

0,0,0,0,0,0,0,5,1,-->0,0,0,0,0,0,0,4,1,--0,0,0,0,0,0,3,1,--0,0,0,0,0,2,1,--0,0,0,0,  
--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R57)

0,0,0,0,0,0,0,6,1,-->0,0,0,0,0,0,0,5,1,--0,0,0,0,0,0,4,1,--0,0,0,0,0,3,1,--0,0,0,0,  
2,1,--0,0,0,--0,0,0,2,--0,0,0,3,--

R58)

0,0,0,0,0,0,0,7,1,-->0,0,0,0,0,0,0,6,1,--0,0,0,0,0,0,5,1,--0,0,0,0,0,4,1,--0,0,0,0,  
3,1,--0,0,0,2,1,--0,0,--0,0,2,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

LEN=3) 0,0,0,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,2,: 0,0,0,3,: 0,0,2,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,: 0,0,0,2,1,: 0,0,0,3,1,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,: 0,0,0,0,0,5,:

0,0,0,0,2,1,: 0,0,0,0,3,1,: 0,0,0,0,4,1,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,: 0,0,0,0,0,0,4,:

0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,: 0,0,0,0,0,2,1,: 0,0,0,0,0,3,1,: 0,0,0,0,0,4,1,:

0,0,0,0,0,5,1,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,4,:

0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,2,1,:

0,0,0,0,0,0,3,1,: 0,0,0,0,0,0,4,1,: 0,0,0,0,0,0,5,1,: 0,0,0,0,0,0,6,1,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,7,:

0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,2,1,: 0,0,0,0,0,0,0,3,1,: 0,0,0,0,0,0,0,4,1,:

0,0,0,0,0,0,0,5,1,: 0,0,0,0,0,0,0,6,1,: 0,0,0,0,0,0,0,7,1,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,0,6,:

0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,0,0,9,:

0,0,0,0,0,0,0,0,2,1,: 0,0,0,0,0,0,0,0,3,1,: 0,0,0,0,0,0,0,0,4,1,:

0,0,0,0,0,0,0,0,5,1,: 0,0,0,0,0,0,0,0,6,1,: 0,0,0,0,0,0,0,0,7,1,:

0,0,0,0,0,0,0,0,8,1,:

Number new nodes in level n is given by : 1,1,2,4,6,8,10,12,14,16,

-----Class

1010-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][100][101][201][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,0,--0,0,--0,0,2,--

R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--

R4) 0,0,2,-->0,0,2,1,--0,0,0,2,--0,0,2,--

R5) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R6) 0,0,0,2,-->0,0,0,2,1,--0,0,0,0,2,--0,0,0,2,--0,0,0,3,--

R7) 0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,0,3,--0,0,0,3,--

R8) 0,0,2,1,-->0,0,--0,0,2,--  
R9)  
0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,  
0,0,0,0,5,--  
R10) 0,0,0,0,2,-->0,0,0,0,2,1,--0,0,0,0,0,2,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R11) 0,0,0,0,3,-->0,0,0,2,1,--0,0,0,2,1,--0,0,0,0,0,3,--0,0,0,0,3,--0,0,0,0,4,--  
R12) 0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,4,--0,0,0,0,4,--  
R13) 0,0,0,2,1,-->0,0,0,--0,0,0,2,--0,0,0,3,--  
R14)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,  
0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R15)  
0,0,0,0,0,2,-->0,0,0,0,0,2,1,--0,0,0,0,0,0,2,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,  
0,4,--0,0,0,0,0,5,--  
R16)  
0,0,0,0,0,3,-->0,0,0,0,2,1,--0,0,0,0,2,1,--0,0,0,0,0,0,3,--0,0,0,0,0,3,--0,0,0,0,0,  
4,--0,0,0,0,0,5,--  
R17)  
0,0,0,0,0,4,-->0,0,0,2,1,--0,0,0,2,1,--0,0,0,2,1,--0,0,0,0,0,0,4,--0,0,0,0,0,4,--0,  
0,0,0,0,5,--  
R18)  
0,0,0,0,0,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,5,--0,0,0,0,0,5,  
--  
R19) 0,0,0,0,2,1,-->0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R20)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R21)  
0,0,0,0,0,0,2,-->0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,  
--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R22)  
0,0,0,0,0,0,3,-->0,0,0,0,0,2,1,--0,0,0,0,0,2,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,3,--  
0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R23)  
0,0,0,0,0,0,4,-->0,0,0,0,2,1,--0,0,0,0,2,1,--0,0,0,0,2,1,--0,0,0,0,0,0,0,4,--0,0,0,  
0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R24)  
0,0,0,0,0,0,5,-->0,0,0,2,1,--0,0,0,2,1,--0,0,0,2,1,--0,0,0,2,1,--0,0,0,0,0,0,0,5,--  
0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R25)  
0,0,0,0,0,0,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,6,  
--0,0,0,0,0,0,6,--  
R26)  
0,0,0,0,0,2,1,-->0,0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,  
--  
R27)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,  
,0,0,0,7,--0,0,0,0,0,0,0,8,--  
R28)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
-

R29)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,2,1,--0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R30)

0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,2,1,--0,0,0,0,0,0,2,1,--0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R31)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,2,1,--0,0,0,0,0,2,1,--0,0,0,0,0,2,1,--0,0,0,0,0,2,1,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R32)

0,0,0,0,0,0,0,6,-->0,0,0,0,2,1,--0,0,0,0,2,1,--0,0,0,0,2,1,--0,0,0,0,2,1,--0,0,0,0,2,1,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R33)

0,0,0,0,0,0,0,7,-->0,0,0,2,1,--0,0,0,2,1,--0,0,0,2,1,--0,0,0,2,1,--0,0,0,2,1,--0,0,0,2,1,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,7,--

R34)

0,0,0,0,0,0,0,2,1,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--

R35)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,0,9,--

R36)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R37)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R38)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R39)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,2,1,--0,0,0,0,0,0,2,1,--0,0,0,0,0,0,2,1,--0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R40)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,2,1,--0,0,0,0,0,2,1,--0,0,0,0,0,2,1,--0,0,0,0,0,2,1,--0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R41)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,2,1,--0,0,0,0,2,1,--0,0,0,0,2,1,--0,0,0,0,2,1,--0,0,0,0,2,1,--0,0,0,0,2,1,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R42)

0,0,0,0,0,0,0,0,8,-->0,0,0,2,1,--0,0,0,2,1,--0,0,0,2,1,--0,0,0,2,1,--0,0,0,2,1,--0,0,0,2,1,--0,0,0,0,0,0,0,0,8,--



0,2,1,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,8,--  
R43)

0,0,0,0,0,0,2,1,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,  
0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

LEN=3) 0,0,0,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,2,: 0,0,0,3,: 0,0,2,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,: 0,0,0,2,1,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,: 0,0,0,0,0,5,:

0,0,0,0,2,1,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,: 0,0,0,0,0,0,4,:

0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,: 0,0,0,0,0,2,1,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,4,:

0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,2,1,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,7,:

0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,2,1,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,0,6,:

0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,0,0,9,:

0,0,0,0,0,0,0,0,2,1,:

Number new nodes in level n is given by : 1,1,2,4,5,6,7,8,9,10,

-----Class

1011-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding L=[[010][100][102][110][120]]

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,0,--0,0,--0,0,2,--

R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--

R4) 0,0,2,-->0,0,2,1,--0,0,--0,--

R5) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R6) 0,0,0,2,-->0,0,2,1,--0,0,0,--0,0,--0,0,2,--

R7) 0,0,0,3,-->0,0,0,3,1,--0,0,0,3,2,--0,0,--0,--

R8) 0,0,2,1,-->0,0,2,1,--

R9)

0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,

0,0,0,0,5,--

R10) 0,0,0,0,2,-->0,0,2,1,--0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--

R11) 0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,2,--0,0,0,--0,0,--0,0,2,--

R12) 0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,3,--0,0,--0,--

R13) 0,0,0,3,1,-->0,0,2,1,--0,0,2,1,--

R14) 0,0,0,3,2,-->0,0,0,3,2,1,--0,0,2,1,--

R15)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,

0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R16)

0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R17) 0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,2,--0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--

R18)

0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,3,--0,0,0,--0,0,--0,0,2,--

R19)

0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,4,--0,0,

--0,--

R20) 0,0,0,0,4,1,-->0,0,0,3,1,--0,0,0,3,2,--0,0,2,1,--

R21) 0,0,0,0,4,2,-->0,0,0,3,2,1,--0,0,2,1,--0,0,2,1,--

R22) 0,0,0,0,4,3,-->0,0,0,0,4,3,1,--0,0,0,0,4,3,1,--0,0,2,1,--

R23) 0,0,0,3,2,1,-->

R24)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,

3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R25)

0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,

0,0,0,0,4,--0,0,0,0,5,--

R26)

0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,2,--0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,

3,--0,0,0,0,4,--

R27)

0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,3,--0,0,0,0,--0,0,0,--0,0,0,

2,--0,0,0,3,--

R28)

0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,4,--0,

0,0,--0,0,--0,0,2,--

R29)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,

6,4,--0,0,0,0,0,6,5,--0,0,--0,--

R30) 0,0,0,0,0,5,1,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,3,--0,0,2,1,--

R31) 0,0,0,0,0,5,2,-->0,0,0,3,2,1,--0,0,0,3,1,--0,0,0,3,2,--0,0,2,1,--

R32) 0,0,0,0,0,5,3,-->0,0,0,0,4,3,1,--0,0,0,0,4,3,1,--0,0,2,1,--0,0,2,1,--

R33)

0,0,0,0,0,5,4,-->0,0,0,0,0,5,4,1,--0,0,0,0,0,5,4,2,--0,0,0,0,0,5,4,1,--0,0,2,1,--

R34) 0,0,0,0,4,3,1,-->0,0,0,3,2,1,--

R35)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,

0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,

0,0,0,7,--0,0,0,0,0,0,0,8,--

R36)

0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,

0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R37)

0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,2,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--

0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R38)

0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,3,--0,0,0,0,0,--0,0,0,0,--

0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R39)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,4,--  
0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--

R40)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,6,1,--0,0,0,0,0,6,2,--0,0,0,0,0,6,3,--0,0,0,0,0,  
0,6,4,--0,0,0,0,0,6,5,--0,0,0,--0,0,--0,0,2,--

R41)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,7,1,--0,0,0,0,0,0,7,2,--0,0,0,0,0,0,7,3,--0,0,  
0,0,0,0,0,7,4,--0,0,0,0,0,0,7,5,--0,0,0,0,0,0,7,6,--0,0,--0,--

R42)

0,0,0,0,0,0,6,1,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,4,--  
0,0,2,1,--

R43)

0,0,0,0,0,0,6,2,-->0,0,0,3,2,1,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,3,--0,0,2,1,  
--

R44)

0,0,0,0,0,0,6,3,-->0,0,0,0,4,3,1,--0,0,0,0,4,3,1,--0,0,0,3,1,--0,0,0,3,2,--0,0,2,1,  
--

R45)

0,0,0,0,0,0,6,4,-->0,0,0,0,0,5,4,1,--0,0,0,0,0,5,4,2,--0,0,0,0,0,5,4,1,--0,0,2,1,--  
0,0,2,1,--

R46)

0,0,0,0,0,0,6,5,-->0,0,0,0,0,6,5,1,--0,0,0,0,0,6,5,2,--0,0,0,0,0,6,5,3,--0,0,  
0,0,0,0,6,5,1,--0,0,2,1,--

R47) 0,0,0,0,0,5,4,1,-->0,0,0,0,4,3,1,--0,0,0,0,4,3,1,--

R48) 0,0,0,0,0,5,4,2,-->0,0,0,3,2,1,--0,0,0,3,2,1,--

R49)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,2,  
--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,  
,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R50)

0,0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--  
0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,  
,0,7,--

R51)

0,0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,2,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,  
0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R52)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,3,--0,0,0,0,0,0,--0,0,0,  
0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R53)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,4,  
--0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R54)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,6,1,--0,0,0,0,0,6,2,--0,0,0,0,0,6,3,--0,0,0,0,  
0,0,6,4,--0,0,0,0,0,6,5,--0,0,0,0,--0,0,0,--0,0,2,--0,0,3,--

R55)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,7,1,--0,0,0,0,0,0,7,2,--0,0,0,0,0,0,7,3,--0,  
0,0,0,0,0,0,7,4,--0,0,0,0,0,0,7,5,--0,0,0,0,0,0,7,6,--0,0,0,--0,0,--0,0,2,--

R56)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,8,1,--0,0,0,0,0,0,8,2,--0,0,0,0,0,0,8,

3, --0,0,0,0,0,0,0,0,8,4, --0,0,0,0,0,0,0,0,8,5, --0,0,0,0,0,0,0,0,8,6, --0,0,0,0,0,0,0,0,8,7, --0,0, --0, --

R57)

0,0,0,0,0,0,0,7,1, -->0,0,0,0,0,0,6,1, --0,0,0,0,0,0,6,2, --0,0,0,0,0,0,6,3, --0,0,0,0,0,0,6,4, --0,0,0,0,0,0,6,5, --0,0,2,1, --

R58)

0,0,0,0,0,0,0,7,2, -->0,0,0,3,2,1, --0,0,0,0,0,5,1, --0,0,0,0,0,5,2, --0,0,0,0,0,5,3, --0,0,0,0,0,5,4, --0,0,2,1, --

R59)

0,0,0,0,0,0,0,7,3, -->0,0,0,0,4,3,1, --0,0,0,0,4,3,1, --0,0,0,0,4,1, --0,0,0,0,4,2, --0,0,0,0,4,3, --0,0,2,1, --

R60)

0,0,0,0,0,0,0,7,4, -->0,0,0,0,0,5,4,1, --0,0,0,0,0,5,4,2, --0,0,0,0,0,5,4,1, --0,0,0,3,1, --0,0,0,3,2, --0,0,2,1, --

R61)

0,0,0,0,0,0,0,7,5, -->0,0,0,0,0,6,5,1, --0,0,0,0,0,6,5,2, --0,0,0,0,0,6,5,3, --0,0,0,0,0,6,5,1, --0,0,2,1, --0,0,2,1, --

R62)

0,0,0,0,0,0,0,7,6, -->0,0,0,0,0,0,7,6,1, --0,0,0,0,0,0,7,6,2, --0,0,0,0,0,0,7,6,3, --0,0,0,0,0,0,7,6,4, --0,0,0,0,0,0,7,6,1, --0,0,2,1, --

R63) 0,0,0,0,0,0,6,5,1, -->0,0,0,0,0,5,4,1, --0,0,0,0,0,5,4,2, --0,0,0,0,0,5,4,1, --

R64) 0,0,0,0,0,0,6,5,2, -->0,0,0,3,2,1, --0,0,0,0,4,3,1, --0,0,0,0,4,3,1, --

R65) 0,0,0,0,0,0,6,5,3, -->0,0,0,0,4,3,1, --0,0,0,0,4,3,1, --0,0,0,3,2,1, --

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, :

LEN=3) 0,0,0, : 0,0,2, :

LEN=4) 0,0,0,0, : 0,0,0,2, : 0,0,0,3, : 0,0,2,1, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,3,1, : 0,0,0,3,2, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :

0,0,0,0,4,1, : 0,0,0,0,4,2, : 0,0,0,0,4,3, : 0,0,0,3,2,1, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, :

0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,1, : 0,0,0,0,0,5,2, : 0,0,0,0,0,5,3, :

0,0,0,0,0,5,4, : 0,0,0,0,4,3,1, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, :

0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,1, :

0,0,0,0,0,0,6,2, : 0,0,0,0,0,0,6,3, : 0,0,0,0,0,0,6,4, : 0,0,0,0,0,0,6,5, :

0,0,0,0,0,5,4,1, : 0,0,0,0,0,5,4,2, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,3, :

0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7, :

0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,1, : 0,0,0,0,0,0,0,7,2, : 0,0,0,0,0,0,0,7,3, :

0,0,0,0,0,0,0,7,4, : 0,0,0,0,0,0,0,7,5, : 0,0,0,0,0,0,0,7,6, : 0,0,0,0,0,0,6,5,1, :

0,0,0,0,0,6,5,2, : 0,0,0,0,0,6,5,3, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,0,3, :

0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, :

0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, :

0,0,0,0,0,0,0,0,8,1, : 0,0,0,0,0,0,0,0,8,2, : 0,0,0,0,0,0,0,0,8,3, :

0,0,0,0,0,0,0,0,8,4, : 0,0,0,0,0,0,0,0,8,5, : 0,0,0,0,0,0,0,0,8,6, :

0,0,0,0,0,0,0,0,8,7, : 0,0,0,0,0,0,0,7,6,1, : 0,0,0,0,0,0,0,7,6,2, :

0,0,0,0,0,0,0,7,6,3, : 0,0,0,0,0,0,0,7,6,4, :

Number new nodes in level n is given by : 1,1,2,4,6,9,11,14,17,20,

-----Class

1012-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][100][102][110][201]]$

-----

--

Rules of  $T[L]$ :

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,0,--0,0,--0,0,2,--

R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--

R4) 0,0,2,-->0,0,2,1,--0,0,--0,0,2,3,--

R5) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R6) 0,0,0,2,-->0,0,2,1,--0,0,0,--0,0,0,2,3,--0,0,0,2,4,--

R7) 0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,--0,0,0,3,4,--

R8) 0,0,2,1,-->0,0,2,1,--

R9) 0,0,2,3,-->0,0,2,3,1,--0,0,--0,0,2,3,--

R10)

0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,5,--

R11) 0,0,0,0,2,-->0,0,2,1,--0,0,0,0,--0,0,0,0,2,3,--0,0,0,0,2,4,--0,0,0,0,2,5,--

R12) 0,0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,--0,0,0,0,3,4,--0,0,0,0,3,5,--

R13) 0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,--0,0,0,0,4,5,--

R14) 0,0,0,2,3,-->0,0,2,3,1,--0,0,0,--0,0,0,2,3,--0,0,0,2,4,--

R15) 0,0,0,2,4,-->0,0,2,3,1,--0,0,0,3,2,--0,0,--0,0,0,3,4,--

R16) 0,0,0,3,2,-->0,0,2,3,1,--0,0,2,1,--

R17) 0,0,0,3,4,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,--0,0,0,3,4,--

R18) 0,0,2,3,1,-->

R19)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R20)

0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,--0,0,0,0,0,2,3,--0,0,0,0,0,2,4,--0,0,0,0,0,2,5,--0,0,0,0,0,2,6,--

R21)

0,0,0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,--0,0,0,0,0,3,4,--0,0,0,0,0,3,5,--0,0,0,0,3,6,--

R22)

0,0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,--0,0,0,0,0,4,5,--0,0,0,0,0,4,6,--

R23)

0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,--0,0,0,0,0,5,6,--

R24)

0,0,0,0,2,3,-->0,0,2,3,1,--0,0,0,0,--0,0,0,0,2,3,--0,0,0,0,2,4,--0,0,0,0,2,5,--

R25) 0,0,0,0,2,4,-->0,0,2,3,1,--0,0,0,3,2,--0,0,0,--0,0,0,0,3,4,--0,0,0,0,3,5,--

R26) 0,0,0,0,2,5,-->0,0,2,3,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,--0,0,0,0,4,5,--

R27) 0,0,0,0,3,4,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,--0,0,0,0,3,4,--0,0,0,0,3,5,--

R28) 0,0,0,0,3,5,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,4,3,--0,0,--0,0,0,0,4,5,--

R29) 0,0,0,0,4,3,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,2,1,--

R30) 0,0,0,0,4,5,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,4,5,3,--0,0,--0,0,0,0,4,5,--  
R31) 0,0,0,3,4,2,-->0,0,2,3,1,--  
R32)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R33)  
0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,0,2,3,--0,0,0,0,0,0,2,4,--0,0,0,  
0,0,0,2,5,--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,2,7,--  
R34)  
0,0,0,0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,--0,0,0,0,0,0,3,4,--0,0,0,0,0,0,3,  
5,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,7,--  
R35)  
0,0,0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,--0,0,0,0,0,0,4,5,--0,  
0,0,0,0,0,4,6,--0,0,0,0,0,0,4,7,--  
R36)  
0,0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,--0,0,0,  
0,0,0,5,6,--0,0,0,0,0,0,5,7,--  
R37)  
0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,  
5,--0,0,--0,0,0,0,0,0,6,7,--  
R38)  
0,0,0,0,0,2,3,-->0,0,2,3,1,--0,0,0,0,0,0,--0,0,0,0,0,0,2,3,--0,0,0,0,0,0,2,4,--0,0,0,0,0,  
2,5,--0,0,0,0,0,0,2,6,--  
R39)  
0,0,0,0,0,2,4,-->0,0,2,3,1,--0,0,0,3,2,--0,0,0,0,--0,0,0,0,0,0,3,4,--0,0,0,0,0,0,3,5,--  
0,0,0,0,0,3,6,--  
R40)  
0,0,0,0,0,2,5,-->0,0,2,3,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,--0,0,0,0,0,0,4,5,--0,0,  
0,0,0,4,6,--  
R41)  
0,0,0,0,0,2,6,-->0,0,2,3,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,--0,0,0,  
0,0,5,6,--  
R42)  
0,0,0,0,0,3,4,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,--0,0,0,0,0,0,3,4,--0,0,0,0,0,0,3,5,  
--0,0,0,0,0,0,3,6,--  
R43)  
0,0,0,0,0,3,5,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,4,3,--0,0,0,--0,0,0,0,0,0,4,5,--0,  
0,0,0,0,4,6,--  
R44)  
0,0,0,0,0,3,6,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,--0,0,  
0,0,0,5,6,--  
R45)  
0,0,0,0,0,4,5,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,4,5,3,--0,0,0,--0,0,0,0,0,0,4,5,--  
0,0,0,0,0,4,6,--  
R46)  
0,0,0,0,0,4,6,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,4,5,3,--0,0,0,0,0,5,4,--0,0,--0,  
0,0,0,0,5,6,--  
R47) 0,0,0,0,0,5,4,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,4,5,3,--0,0,2,1,--  
R48)  
0,0,0,0,0,5,6,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,4,5,3,--0,0,0,0,0,5,6,4,--0,0,--

0,0,0,0,0,5,6,--

R49) 0,0,0,0,4,5,3,-->0,0,2,3,1,--0,0,0,3,4,2,--

R50)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R51)

0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,3,--0,0,0,0,0,0,0,0,2,4,--0,0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,0,2,8,--

R52)

0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,3,4,--0,0,0,0,0,0,0,3,5,--0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,3,8,--

R53)

0,0,0,0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,--0,0,0,0,0,0,0,0,4,5,--0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,4,8,--

R54)

0,0,0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,0,0,5,6,--0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,5,8,--

R55)

0,0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,0,6,5,--0,0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,6,8,--

R56)

0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,7,8,--

R57)

0,0,0,0,0,0,2,3,-->0,0,2,3,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,2,3,--0,0,0,0,0,0,2,4,--0,0,0,0,0,0,2,5,--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,2,7,--

R58)

0,0,0,0,0,0,2,4,-->0,0,2,3,1,--0,0,0,3,2,--0,0,0,0,0,0,--0,0,0,0,0,0,3,4,--0,0,0,0,0,0,3,5,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,7,--

R59)

0,0,0,0,0,0,2,5,-->0,0,2,3,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,--0,0,0,0,0,0,4,5,--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,7,--

R60)

0,0,0,0,0,0,2,6,-->0,0,2,3,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,5,6,--0,0,0,0,0,0,5,7,--

R61)

0,0,0,0,0,0,2,7,-->0,0,2,3,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--0,0,0,0,0,0,6,7,--

R62)

0,0,0,0,0,0,3,4,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,0,0,--0,0,0,0,0,0,3,4,--0,0,0,0,0,0,3,5,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,7,--

R63)

0,0,0,0,0,0,3,5,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,4,3,--0,0,0,0,0,0,--0,0,0,0,0,0,4,5,--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,7,--

R64)

0,0,0,0,0,0,3,6,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,5,6,--0,0,0,0,0,0,5,7,--

R65)

0,0,0,0,0,0,3,7,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,4,5,--

0,0,6,5,--0,0,--0,0,0,0,0,0,6,7,--

R66)

0,0,0,0,0,0,4,5,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,4,5,3,--0,0,0,0,--0,0,0,0,0,0,  
4,5,--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,7,--

R67)

0,0,0,0,0,0,4,6,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,4,5,3,--0,0,0,0,0,5,4,--0,0,0,  
--0,0,0,0,0,0,5,6,--0,0,0,0,0,0,5,7,--

R68)

0,0,0,0,0,0,4,7,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,4,5,3,--0,0,0,0,0,5,4,--0,0,0,  
0,0,0,6,5,--0,0,--0,0,0,0,0,0,6,7,--

R69)

0,0,0,0,0,0,5,6,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,4,5,3,--0,0,0,0,0,5,6,4,--0,0,  
0,--0,0,0,0,0,0,5,6,--0,0,0,0,0,0,5,7,--

R70)

0,0,0,0,0,0,5,7,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,4,5,3,--0,0,0,0,0,5,6,4,--0,0,  
0,0,0,0,6,5,--0,0,--0,0,0,0,0,0,6,7,--

R71)

0,0,0,0,0,0,6,5,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,4,5,3,--0,0,0,0,0,5,6,4,--0,0,  
2,1,--

R72)

0,0,0,0,0,0,6,7,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,4,5,3,--0,0,0,0,0,5,6,4,--0,0,  
0,0,0,0,6,7,5,--0,0,--0,0,0,0,0,0,6,7,--

R73) 0,0,0,0,0,0,5,6,4,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,4,5,3,--

R74)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,2,  
--0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,  
,0,6,--0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,9,--

R75)

0,0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,3,--0,0,0,0,0,0,  
0,0,2,4,--0,0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,0,2,7,--0,0,0,0,  
,0,0,0,0,2,8,--0,0,0,0,0,0,0,0,2,9,--

R76)

0,0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,3,4,--0,  
0,0,0,0,0,0,0,0,3,5,--0,0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,0,3,8,  
,--0,0,0,0,0,0,0,0,3,9,--

R77)

0,0,0,0,0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,  
0,0,4,5,--0,0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,0,4,8,--0,0,0,0,  
,0,0,0,0,4,9,--

R78)

0,0,0,0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
--0,0,0,0,0,0,0,0,5,6,--0,0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,0,5,8,--0,0,0,0,0,0,0,0,  
,5,9,--

R79)

0,0,0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--0,0,0,0,0,--0,0,0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,0,6,9,-  
-

R80)

0,0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--0,0,0,0,0,0,0,0,7,6,--0,0,0,--0,0,0,0,0,0,0,0,7,8,--0,0,0,0,0,0,0,0,7,9,--



R81)

0,0,0,0,0,0,0,0,8,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,8,7,--0,0,--0,0,0,0,0,0,0,8,9,--

R82)

0,0,0,0,0,0,0,2,3,-->0,0,2,3,1,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,3,--0,0,0,0,0,0,0,  
2,4,--0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,2,8,  
,--

R83)

0,0,0,0,0,0,0,2,4,-->0,0,2,3,1,--0,0,0,3,2,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,3,4,--0,0,  
0,0,0,0,0,3,5,--0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,3,8,--

R84)

0,0,0,0,0,0,0,2,5,-->0,0,2,3,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,--0,0,0,0,0,0,  
0,4,5,--0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,4,8,--

R85)

0,0,0,0,0,0,0,2,6,-->0,0,2,3,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,  
--0,0,0,0,0,0,0,5,6,--0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,5,8,--

R86)

0,0,0,0,0,0,0,2,7,-->0,0,2,3,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,  
0,0,6,5,--0,0,0,--0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,6,8,--

R87)

0,0,0,0,0,0,0,2,8,-->0,0,2,3,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,  
0,0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,--0,0,0,0,0,0,7,8,--

R88)

0,0,0,0,0,0,0,3,4,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,3,4,--0,  
0,0,0,0,0,0,3,5,--0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,3,8,--

R89)

0,0,0,0,0,0,0,3,5,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,4,3,--0,0,0,0,0,--0,0,0,0,0,  
0,0,4,5,--0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,4,8,--

R90)

0,0,0,0,0,0,0,3,6,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,  
0,--0,0,0,0,0,0,0,5,6,--0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,5,8,--

R91)

0,0,0,0,0,0,0,3,7,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,  
0,0,0,6,5,--0,0,0,--0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,6,8,--

R92)

0,0,0,0,0,0,0,3,8,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,  
0,0,0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,--0,0,0,0,0,0,7,8,--

R93)

0,0,0,0,0,0,0,4,5,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,4,5,3,--0,0,0,0,0,--0,0,0,0,  
0,0,0,4,5,--0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,4,8,--

R94)

0,0,0,0,0,0,0,4,6,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,4,5,3,--0,0,0,0,0,5,4,--0,0,  
0,0,--0,0,0,0,0,0,0,5,6,--0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,5,8,--

R95)

0,0,0,0,0,0,0,4,7,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,4,5,3,--0,0,0,0,0,5,4,--0,0,  
0,0,0,0,6,5,--0,0,0,--0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,6,8,--

R96)

0,0,0,0,0,0,0,4,8,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,4,5,3,--0,0,0,0,0,5,4,--0,0,  
0,0,0,0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,--0,0,0,0,0,0,7,8,--

R97)

0,0,0,0,0,0,0,5,6,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,4,5,3,--0,0,0,0,0,5,6,4,--0,  
0,0,0,--0,0,0,0,0,0,0,5,6,--0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,5,8,--

R98)

0,0,0,0,0,0,0,5,7,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,4,5,3,--0,0,0,0,0,5,6,4,--0,  
0,0,0,0,0,6,5,--0,0,0,--0,0,0,0,0,0,6,7,--0,0,0,0,0,0,6,8,--

R99)

0,0,0,0,0,0,0,5,8,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,4,5,3,--0,0,0,0,0,5,6,4,--0,  
0,0,0,0,0,6,5,--0,0,0,0,0,0,7,6,--0,0,--0,0,0,0,0,0,7,8,--

R100)

0,0,0,0,0,0,0,6,7,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,4,5,3,--0,0,0,0,0,5,6,4,--0,  
0,0,0,0,0,6,7,5,--0,0,0,--0,0,0,0,0,0,6,7,--0,0,0,0,0,0,6,8,--

R101)

0,0,0,0,0,0,0,6,8,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,4,5,3,--0,0,0,0,0,5,6,4,--0,  
0,0,0,0,0,6,7,5,--0,0,0,0,0,0,7,6,--0,0,--0,0,0,0,0,0,7,8,--

R102)

0,0,0,0,0,0,0,7,6,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,4,5,3,--0,0,0,0,0,5,6,4,--0,  
0,0,0,0,0,6,7,5,--0,0,2,1,--

R103)

0,0,0,0,0,0,0,7,8,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,4,5,3,--0,0,0,0,0,5,6,4,--0,  
0,0,0,0,0,6,7,5,--0,0,0,0,0,0,7,8,6,--0,0,--0,0,0,0,0,0,7,8,--

R104)

0,0,0,0,0,0,6,7,5,-->0,0,2,3,1,--0,0,0,3,4,2,--0,0,0,0,4,5,3,--0,0,0,0,0,5,6,4,--

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, :
- LEN=3) 0,0,0, : 0,0,2, :
- LEN=4) 0,0,0,0, : 0,0,0,2, : 0,0,0,3, : 0,0,2,1, : 0,0,2,3, :
- LEN=5) 0,0,0,0,0, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,2,3, : 0,0,0,2,4, :  
0,0,0,3,2, : 0,0,0,3,4, : 0,0,2,3,1, :
- LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :  
0,0,0,0,2,3, : 0,0,0,0,2,4, : 0,0,0,0,2,5, : 0,0,0,0,3,4, : 0,0,0,0,3,5, : 0,0,0,0,4,3, :  
0,0,0,0,4,5, : 0,0,0,3,4,2, :
- LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, :  
0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,2,3, : 0,0,0,0,0,2,4, : 0,0,0,0,0,2,5, :  
0,0,0,0,0,2,6, : 0,0,0,0,0,3,4, : 0,0,0,0,0,3,5, : 0,0,0,0,0,3,6, : 0,0,0,0,0,4,5, :  
0,0,0,0,0,4,6, : 0,0,0,0,0,5,4, : 0,0,0,0,0,5,6, : 0,0,0,0,4,5,3, :
- LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, :  
0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,2,3, :  
0,0,0,0,0,0,2,4, : 0,0,0,0,0,0,2,5, : 0,0,0,0,0,0,2,6, : 0,0,0,0,0,0,2,7, :  
0,0,0,0,0,0,3,4, : 0,0,0,0,0,0,3,5, : 0,0,0,0,0,0,3,6, : 0,0,0,0,0,0,3,7, :  
0,0,0,0,0,0,4,5, : 0,0,0,0,0,0,4,6, : 0,0,0,0,0,0,4,7, : 0,0,0,0,0,0,5,6, :  
0,0,0,0,0,0,5,7, : 0,0,0,0,0,0,6,5, : 0,0,0,0,0,0,6,7, : 0,0,0,0,0,5,6,4, :
- LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,3, :  
0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7, :  
0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,2,3, : 0,0,0,0,0,0,0,2,4, : 0,0,0,0,0,0,0,2,5, :  
0,0,0,0,0,0,0,2,6, : 0,0,0,0,0,0,0,2,7, : 0,0,0,0,0,0,0,2,8, : 0,0,0,0,0,0,0,3,4, :  
0,0,0,0,0,0,0,3,5, : 0,0,0,0,0,0,0,3,6, : 0,0,0,0,0,0,0,3,7, : 0,0,0,0,0,0,0,3,8, :  
0,0,0,0,0,0,0,4,5, : 0,0,0,0,0,0,0,4,6, : 0,0,0,0,0,0,0,4,7, : 0,0,0,0,0,0,0,4,8, :  
0,0,0,0,0,0,0,5,6, : 0,0,0,0,0,0,0,5,7, : 0,0,0,0,0,0,0,5,8, : 0,0,0,0,0,0,0,6,7, :  
0,0,0,0,0,0,0,6,8, : 0,0,0,0,0,0,0,7,6, : 0,0,0,0,0,0,0,7,8, : 0,0,0,0,0,0,6,7,5, :

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,0,0,3,:  
0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,0,6,:  
0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,0,0,9,:  
0,0,0,0,0,0,0,0,2,3,: 0,0,0,0,0,0,0,0,2,4,: 0,0,0,0,0,0,0,0,2,5,:  
0,0,0,0,0,0,0,0,2,6,: 0,0,0,0,0,0,0,0,2,7,: 0,0,0,0,0,0,0,0,2,8,:  
0,0,0,0,0,0,0,0,2,9,: 0,0,0,0,0,0,0,0,3,4,: 0,0,0,0,0,0,0,0,3,5,:  
0,0,0,0,0,0,0,0,3,6,: 0,0,0,0,0,0,0,0,3,7,: 0,0,0,0,0,0,0,0,3,8,:  
0,0,0,0,0,0,0,0,3,9,: 0,0,0,0,0,0,0,0,4,5,: 0,0,0,0,0,0,0,0,4,6,:  
0,0,0,0,0,0,0,0,4,7,: 0,0,0,0,0,0,0,0,4,8,: 0,0,0,0,0,0,0,0,4,9,:  
0,0,0,0,0,0,0,0,5,6,: 0,0,0,0,0,0,0,0,5,7,: 0,0,0,0,0,0,0,0,5,8,:  
0,0,0,0,0,0,0,0,5,9,: 0,0,0,0,0,0,0,0,6,7,: 0,0,0,0,0,0,0,0,6,8,:  
0,0,0,0,0,0,0,0,6,9,: 0,0,0,0,0,0,0,0,7,8,: 0,0,0,0,0,0,0,0,7,9,:  
0,0,0,0,0,0,0,0,8,7,: 0,0,0,0,0,0,0,0,8,9,: 0,0,0,0,0,0,0,7,8,6,:  
Number new nodes in level n is given by : 1,1,2,5,9,13,18,24,31,39,

-----Class

1013-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][100][102][110][210]]$

-----  
--  
Rules of T[L]:

- R1) 0,-->0,0,--0,--
- R2) 0,0,-->0,0,0,--0,0,--0,0,2,--
- R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--
- R4) 0,0,2,-->0,0,2,1,--0,0,--0,0,2,3,--
- R5) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R6) 0,0,0,2,-->0,0,2,1,--0,0,0,--0,0,0,2,3,--0,0,0,2,4,--
- R7) 0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,--0,0,0,3,4,--
- R8) 0,0,2,1,-->0,0,2,1,--
- R9) 0,0,2,3,-->0,0,2,3,1,--0,0,--0,0,2,3,--
- R10) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,5,--
- R11) 0,0,0,0,2,-->0,0,2,1,--0,0,0,0,--0,0,0,0,2,3,--0,0,0,0,2,4,--0,0,0,0,2,5,--
- R12) 0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,--0,0,0,0,3,4,--0,0,0,0,3,5,--
- R13) 0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,--0,0,0,0,4,5,--
- R14) 0,0,0,2,3,-->0,0,2,3,1,--0,0,0,--0,0,0,2,3,--0,0,0,2,4,--
- R15) 0,0,0,2,4,-->0,0,2,3,1,--0,0,2,1,--0,0,--0,0,0,2,4,5,--
- R16) 0,0,0,3,1,-->0,0,2,1,--0,0,2,1,--
- R17) 0,0,0,3,4,-->0,0,0,3,4,1,--0,0,2,3,1,--0,0,--0,0,0,3,4,--
- R18) 0,0,2,3,1,-->
- R19) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--
- R20) 0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,2,3,--0,0,0,0,0,2,4,--0,0,0,0,0,2,5,--0,0,0,0,0,2,6,--
- R21) 0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,3,4,--0,0,0,0,0,3,5,--0,0,0,0,3,6,--

R22)

0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,--0,0,0,0,0,4,5,--0,0,0,0,  
0,4,6,--

R23)

0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,--0,0,0,0,0,  
5,6,--

R24)

0,0,0,0,2,3,-->0,0,2,3,1,--0,0,0,0,--0,0,0,0,2,3,--0,0,0,0,2,4,--0,0,0,0,2,5,--

R25) 0,0,0,0,2,4,-->0,0,2,3,1,--0,0,2,1,--0,0,0,--0,0,0,0,2,4,5,--0,0,0,0,2,4,6,--

R26) 0,0,0,0,2,5,-->0,0,2,3,1,--0,0,0,3,1,--0,0,2,1,--0,0,--0,0,0,0,2,5,6,--

R27) 0,0,0,0,3,4,-->0,0,0,3,4,1,--0,0,2,3,1,--0,0,0,--0,0,0,0,3,4,--0,0,0,0,3,5,--

R28) 0,0,0,0,3,5,-->0,0,0,3,4,1,--0,0,2,3,1,--0,0,2,1,--0,0,--0,0,0,0,3,5,6,--

R29) 0,0,0,0,4,1,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--

R30) 0,0,0,0,4,5,-->0,0,0,0,4,5,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,--0,0,0,0,4,5,--

R31) 0,0,0,2,4,5,-->0,0,2,3,1,--0,0,2,3,1,--0,0,--0,0,0,2,4,5,--

R32) 0,0,0,3,4,1,-->0,0,2,3,1,--

R33)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R34)

0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,0,2,3,--0,0,0,0,0,0,2,4,--0,0,0,  
0,0,0,2,5,--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,2,7,--

R35)

0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,--0,0,0,0,0,0,3,4,--0,0,0,0,0,0,3,  
5,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,7,--

R36)

0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,0,4,5,--0,  
0,0,0,0,0,4,6,--0,0,0,0,0,0,4,7,--

R37)

0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,--0,0,0,  
0,0,0,5,6,--0,0,0,0,0,0,5,7,--

R38)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,  
1,--0,0,--0,0,0,0,0,0,6,7,--

R39)

0,0,0,0,0,2,3,-->0,0,2,3,1,--0,0,0,0,0,--0,0,0,0,0,2,3,--0,0,0,0,0,2,4,--0,0,0,0,0,  
2,5,--0,0,0,0,0,2,6,--

R40)

0,0,0,0,0,2,4,-->0,0,2,3,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,2,4,5,--0,0,0,0,0,2,4,6,  
--0,0,0,0,0,2,4,7,--

R41)

0,0,0,0,0,2,5,-->0,0,2,3,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,--0,0,0,0,0,2,5,6,--0,0,0,  
0,0,2,5,7,--

R42)

0,0,0,0,0,2,6,-->0,0,2,3,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,--0,0,0,0,0,2,  
6,7,--

R43)

0,0,0,0,0,3,4,-->0,0,0,3,4,1,--0,0,2,3,1,--0,0,0,0,--0,0,0,0,0,3,4,--0,0,0,0,0,3,5,  
--0,0,0,0,0,3,6,--

R44)

0,0,0,0,0,3,5,-->0,0,0,3,4,1,--0,0,2,3,1,--0,0,2,1,--0,0,0,--0,0,0,0,0,3,5,6,--0,0,0,0,0,3,5,7,--

R45)

0,0,0,0,0,3,6,-->0,0,0,3,4,1,--0,0,2,3,1,--0,0,0,3,1,--0,0,2,1,--0,0,--0,0,0,0,0,3,6,7,--

R46)

0,0,0,0,0,4,5,-->0,0,0,0,4,5,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,0,--0,0,0,0,0,4,5,--0,0,0,0,0,4,6,--

R47)

0,0,0,0,0,4,6,-->0,0,0,0,4,5,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,2,1,--0,0,--0,0,0,0,0,4,6,7,--

R48) 0,0,0,0,0,5,1,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--

R49)

0,0,0,0,0,5,6,-->0,0,0,0,0,5,6,1,--0,0,0,0,4,5,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,--0,0,0,0,0,5,6,--

R50)

0,0,0,0,2,4,5,-->0,0,2,3,1,--0,0,2,3,1,--0,0,0,--0,0,0,0,2,4,5,--0,0,0,0,2,4,6,--

R51) 0,0,0,0,2,4,6,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,1,--0,0,--0,0,0,0,2,4,6,7,--

R52) 0,0,0,0,2,5,6,-->0,0,2,3,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,--0,0,0,0,2,5,6,--

R53) 0,0,0,0,3,5,6,-->0,0,0,3,4,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,--0,0,0,0,3,5,6,--

R54) 0,0,0,0,4,5,1,-->0,0,0,3,4,1,--0,0,2,3,1,--

R55)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R56)

0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,3,--0,0,0,0,0,0,0,0,2,4,--0,0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,0,2,8,--

R57)

0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,3,4,--0,0,0,0,0,0,0,3,5,--0,0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,0,3,8,--

R58)

0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,0,0,0,4,5,--0,0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,0,4,8,--

R59)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,0,5,6,--0,0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,0,5,8,--

R60)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,0,6,8,--

R61)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,0,7,8,--

R62)

0,0,0,0,0,0,2,3,-->0,0,2,3,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,2,3,--0,0,0,0,0,0,2,4,--0,0,0,0,0,0,2,5,--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,2,7,--

R63)

0,0,0,0,0,0,2,4,-->0,0,2,3,1,--0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,0,2,4,5,--0,0,0,0,0,0,2,4,6,--0,0,0,0,0,0,2,4,7,--0,0,0,0,0,0,2,4,8,--

R64)

0,0,0,0,0,0,2,5,-->0,0,2,3,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,0,2,5,6,--  
0,0,0,0,0,0,2,5,7,--0,0,0,0,0,0,2,5,8,--

R65)

0,0,0,0,0,0,2,6,-->0,0,2,3,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,--0,0,0,0,  
0,0,2,6,7,--0,0,0,0,0,0,2,6,8,--

R66)

0,0,0,0,0,0,2,7,-->0,0,2,3,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--  
0,0,--0,0,0,0,0,0,2,7,8,--

R67)

0,0,0,0,0,0,3,4,-->0,0,0,3,4,1,--0,0,2,3,1,--0,0,0,0,0,--0,0,0,0,0,0,3,4,--0,0,0,0,  
0,0,3,5,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,7,--

R68)

0,0,0,0,0,0,3,5,-->0,0,0,3,4,1,--0,0,2,3,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,0,3,5,6,  
--0,0,0,0,0,0,3,5,7,--0,0,0,0,0,0,3,5,8,--

R69)

0,0,0,0,0,0,3,6,-->0,0,0,3,4,1,--0,0,2,3,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,--0,0,0,0,  
0,0,3,6,7,--0,0,0,0,0,0,3,6,8,--

R70)

0,0,0,0,0,0,3,7,-->0,0,0,3,4,1,--0,0,2,3,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,  
0,--0,0,0,0,0,0,3,7,8,--

R71)

0,0,0,0,0,0,4,5,-->0,0,0,0,4,5,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,0,0,--0,0,0,0,0,0,  
4,5,--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,7,--

R72)

0,0,0,0,0,0,4,6,-->0,0,0,0,4,5,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,2,1,--0,0,0,--0,0,  
0,0,0,0,4,6,7,--0,0,0,0,0,0,4,6,8,--

R73)

0,0,0,0,0,0,4,7,-->0,0,0,0,4,5,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,0,3,1,--0,0,2,1,--  
0,0,--0,0,0,0,0,0,4,7,8,--

R74)

0,0,0,0,0,0,5,6,-->0,0,0,0,0,5,6,1,--0,0,0,0,4,5,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,  
0,--0,0,0,0,0,0,5,6,--0,0,0,0,0,0,5,7,--

R75)

0,0,0,0,0,0,5,7,-->0,0,0,0,0,5,6,1,--0,0,0,0,4,5,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,  
2,1,--0,0,--0,0,0,0,0,0,5,7,8,--

R76)

0,0,0,0,0,0,6,1,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--

R77)

0,0,0,0,0,0,6,7,-->0,0,0,0,0,0,6,7,1,--0,0,0,0,0,5,6,1,--0,0,0,0,4,5,1,--0,0,0,3,4,  
1,--0,0,2,3,1,--0,0,--0,0,0,0,0,0,6,7,--

R78)

0,0,0,0,0,2,4,5,-->0,0,2,3,1,--0,0,2,3,1,--0,0,0,0,--0,0,0,0,0,2,4,5,--0,0,0,0,0,2,  
4,6,--0,0,0,0,0,2,4,7,--

R79)

0,0,0,0,0,2,4,6,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,1,--0,0,0,--0,0,0,0,0,2,4,6,7,--0,  
0,0,0,0,2,4,6,8,--

R80)

0,0,0,0,0,2,4,7,-->0,0,2,3,1,--0,0,2,3,1,--0,0,0,3,1,--0,0,2,1,--0,0,--0,0,0,0,0,2,  
4,7,8,--

R81)

0,0,0,0,0,2,5,6,-->0,0,2,3,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,0,--0,0,0,0,0,2,5,6,--  
0,0,0,0,0,2,5,7,--

R82)

0,0,0,0,0,2,5,7,-->0,0,2,3,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,2,1,--0,0,--0,0,0,0,0,  
2,5,7,8,--

R83)

0,0,0,0,0,2,6,7,-->0,0,2,3,1,--0,0,0,0,4,5,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,--0,0,  
0,0,0,2,6,7,--

R84)

0,0,0,0,0,3,5,6,-->0,0,0,3,4,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,0,--0,0,0,0,0,3,5,6,--  
0,0,0,0,0,3,5,7,--

R85)

0,0,0,0,0,3,5,7,-->0,0,0,3,4,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,2,1,--0,0,--0,0,0,0,0,  
3,5,7,8,--

R86)

0,0,0,0,0,3,6,7,-->0,0,0,3,4,1,--0,0,2,3,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,--0,0,0,  
0,0,3,6,7,--

R87)

0,0,0,0,0,4,6,7,-->0,0,0,0,4,5,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,--0,0,  
0,0,0,4,6,7,--

R88) 0,0,0,0,0,5,6,1,-->0,0,0,0,4,5,1,--0,0,0,3,4,1,--0,0,2,3,1,--

R89)

0,0,0,0,2,4,6,7,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,--0,0,0,0,2,4,6,7,--

R90)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,2,  
--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,  
,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R91)

0,0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,3,--0,0,0,0,0,0,  
0,0,2,4,--0,0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,0,2,7,--0,0,0,0,  
,0,0,0,0,2,8,--0,0,0,0,0,0,0,0,2,9,--

R92)

0,0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,3,4,--0,  
0,0,0,0,0,0,0,0,3,5,--0,0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,0,3,8,  
,--0,0,0,0,0,0,0,0,3,9,--

R93)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,0,  
0,0,4,5,--0,0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,0,4,8,--0,0,0,0,  
,0,0,0,0,4,9,--

R94)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,  
--0,0,0,0,0,0,0,0,5,6,--0,0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,0,5,8,--0,0,0,0,0,0,0,0,  
,5,9,--

R95)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,  
0,2,1,--0,0,0,0,--0,0,0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,0,6,9,-  
-

R96)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,  
4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,--0,0,0,0,0,0,0,7,8,--0,0,0,0,0,0,0,0,7,9,--

R97)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,8,1,--0,0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,0,6,1,--0,0,0,0,0,0,5,1,--0,0,0,0,0,0,4,1,--0,0,0,0,3,1,--0,0,2,1,--0,0,--0,0,0,0,0,0,0,0,8,9,--

R98)

0,0,0,0,0,0,0,0,2,3,-->0,0,2,3,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,3,--0,0,0,0,0,0,0,0,2,4,--0,0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,0,2,8,--

R99)

0,0,0,0,0,0,0,0,2,4,-->0,0,2,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,4,5,--0,0,0,0,0,0,0,0,2,4,6,--0,0,0,0,0,0,0,0,2,4,7,--0,0,0,0,0,0,0,0,2,4,8,--0,0,0,0,0,0,0,0,2,4,9,--

R100)

0,0,0,0,0,0,0,0,2,5,-->0,0,2,3,1,--0,0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,5,6,--0,0,0,0,0,0,0,0,2,5,7,--0,0,0,0,0,0,0,0,2,5,8,--0,0,0,0,0,0,0,0,2,5,9,--

R101)

0,0,0,0,0,0,0,0,2,6,-->0,0,2,3,1,--0,0,0,0,0,4,1,--0,0,0,0,3,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,0,2,6,7,--0,0,0,0,0,0,0,0,2,6,8,--0,0,0,0,0,0,0,0,2,6,9,--

R102)

0,0,0,0,0,0,0,0,2,7,-->0,0,2,3,1,--0,0,0,0,0,0,5,1,--0,0,0,0,0,4,1,--0,0,0,0,3,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,0,0,0,2,7,8,--0,0,0,0,0,0,0,0,2,7,9,--

R103)

0,0,0,0,0,0,0,0,2,8,-->0,0,2,3,1,--0,0,0,0,0,0,0,6,1,--0,0,0,0,0,0,5,1,--0,0,0,0,0,4,1,--0,0,0,0,3,1,--0,0,2,1,--0,0,--0,0,0,0,0,0,0,0,2,8,9,--

R104)

0,0,0,0,0,0,0,0,3,4,-->0,0,0,0,3,4,1,--0,0,2,3,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,3,4,--0,0,0,0,0,0,0,0,3,5,--0,0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,0,3,8,--

R105)

0,0,0,0,0,0,0,0,3,5,-->0,0,0,0,3,4,1,--0,0,2,3,1,--0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,0,0,0,3,5,6,--0,0,0,0,0,0,0,0,3,5,7,--0,0,0,0,0,0,0,0,3,5,8,--0,0,0,0,0,0,0,0,3,5,9,--

R106)

0,0,0,0,0,0,0,0,3,6,-->0,0,0,0,3,4,1,--0,0,2,3,1,--0,0,0,0,3,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,0,3,6,7,--0,0,0,0,0,0,0,0,3,6,8,--0,0,0,0,0,0,0,0,3,6,9,--

R107)

0,0,0,0,0,0,0,0,3,7,-->0,0,0,0,3,4,1,--0,0,2,3,1,--0,0,0,0,0,4,1,--0,0,0,0,3,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,0,0,0,3,7,8,--0,0,0,0,0,0,0,0,3,7,9,--

R108)

0,0,0,0,0,0,0,0,3,8,-->0,0,0,0,3,4,1,--0,0,2,3,1,--0,0,0,0,0,0,5,1,--0,0,0,0,0,4,1,--0,0,0,0,3,1,--0,0,2,1,--0,0,--0,0,0,0,0,0,0,0,3,8,9,--

R109)

0,0,0,0,0,0,0,0,4,5,-->0,0,0,0,4,5,1,--0,0,0,0,3,4,1,--0,0,2,3,1,--0,0,0,0,0,0,--0,0,0,0,0,0,0,0,4,5,--0,0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,0,4,8,--

R110)

0,0,0,0,0,0,0,0,4,6,-->0,0,0,0,4,5,1,--0,0,0,0,3,4,1,--0,0,2,3,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,0,0,0,4,6,7,--0,0,0,0,0,0,0,0,4,6,8,--0,0,0,0,0,0,0,0,4,6,9,--

R111)

0,0,0,0,0,0,0,0,4,7,-->0,0,0,0,4,5,1,--0,0,0,0,3,4,1,--0,0,2,3,1,--0,0,0,0,3,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,0,0,0,4,7,8,--0,0,0,0,0,0,0,0,4,7,9,--

R112)

0,0,0,0,0,0,0,0,4,8,-->0,0,0,0,4,5,1,--0,0,0,0,3,4,1,--0,0,2,3,1,--0,0,0,0,4,1,--0,0,0,0,3,1,--0,0,2,1,--0,0,--0,0,0,0,0,0,0,0,4,8,9,--



R113)

0,0,0,0,0,0,0,5,6,-->0,0,0,0,0,5,6,1,--0,0,0,0,4,5,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,0,0,--0,0,0,0,0,0,5,6,--0,0,0,0,0,0,5,7,--0,0,0,0,0,0,5,8,--

R114)

0,0,0,0,0,0,0,5,7,-->0,0,0,0,0,5,6,1,--0,0,0,0,4,5,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,2,1,--0,0,0,--0,0,0,0,0,0,5,7,8,--0,0,0,0,0,0,5,7,9,--

R115)

0,0,0,0,0,0,0,5,8,-->0,0,0,0,0,5,6,1,--0,0,0,0,4,5,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,0,3,1,--0,0,2,1,--0,0,--0,0,0,0,0,0,5,8,9,--

R116)

0,0,0,0,0,0,0,6,7,-->0,0,0,0,0,0,6,7,1,--0,0,0,0,0,5,6,1,--0,0,0,0,4,5,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,0,--0,0,0,0,0,0,6,7,--0,0,0,0,0,0,6,8,--

R117)

0,0,0,0,0,0,0,6,8,-->0,0,0,0,0,0,6,7,1,--0,0,0,0,0,5,6,1,--0,0,0,0,4,5,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,2,1,--0,0,--0,0,0,0,0,0,6,8,9,--

R118)

0,0,0,0,0,0,0,7,1,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--

R119)

0,0,0,0,0,0,0,7,8,-->0,0,0,0,0,0,0,7,8,1,--0,0,0,0,0,0,6,7,1,--0,0,0,0,0,5,6,1,--0,0,0,0,4,5,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,--0,0,0,0,0,0,0,7,8,--

R120)

0,0,0,0,0,0,2,4,5,-->0,0,2,3,1,--0,0,2,3,1,--0,0,0,0,0,--0,0,0,0,0,0,2,4,5,--0,0,0,0,0,0,2,4,6,--0,0,0,0,0,0,2,4,7,--0,0,0,0,0,0,2,4,8,--

R121)

0,0,0,0,0,0,2,4,6,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,0,2,4,6,7,--0,0,0,0,0,0,2,4,6,8,--0,0,0,0,0,0,2,4,6,9,--

R122)

0,0,0,0,0,0,2,4,7,-->0,0,2,3,1,--0,0,2,3,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,--0,0,0,0,0,0,2,4,7,8,--0,0,0,0,0,0,2,4,7,9,--

R123)

0,0,0,0,0,0,2,4,8,-->0,0,2,3,1,--0,0,2,3,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,--0,0,0,0,0,0,2,4,8,9,--

R124)

0,0,0,0,0,0,2,5,6,-->0,0,2,3,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,0,0,--0,0,0,0,0,0,2,5,6,--0,0,0,0,0,0,2,5,7,--0,0,0,0,0,0,2,5,8,--

R125)

0,0,0,0,0,0,2,5,7,-->0,0,2,3,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,2,1,--0,0,0,--0,0,0,0,0,0,2,5,7,8,--0,0,0,0,0,0,2,5,7,9,--

R126)

0,0,0,0,0,0,2,5,8,-->0,0,2,3,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,0,3,1,--0,0,2,1,--0,0,--0,0,0,0,0,0,2,5,8,9,--

R127)

0,0,0,0,0,0,2,6,7,-->0,0,2,3,1,--0,0,0,0,4,5,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,0,--0,0,0,0,0,0,2,6,7,--0,0,0,0,0,0,2,6,8,--

R128)

0,0,0,0,0,0,2,6,8,-->0,0,2,3,1,--0,0,0,0,4,5,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,2,1,--0,0,--0,0,0,0,0,0,2,6,8,9,--

R129)

0,0,0,0,0,0,2,7,8,-->0,0,2,3,1,--0,0,0,0,0,5,6,1,--0,0,0,0,4,5,1,--0,0,0,3,4,1,--0,

0,2,3,1,--0,0,--0,0,0,0,0,0,2,7,8,--

R130)

0,0,0,0,0,0,3,5,6,-->0,0,0,3,4,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,0,0,--0,0,0,0,0,0,3,5,6,--0,0,0,0,0,0,3,5,7,--0,0,0,0,0,0,3,5,8,--

R131)

0,0,0,0,0,0,3,5,7,-->0,0,0,3,4,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,2,1,--0,0,0,--0,0,0,0,0,0,3,5,7,8,--0,0,0,0,0,0,3,5,7,9,--

R132)

0,0,0,0,0,0,3,5,8,-->0,0,0,3,4,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,0,3,1,--0,0,2,1,--0,0,--0,0,0,0,0,0,3,5,8,9,--

R133)

0,0,0,0,0,0,3,6,7,-->0,0,0,3,4,1,--0,0,2,3,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,0,--0,0,0,0,0,0,3,6,7,--0,0,0,0,0,0,3,6,8,--

R134)

0,0,0,0,0,0,3,6,8,-->0,0,0,3,4,1,--0,0,2,3,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,2,1,--0,0,--0,0,0,0,0,0,3,6,8,9,--

R135)

0,0,0,0,0,0,3,7,8,-->0,0,0,3,4,1,--0,0,2,3,1,--0,0,0,0,4,5,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,--0,0,0,0,0,0,3,7,8,--

R136)

0,0,0,0,0,0,4,6,7,-->0,0,0,0,4,5,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,0,--0,0,0,0,0,0,4,6,7,--0,0,0,0,0,0,4,6,8,--

R137)

0,0,0,0,0,0,4,6,8,-->0,0,0,0,4,5,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,2,1,--0,0,--0,0,0,0,0,0,4,6,8,9,--

R138)

0,0,0,0,0,0,4,7,8,-->0,0,0,0,4,5,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,--0,0,0,0,0,0,4,7,8,--

R139)

0,0,0,0,0,0,5,7,8,-->0,0,0,0,0,5,6,1,--0,0,0,0,4,5,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,--0,0,0,0,0,0,5,7,8,--

R140)

0,0,0,0,0,0,6,7,1,-->0,0,0,0,0,5,6,1,--0,0,0,0,4,5,1,--0,0,0,3,4,1,--0,0,2,3,1,--

R141)

0,0,0,0,0,2,4,6,7,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,0,--0,0,0,0,0,2,4,6,7,--0,0,0,0,0,2,4,6,8,--

R142)

0,0,0,0,0,2,4,6,8,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,2,1,--0,0,--0,0,0,0,0,2,4,6,8,9,--

R143)

0,0,0,0,0,2,4,7,8,-->0,0,2,3,1,--0,0,2,3,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,--0,0,0,0,0,2,4,7,8,--

R144)

0,0,0,0,0,2,5,7,8,-->0,0,2,3,1,--0,0,0,3,4,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,--0,0,0,0,0,2,5,7,8,--

R145)

0,0,0,0,0,3,5,7,8,-->0,0,0,3,4,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,--0,0,0,0,0,3,5,7,8,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0, :  
LEN=3) 0,0,0, : 0,0,2, :  
LEN=4) 0,0,0,0, : 0,0,0,2, : 0,0,0,3, : 0,0,2,1, : 0,0,2,3, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,2,3, : 0,0,0,2,4, :  
0,0,0,3,1, : 0,0,0,3,4, : 0,0,2,3,1, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :  
0,0,0,0,2,3, : 0,0,0,0,2,4, : 0,0,0,0,2,5, : 0,0,0,0,3,4, : 0,0,0,0,3,5, : 0,0,0,0,4,1, :  
0,0,0,0,4,5, : 0,0,0,2,4,5, : 0,0,0,3,4,1, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, :  
0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,2,3, : 0,0,0,0,0,2,4, : 0,0,0,0,0,2,5, :  
0,0,0,0,0,2,6, : 0,0,0,0,0,3,4, : 0,0,0,0,0,3,5, : 0,0,0,0,0,3,6, : 0,0,0,0,0,4,5, :  
0,0,0,0,0,4,6, : 0,0,0,0,0,5,1, : 0,0,0,0,0,5,6, : 0,0,0,0,2,4,5, : 0,0,0,0,2,4,6, :  
0,0,0,0,2,5,6, : 0,0,0,0,3,5,6, : 0,0,0,0,4,5,1, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, :  
0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,2,3, :  
0,0,0,0,0,0,2,4, : 0,0,0,0,0,0,2,5, : 0,0,0,0,0,0,2,6, : 0,0,0,0,0,0,2,7, :  
0,0,0,0,0,0,3,4, : 0,0,0,0,0,0,3,5, : 0,0,0,0,0,0,3,6, : 0,0,0,0,0,0,3,7, :  
0,0,0,0,0,0,4,5, : 0,0,0,0,0,0,4,6, : 0,0,0,0,0,0,4,7, : 0,0,0,0,0,0,5,6, :  
0,0,0,0,0,0,5,7, : 0,0,0,0,0,0,6,1, : 0,0,0,0,0,0,6,7, : 0,0,0,0,0,2,4,5, :  
0,0,0,0,0,2,4,6, : 0,0,0,0,0,2,4,7, : 0,0,0,0,0,2,5,6, : 0,0,0,0,0,2,5,7, :  
0,0,0,0,0,2,6,7, : 0,0,0,0,0,3,5,6, : 0,0,0,0,0,3,5,7, : 0,0,0,0,0,3,6,7, :  
0,0,0,0,0,4,6,7, : 0,0,0,0,0,5,6,1, : 0,0,0,0,2,4,6,7, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,3, :  
0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7, :  
0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,2,3, : 0,0,0,0,0,0,0,2,4, : 0,0,0,0,0,0,0,2,5, :  
0,0,0,0,0,0,0,2,6, : 0,0,0,0,0,0,0,2,7, : 0,0,0,0,0,0,0,2,8, : 0,0,0,0,0,0,0,3,4, :  
0,0,0,0,0,0,0,3,5, : 0,0,0,0,0,0,0,3,6, : 0,0,0,0,0,0,0,3,7, : 0,0,0,0,0,0,0,3,8, :  
0,0,0,0,0,0,0,4,5, : 0,0,0,0,0,0,0,4,6, : 0,0,0,0,0,0,0,4,7, : 0,0,0,0,0,0,0,4,8, :  
0,0,0,0,0,0,0,5,6, : 0,0,0,0,0,0,0,5,7, : 0,0,0,0,0,0,0,5,8, : 0,0,0,0,0,0,0,6,7, :  
0,0,0,0,0,0,0,6,8, : 0,0,0,0,0,0,0,7,1, : 0,0,0,0,0,0,0,7,8, : 0,0,0,0,0,0,2,4,5, :  
0,0,0,0,0,0,2,4,6, : 0,0,0,0,0,0,2,4,7, : 0,0,0,0,0,0,2,4,8, : 0,0,0,0,0,0,2,5,6, :  
0,0,0,0,0,0,2,5,7, : 0,0,0,0,0,0,2,5,8, : 0,0,0,0,0,0,2,6,7, : 0,0,0,0,0,0,2,6,8, :  
0,0,0,0,0,0,2,7,8, : 0,0,0,0,0,0,3,5,6, : 0,0,0,0,0,0,3,5,7, : 0,0,0,0,0,0,3,5,8, :  
0,0,0,0,0,0,3,6,7, : 0,0,0,0,0,0,3,6,8, : 0,0,0,0,0,0,3,7,8, : 0,0,0,0,0,0,4,6,7, :  
0,0,0,0,0,0,4,6,8, : 0,0,0,0,0,0,4,7,8, : 0,0,0,0,0,0,5,7,8, : 0,0,0,0,0,0,6,7,1, :  
0,0,0,0,0,2,4,6,7, : 0,0,0,0,0,2,4,6,8, : 0,0,0,0,0,2,4,7,8, : 0,0,0,0,0,2,5,7,8, :  
0,0,0,0,0,3,5,7,8, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,0,3, :  
0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, :  
0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, :  
0,0,0,0,0,0,0,0,2,3, : 0,0,0,0,0,0,0,0,2,4, : 0,0,0,0,0,0,0,0,2,5, :  
0,0,0,0,0,0,0,0,2,6, : 0,0,0,0,0,0,0,0,2,7, : 0,0,0,0,0,0,0,0,2,8, :  
0,0,0,0,0,0,0,0,2,9, : 0,0,0,0,0,0,0,0,3,4, : 0,0,0,0,0,0,0,0,3,5, :  
0,0,0,0,0,0,0,0,3,6, : 0,0,0,0,0,0,0,0,3,7, : 0,0,0,0,0,0,0,0,3,8, :  
0,0,0,0,0,0,0,0,3,9, : 0,0,0,0,0,0,0,0,4,5, : 0,0,0,0,0,0,0,0,4,6, :  
0,0,0,0,0,0,0,0,4,7, : 0,0,0,0,0,0,0,0,4,8, : 0,0,0,0,0,0,0,0,4,9, :  
0,0,0,0,0,0,0,0,5,6, : 0,0,0,0,0,0,0,0,5,7, : 0,0,0,0,0,0,0,0,5,8, :  
0,0,0,0,0,0,0,0,5,9, : 0,0,0,0,0,0,0,0,6,7, : 0,0,0,0,0,0,0,0,6,8, :  
0,0,0,0,0,0,0,0,6,9, : 0,0,0,0,0,0,0,0,7,8, : 0,0,0,0,0,0,0,0,7,9, :  
0,0,0,0,0,0,0,0,8,1, : 0,0,0,0,0,0,0,0,8,9, : 0,0,0,0,0,0,0,2,4,5, :

0,0,0,0,0,0,0,2,4,6, : 0,0,0,0,0,0,0,2,4,7, : 0,0,0,0,0,0,0,2,4,8, :  
 0,0,0,0,0,0,0,2,4,9, : 0,0,0,0,0,0,0,2,5,6, : 0,0,0,0,0,0,0,2,5,7, :  
 0,0,0,0,0,0,0,2,5,8, : 0,0,0,0,0,0,0,2,5,9, : 0,0,0,0,0,0,0,2,6,7, :  
 0,0,0,0,0,0,0,2,6,8, : 0,0,0,0,0,0,0,2,6,9, : 0,0,0,0,0,0,0,2,7,8, :  
 0,0,0,0,0,0,0,2,7,9, : 0,0,0,0,0,0,0,2,8,9, : 0,0,0,0,0,0,0,3,5,6, :  
 0,0,0,0,0,0,0,3,5,7, : 0,0,0,0,0,0,0,3,5,8, : 0,0,0,0,0,0,0,3,5,9, :  
 0,0,0,0,0,0,0,3,6,7, : 0,0,0,0,0,0,0,3,6,8, : 0,0,0,0,0,0,0,3,6,9, :  
 0,0,0,0,0,0,0,3,7,8, : 0,0,0,0,0,0,0,3,7,9, : 0,0,0,0,0,0,0,3,8,9, :  
 0,0,0,0,0,0,0,4,6,7, : 0,0,0,0,0,0,0,4,6,8, : 0,0,0,0,0,0,0,4,6,9, :  
 0,0,0,0,0,0,0,4,7,8, : 0,0,0,0,0,0,0,4,7,9, : 0,0,0,0,0,0,0,4,8,9, :  
 0,0,0,0,0,0,0,5,7,8, : 0,0,0,0,0,0,0,5,7,9, : 0,0,0,0,0,0,0,5,8,9, :  
 0,0,0,0,0,0,0,6,8,9, : 0,0,0,0,0,0,0,7,8,1, : 0,0,0,0,0,0,2,4,6,7, :  
 0,0,0,0,0,0,2,4,6,8, : 0,0,0,0,0,0,2,4,6,9, : 0,0,0,0,0,0,2,4,7,8, :  
 0,0,0,0,0,0,2,4,7,9, : 0,0,0,0,0,0,2,4,8,9, : 0,0,0,0,0,0,2,5,7,8, :  
 0,0,0,0,0,0,2,5,7,9, : 0,0,0,0,0,0,2,5,8,9, : 0,0,0,0,0,0,2,6,8,9, :  
 0,0,0,0,0,0,3,5,7,8, : 0,0,0,0,0,0,3,5,7,9, : 0,0,0,0,0,0,3,5,8,9, :  
 0,0,0,0,0,0,3,6,8,9, : 0,0,0,0,0,0,4,6,8,9, : 0,0,0,0,0,2,4,6,8,9, :  
 Number new nodes in level n is given by : 1,1,2,5,9,14,22,35,56,90,

-----Class

1014-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][100][102][120][201]]$

--  
 Rules of T[L]:  
 R1) 0, -->0,0, --0, --  
 R2) 0,0, -->0,0,0, --0,0, --0,0,2, --  
 R3) 0,0,0, -->0,0,0,0, --0,0,0, --0,0,0,2, --0,0,0,3, --  
 R4) 0,0,2, -->0,0,2,1, --0,0,0,2, --0, --  
 R5) 0,0,0,0, -->0,0,0,0,0, --0,0,0,0, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --  
 R6) 0,0,0,2, -->0,0,2,1, --0,0,0,0,2, --0,0, --0,0,2, --  
 R7) 0,0,0,3, -->0,0,2,1, --0,0,0,3,2, --0,0,0,0,3, --0, --  
 R8) 0,0,2,1, -->0,0,2,1, --  
 R9)  
 0,0,0,0,0, -->0,0,0,0,0,0, --0,0,0,0,0, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,  
 0,0,0,0,5, --  
 R10) 0,0,0,0,2, -->0,0,2,1, --0,0,0,0,0,2, --0,0,0, --0,0,0,2, --0,0,0,3, --  
 R11) 0,0,0,0,3, -->0,0,2,1, --0,0,0,0,3,2, --0,0,0,0,0,3, --0,0, --0,0,2, --  
 R12) 0,0,0,0,4, -->0,0,2,1, --0,0,0,0,3,2, --0,0,0,0,0,4,3, --0,0,0,0,0,4, --0, --  
 R13) 0,0,0,3,2, -->0,0,0,3,2,1, --0,0,2,1, --  
 R14)  
 0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,0,0,0,0,0, --0,0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,0,  
 0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --  
 R15)  
 0,0,0,0,0,2, -->0,0,2,1, --0,0,0,0,0,0,2, --0,0,0,0, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,  
 4, --  
 R16)  
 0,0,0,0,0,3, -->0,0,2,1, --0,0,0,0,3,2, --0,0,0,0,0,0,3, --0,0,0, --0,0,0,2, --0,0,0,3, --  
 R17)  
 0,0,0,0,0,4, -->0,0,2,1, --0,0,0,0,3,2, --0,0,0,0,0,4,3, --0,0,0,0,0,0,4, --0,0, --0,0,2, --

R18)

0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,5,--  
0,--

R19) 0,0,0,0,4,3,-->0,0,0,3,2,1,--0,0,0,0,4,3,2,--0,0,2,1,--

R20) 0,0,0,3,2,1,-->

R21)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R22)

0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,  
--0,0,0,0,0,4,--0,0,0,0,0,5,--

R23)

0,0,0,0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,0,3,--0,0,0,0,--0,0,0,0,2,--0,0,  
0,0,3,--0,0,0,0,4,--

R24)

0,0,0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,0,4,--0,0,0,--0,0,  
0,2,--0,0,0,3,--

R25)

0,0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,0,  
5,--0,0,--0,0,2,--

R26)

0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,  
5,--0,0,0,0,0,0,6,--0,--

R27) 0,0,0,0,0,5,4,-->0,0,0,3,2,1,--0,0,0,0,4,3,2,--0,0,0,0,0,5,4,3,--0,0,2,1,--

R28) 0,0,0,0,4,3,2,-->0,0,0,3,2,1,--

R29)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,  
,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R30)

0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,  
0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R31)

0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,--0,0,0,0,0,  
2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R32)

0,0,0,0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,  
--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R33)

0,0,0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,  
0,0,5,--0,0,0,--0,0,0,2,--0,0,0,3,--

R34)

0,0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,  
6,5,--0,0,0,0,0,0,0,6,--0,0,--0,0,2,--

R35)

0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,  
6,5,--0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,7,--0,--

R36)

0,0,0,0,0,0,6,5,-->0,0,0,3,2,1,--0,0,0,0,4,3,2,--0,0,0,0,0,5,4,3,--0,0,0,0,0,0,6,5,  
4,--0,0,2,1,--

R37) 0,0,0,0,0,5,4,3,-->0,0,0,3,2,1,--0,0,0,0,4,3,2,--

R38)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,2,  
--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0  
,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R39)

0,0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0  
,0,0,0,7,--

R40)

0,0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,--0,0,  
0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R41)

0,0,0,0,0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,0,0,4,--0,0,  
0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R42)

0,0,0,0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,0,0,0,5,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R43)

0,0,0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--0,0,0,0,0,0,0,0,6,--0,0,0,--0,0,0,2,--0,0,0,3,--

R44)

0,0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,0,7,--0,0,--0,0,2,--

R45)

0,0,0,0,0,0,0,0,8,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,8,7,--0,0,0,0,0,0,0,8,--0,--

R46)

0,0,0,0,0,0,0,7,6,-->0,0,0,3,2,1,--0,0,0,0,4,3,2,--0,0,0,0,0,5,4,3,--0,0,0,0,0,0,6,  
5,4,--0,0,0,0,0,0,7,6,5,--0,0,2,1,--

R47) 0,0,0,0,0,0,6,5,4,-->0,0,0,3,2,1,--0,0,0,0,4,3,2,--0,0,0,0,0,5,4,3,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, :

LEN=3) 0,0,0, : 0,0,2, :

LEN=4) 0,0,0,0, : 0,0,0,2, : 0,0,0,3, : 0,0,2,1, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,3,2, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :

0,0,0,0,4,3, : 0,0,0,3,2,1, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, :

0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,4, : 0,0,0,0,4,3,2, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, :

0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,5, :

0,0,0,0,0,5,4,3, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,3, :

0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7, :

0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,7,6, : 0,0,0,0,0,0,6,5,4, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,0,3, :

0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, :

0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, :

0,0,0,0,0,0,0,0,8,7,: 0,0,0,0,0,0,0,7,6,5,:

Number new nodes in level n is given by : 1,1,2,4,5,7,8,9,10,11,

-----Class

1015-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][100][102][120][210]]$

-----  
--

Rules of  $T[L]$ :

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,0,--0,0,--0,0,2,--

R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--

R4) 0,0,2,-->0,0,2,1,--0,0,0,2,--0,--

R5) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R6) 0,0,0,2,-->0,0,2,1,--0,0,0,0,2,--0,0,--0,0,2,--

R7) 0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,3,--0,--

R8) 0,0,2,1,-->0,0,2,1,--

R9)

0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,  
0,0,0,0,5,--

R10) 0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,2,--0,0,0,--0,0,2,--0,0,0,3,--

R11) 0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,3,--0,0,--0,0,2,--

R12) 0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,4,--0,--

R13) 0,0,0,3,1,-->0,0,2,1,--0,0,0,3,1,--

R14)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,  
0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R15)

0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,2,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,  
4,--

R16)

0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,3,--0,0,0,--0,0,0,2,--0,0,0,3,--

R17)

0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,4,--0,0,--0,0,2,--

R18)

0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,5,--  
0,--

R19) 0,0,0,0,4,1,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,4,1,--

R20)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R21)

0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,  
--0,0,0,0,0,4,--0,0,0,0,0,5,--

R22)

0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,3,--0,0,0,0,--0,0,0,0,2,--0,0,  
0,0,3,--0,0,0,0,4,--

R23)

0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,4,--0,0,0,--0,0,  
0,2,--0,0,0,3,--

R24)

0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,5,--0,0,--0,0,2,--

R25)

0,0,0,0,0,0,6,-->0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,6,--0,--

R26) 0,0,0,0,0,5,1,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,5,1,--

R27)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R28)

0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--

R29)

0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R30)

0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,4,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R31)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,5,--0,0,0,--0,0,2,--0,0,0,3,--

R32)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,6,--0,0,--0,0,2,--

R33)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,7,1,--0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,7,--0,--

R34)

0,0,0,0,0,0,6,1,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,6,1,--

R35)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R36)

0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R37)

0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--

R38)

0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,4,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R39)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,5,--0,0,0,0,--0,0,0,2,--0,0,0,3,--0,0,0,4,--

R40)



0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,  
0,2,1,--0,0,0,0,0,0,0,0,6,--0,0,0,--0,0,0,2,--0,0,0,3,--

R41)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,7,1,--0,0,0,0,0,6,1,--0,0,0,0,5,1,--0,0,0,0,  
4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,7,--0,0,--0,0,2,--

R42)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,8,1,--0,0,0,0,0,7,1,--0,0,0,0,6,1,--0,  
0,0,0,5,1,--0,0,0,4,1,--0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,8,--0,--

R43)

0,0,0,0,0,0,0,7,1,-->0,0,0,0,0,6,1,--0,0,0,0,5,1,--0,0,0,4,1,--0,0,3,1,--0,  
0,2,1,--0,0,0,0,0,7,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

LEN=3) 0,0,0, : 0,0,2, :

LEN=4) 0,0,0,0, : 0,0,0,2, : 0,0,0,3, : 0,0,2,1, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,3,1, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :

0,0,0,0,4,1, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, :

0,0,0,0,0,5, : 0,0,0,0,0,6, : 0,0,0,0,5,1, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, :

0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,0,7, : 0,0,0,0,0,6,1, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :

0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,0,7, :

0,0,0,0,0,0,8, : 0,0,0,0,0,7,1, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :

0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, :

0,0,0,0,0,0,7, : 0,0,0,0,0,0,8, : 0,0,0,0,0,0,9, :

0,0,0,0,0,8,1, :

Number new nodes in level n is given by : 1,1,2,4,5,6,7,8,9,10,

-----Class

1016-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][100][102][201][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,0,--0,0,--0,0,2,--

R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--

R4) 0,0,2,-->0,0,2,1,--0,0,0,2,--0,0,2,3,--

R5) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R6) 0,0,0,2,-->0,0,2,1,--0,0,0,0,2,--0,0,0,2,3,--0,0,0,2,4,--

R7) 0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,0,3,--0,0,0,3,4,--

R8) 0,0,2,1,-->0,0,2,1,--

R9) 0,0,2,3,-->0,0,2,3,1,--0,0,0,2,3,--0,0,2,3,--

R10)

0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,

0,0,0,0,5,--

R11)

0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,2,--0,0,0,0,2,3,--0,0,0,0,2,4,--0,0,0,0,2,5,--

R12) 0,0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,3,--0,0,0,0,3,4,--0,0,0,0,3,5,--

R13) 0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,4,--0,0,0,0,4,5,--

R14) 0,0,0,2,3,-->0,0,2,3,1,--0,0,0,0,2,3,--0,0,0,2,3,--0,0,0,2,4,--

R15) 0,0,0,2,4,-->0,0,2,3,1,--0,0,2,1,--0,0,0,0,2,4,--0,0,0,3,4,--

R16) 0,0,0,3,4,-->0,0,2,3,1,--0,0,2,3,1,--0,0,0,0,3,4,--0,0,0,3,4,--

R17) 0,0,2,3,1,-->

R18)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R19)

0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,2,--0,0,0,0,0,2,3,--0,0,0,0,0,2,4,--0,0,0,0,0,2,5,--0,0,0,0,0,2,6,--

R20)

0,0,0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,3,--0,0,0,0,0,3,4,--0,0,0,0,0,3,5,--0,0,0,0,0,3,6,--

R21)

0,0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,4,--0,0,0,0,0,4,5,--0,0,0,0,0,4,6,--

R22)

0,0,0,0,0,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,5,--0,0,0,0,0,5,6,--

R23)

0,0,0,0,2,3,-->0,0,2,3,1,--0,0,0,0,0,2,3,--0,0,0,0,2,3,--0,0,0,0,2,4,--0,0,0,0,2,5,--

R24)

0,0,0,0,2,4,-->0,0,2,3,1,--0,0,2,1,--0,0,0,0,0,2,4,--0,0,0,0,3,4,--0,0,0,0,3,5,--

R25) 0,0,0,0,2,5,-->0,0,2,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,2,5,--0,0,0,0,4,5,--

R26)

0,0,0,0,3,4,-->0,0,2,3,1,--0,0,2,3,1,--0,0,0,0,0,3,4,--0,0,0,0,3,4,--0,0,0,0,3,5,--

R27)

0,0,0,0,3,5,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,1,--0,0,0,0,0,3,5,--0,0,0,0,4,5,--

R28)

0,0,0,0,4,5,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,0,0,0,4,5,--0,0,0,0,4,5,--

R29)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R30)

0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,2,3,--0,0,0,0,0,0,2,4,--0,0,0,0,0,0,2,5,--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,2,7,--

R31)

0,0,0,0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,3,4,--0,0,0,0,0,0,3,5,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,7,--

R32)

0,0,0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,4,5,--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,7,--

R33)

0,0,0,0,0,0,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,5,6,--0,0,0,0,0,0,5,7,--

R34)

0,0,0,0,0,0,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,6,  
--0,0,0,0,0,0,6,7,--

R35)

0,0,0,0,0,2,3,-->0,0,2,3,1,--0,0,0,0,0,0,2,3,--0,0,0,0,0,2,3,--0,0,0,0,0,2,4,--0,0,  
0,0,0,2,5,--0,0,0,0,0,2,6,--

R36)

0,0,0,0,0,2,4,-->0,0,2,3,1,--0,0,2,1,--0,0,0,0,0,0,2,4,--0,0,0,0,0,3,4,--0,0,0,0,0,  
3,5,--0,0,0,0,0,3,6,--

R37)

0,0,0,0,0,2,5,-->0,0,2,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,2,5,--0,0,0,0,0,4,5,--  
0,0,0,0,0,4,6,--

R38)

0,0,0,0,0,2,6,-->0,0,2,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,2,6,--0,0,0,  
0,0,5,6,--

R39)

0,0,0,0,0,3,4,-->0,0,2,3,1,--0,0,2,3,1,--0,0,0,0,0,0,3,4,--0,0,0,0,0,3,4,--0,0,0,0,  
0,3,5,--0,0,0,0,0,3,6,--

R40)

0,0,0,0,0,3,5,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,1,--0,0,0,0,0,0,3,5,--0,0,0,0,0,4,5,  
--0,0,0,0,0,4,6,--

R41)

0,0,0,0,0,3,6,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,3,6,--0,0,  
0,0,0,5,6,--

R42)

0,0,0,0,0,4,5,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,0,0,0,0,4,5,--0,0,0,0,0,4,  
5,--0,0,0,0,0,4,6,--

R43)

0,0,0,0,0,4,6,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,2,1,--0,0,0,0,0,0,4,6,--0,  
0,0,0,0,5,6,--

R44)

0,0,0,0,0,5,6,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,0,0,0,0,5,6,--  
0,0,0,0,0,5,6,--

R45)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,  
0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R46)

0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,2,3,--0,0,0,0,0,0,0,  
2,4,--0,0,0,0,0,0,2,5,--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,2,7,--0,0,0,0,0,0,2,8,  
,--

R47)

0,0,0,0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,3,4,--0,0,  
0,0,0,0,0,3,5,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,7,--0,0,0,0,0,0,3,8,--

R48)

0,0,0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,  
4,5,--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,7,--0,0,0,0,0,0,4,8,--

R49)

0,0,0,0,0,0,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,5,--0,0,  
0,0,0,0,0,5,6,--0,0,0,0,0,0,5,7,--0,0,0,0,0,0,5,8,--

R50)

0,0,0,0,0,0,0,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,6,8,--

R51)

0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,7,8,--

R52)

0,0,0,0,0,0,2,3,-->0,0,2,3,1,--0,0,0,0,0,0,0,2,3,--0,0,0,0,0,0,2,3,--0,0,0,0,0,0,2,4,4,--0,0,0,0,0,0,2,5,--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,2,7,--

R53)

0,0,0,0,0,0,2,4,-->0,0,2,3,1,--0,0,2,1,--0,0,0,0,0,0,0,2,4,--0,0,0,0,0,0,3,4,--0,0,0,0,0,0,3,5,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,7,--

R54)

0,0,0,0,0,0,2,5,-->0,0,2,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,4,5,--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,7,--

R55)

0,0,0,0,0,0,2,6,-->0,0,2,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,5,6,--0,0,0,0,0,0,5,7,--

R56)

0,0,0,0,0,0,2,7,-->0,0,2,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,6,7,--

R57)

0,0,0,0,0,0,3,4,-->0,0,2,3,1,--0,0,2,3,1,--0,0,0,0,0,0,0,3,4,--0,0,0,0,0,0,3,4,--0,0,0,0,0,0,3,5,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,7,--

R58)

0,0,0,0,0,0,3,5,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,1,--0,0,0,0,0,0,0,3,5,--0,0,0,0,0,0,4,5,--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,7,--

R59)

0,0,0,0,0,0,3,6,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,5,6,--0,0,0,0,0,0,5,7,--

R60)

0,0,0,0,0,0,3,7,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,6,7,--

R61)

0,0,0,0,0,0,4,5,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,0,0,0,0,0,4,5,--0,0,0,0,0,0,4,5,--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,7,--

R62)

0,0,0,0,0,0,4,6,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,5,6,--0,0,0,0,0,0,5,7,--

R63)

0,0,0,0,0,0,4,7,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,6,7,--

R64)

0,0,0,0,0,0,5,6,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,0,0,0,0,0,5,6,--0,0,0,0,0,0,5,6,--0,0,0,0,0,0,5,7,--

R65)

0,0,0,0,0,0,5,7,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,5,7,--0,0,0,0,0,0,6,7,--

R66)

0,0,0,0,0,0,6,7,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,0,0,0,0,6,7,--

0,0,0,0,0,6,7,--0,0,0,0,0,6,7,--

R67)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,2,  
--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,  
,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R68)

0,0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,2,3,--0,0,0,0,  
0,0,0,0,2,4,--0,0,0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,0,0,2,7,--0,0,  
,0,0,0,0,0,0,2,8,--0,0,0,0,0,0,0,0,0,2,9,--

R69)

0,0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,3,4,  
--0,0,0,0,0,0,0,0,0,3,5,--0,0,0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,0,  
,3,8,--0,0,0,0,0,0,0,0,0,3,9,--

R70)

0,0,0,0,0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,  
0,0,0,4,5,--0,0,0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,0,0,4,8,--0,0,0,  
,0,0,0,0,0,4,9,--

R71)

0,0,0,0,0,0,0,0,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,0,5,--  
0,0,0,0,0,0,0,0,5,6,--0,0,0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,0,0,5,8,--0,0,0,0,0,0,0,0,0,5,  
,9,--

R72)

0,0,0,0,0,0,0,0,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,  
0,0,0,6,--0,0,0,0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,0,0,6,9,--

R73)

0,0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,  
0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,7,8,--0,0,0,0,0,0,0,0,0,7,9,--

R74)

0,0,0,0,0,0,0,0,8,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,  
0,2,1,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,8,9,--

R75)

0,0,0,0,0,0,0,0,2,3,-->0,0,2,3,1,--0,0,0,0,0,0,0,0,0,2,3,--0,0,0,0,0,0,0,0,0,2,3,--0,0,0,0,  
0,0,0,2,4,--0,0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,  
,0,2,8,--

R76)

0,0,0,0,0,0,0,0,2,4,-->0,0,2,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,0,2,4,--0,0,0,0,0,0,0,0,0,3,4,  
--0,0,0,0,0,0,0,0,3,5,--0,0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,0,3,8,--

R77)

0,0,0,0,0,0,0,0,2,5,-->0,0,2,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,0,2,5,--0,0,0,0,  
0,0,0,4,5,--0,0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,0,4,8,--

R78)

0,0,0,0,0,0,0,0,2,6,-->0,0,2,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,0,2,6,  
--0,0,0,0,0,0,0,0,5,6,--0,0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,0,5,8,--

R79)

0,0,0,0,0,0,0,0,2,7,-->0,0,2,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,  
0,0,0,2,7,--0,0,0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,0,6,8,--

R80)

0,0,0,0,0,0,0,0,2,8,-->0,0,2,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--  
0,0,0,0,0,0,0,0,2,8,--0,0,0,0,0,0,0,0,7,8,--

R81)

0,0,0,0,0,0,0,3,4,-->0,0,2,3,1,--0,0,2,3,1,--0,0,0,0,0,0,0,0,3,4,--0,0,0,0,0,0,0,3,4,--0,0,0,0,0,0,0,3,5,--0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,3,8,--  
-

R82)

0,0,0,0,0,0,0,3,5,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,3,5,--0,0,0,0,0,0,0,4,5,--0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,4,8,--

R83)

0,0,0,0,0,0,0,3,6,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,5,6,--0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,5,8,--

R84)

0,0,0,0,0,0,0,3,7,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,6,8,--

R85)

0,0,0,0,0,0,0,3,8,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,3,8,--0,0,0,0,0,0,0,7,8,--

R86)

0,0,0,0,0,0,0,4,5,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,0,0,0,0,0,0,0,4,5,--0,0,0,0,0,0,0,4,5,--0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,4,8,--

R87)

0,0,0,0,0,0,0,4,6,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,5,6,--0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,5,8,--

R88)

0,0,0,0,0,0,0,4,7,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,6,8,--

R89)

0,0,0,0,0,0,0,4,8,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,4,8,--0,0,0,0,0,0,0,7,8,--

R90)

0,0,0,0,0,0,0,5,6,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,0,0,0,0,0,0,0,5,6,--0,0,0,0,0,0,0,5,6,--0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,5,8,--

R91)

0,0,0,0,0,0,0,5,7,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,6,8,--

R92)

0,0,0,0,0,0,0,5,8,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,5,8,--0,0,0,0,0,0,0,7,8,--

R93)

0,0,0,0,0,0,0,6,7,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,6,8,--

R94)

0,0,0,0,0,0,0,6,8,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,7,8,--

R95)

0,0,0,0,0,0,0,7,8,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,0,0,0,0,0,0,7,8,--0,0,0,0,0,0,0,7,8,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, :

LEN=3) 0,0,0, : 0,0,2, :

LEN=4) 0,0,0,0, : 0,0,0,2, : 0,0,0,3, : 0,0,2,1, : 0,0,2,3, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,2,3, : 0,0,0,2,4, :  
 0,0,0,3,4, : 0,0,2,3,1, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :  
 0,0,0,0,2,3, : 0,0,0,0,2,4, : 0,0,0,0,2,5, : 0,0,0,0,3,4, : 0,0,0,0,3,5, : 0,0,0,0,4,5, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, :  
 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,2,3, : 0,0,0,0,0,2,4, : 0,0,0,0,0,2,5, :  
 0,0,0,0,0,2,6, : 0,0,0,0,0,3,4, : 0,0,0,0,0,3,5, : 0,0,0,0,0,3,6, : 0,0,0,0,0,4,5, :  
 0,0,0,0,0,4,6, : 0,0,0,0,0,5,6, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, :  
 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,2,3, :  
 0,0,0,0,0,0,2,4, : 0,0,0,0,0,0,2,5, : 0,0,0,0,0,0,2,6, : 0,0,0,0,0,0,2,7, :  
 0,0,0,0,0,0,3,4, : 0,0,0,0,0,0,3,5, : 0,0,0,0,0,0,3,6, : 0,0,0,0,0,0,3,7, :  
 0,0,0,0,0,0,4,5, : 0,0,0,0,0,0,4,6, : 0,0,0,0,0,0,4,7, : 0,0,0,0,0,0,5,6, :  
 0,0,0,0,0,0,5,7, : 0,0,0,0,0,0,6,7, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7, :  
 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,2,3, : 0,0,0,0,0,0,0,2,4, : 0,0,0,0,0,0,0,2,5, :  
 0,0,0,0,0,0,0,2,6, : 0,0,0,0,0,0,0,2,7, : 0,0,0,0,0,0,0,2,8, : 0,0,0,0,0,0,0,3,4, :  
 0,0,0,0,0,0,0,3,5, : 0,0,0,0,0,0,0,3,6, : 0,0,0,0,0,0,0,3,7, : 0,0,0,0,0,0,0,3,8, :  
 0,0,0,0,0,0,0,4,5, : 0,0,0,0,0,0,0,4,6, : 0,0,0,0,0,0,0,4,7, : 0,0,0,0,0,0,0,4,8, :  
 0,0,0,0,0,0,0,5,6, : 0,0,0,0,0,0,0,5,7, : 0,0,0,0,0,0,0,5,8, : 0,0,0,0,0,0,0,6,7, :  
 0,0,0,0,0,0,0,6,8, : 0,0,0,0,0,0,0,7,8, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, :  
 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, :  
 0,0,0,0,0,0,0,0,2,3, : 0,0,0,0,0,0,0,0,2,4, : 0,0,0,0,0,0,0,0,2,5, :  
 0,0,0,0,0,0,0,0,2,6, : 0,0,0,0,0,0,0,0,2,7, : 0,0,0,0,0,0,0,0,2,8, :  
 0,0,0,0,0,0,0,0,2,9, : 0,0,0,0,0,0,0,0,3,4, : 0,0,0,0,0,0,0,0,3,5, :  
 0,0,0,0,0,0,0,0,3,6, : 0,0,0,0,0,0,0,0,3,7, : 0,0,0,0,0,0,0,0,3,8, :  
 0,0,0,0,0,0,0,0,3,9, : 0,0,0,0,0,0,0,0,4,5, : 0,0,0,0,0,0,0,0,4,6, :  
 0,0,0,0,0,0,0,0,4,7, : 0,0,0,0,0,0,0,0,4,8, : 0,0,0,0,0,0,0,0,4,9, :  
 0,0,0,0,0,0,0,0,5,6, : 0,0,0,0,0,0,0,0,5,7, : 0,0,0,0,0,0,0,0,5,8, :  
 0,0,0,0,0,0,0,0,5,9, : 0,0,0,0,0,0,0,0,6,7, : 0,0,0,0,0,0,0,0,6,8, :  
 0,0,0,0,0,0,0,0,6,9, : 0,0,0,0,0,0,0,0,7,8, : 0,0,0,0,0,0,0,0,7,9, :  
 0,0,0,0,0,0,0,0,8,9, :

Number new nodes in level n is given by : 1,1,2,5,8,11,16,22,29,37,

-----Class

1017-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][100][110][120][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,0,--0,0,--0,0,2,--

R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--

R4) 0,0,2,-->0,0,--0,0,--0,--

R5) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R6) 0,0,0,2,-->0,0,0,--0,0,0,--0,0,--0,0,2,--

R7) 0,0,0,3,-->0,0,--0,0,0,2,--0,0,--0,--  
R8)  
0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,  
0,0,0,0,5,--  
R9) 0,0,0,0,2,-->0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,3,--  
R10) 0,0,0,0,3,-->0,0,0,--0,0,0,0,2,--0,0,0,--0,0,--0,0,2,--  
R11) 0,0,0,0,4,-->0,0,--0,0,0,2,--0,0,0,0,3,--0,0,--0,--  
R12)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,  
0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R13)  
0,0,0,0,0,2,-->0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,  
--  
R14) 0,0,0,0,0,3,-->0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--  
R15) 0,0,0,0,0,4,-->0,0,0,--0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,--0,0,--0,0,2,--  
R16) 0,0,0,0,0,5,-->0,0,--0,0,0,2,--0,0,0,0,3,--0,0,0,0,0,4,--0,0,--0,--  
R17)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R18)  
0,0,0,0,0,0,2,-->0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,3,  
--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R19)  
0,0,0,0,0,0,3,-->0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,--0,0,0,0,2,--0,0,  
0,0,3,--0,0,0,0,4,--  
R20)  
0,0,0,0,0,0,4,-->0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,--0,0,0,--0,0,0,2,  
--0,0,0,3,--  
R21)  
0,0,0,0,0,0,5,-->0,0,0,--0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,--0,0,--0,  
0,2,--  
R22)  
0,0,0,0,0,0,6,-->0,0,--0,0,0,2,--0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--0,0,--0,  
--  
R23)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,  
0,0,0,7,--0,0,0,0,0,0,0,8,--  
R24)  
0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,  
0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--  
R25)  
0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,  
0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R26)  
0,0,0,0,0,0,0,4,-->0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,--0,0,0,  
0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R27)  
0,0,0,0,0,0,0,5,-->0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,  
0,--0,0,0,--0,0,0,2,--0,0,0,3,--



R28)

0,0,0,0,0,0,0,6,-->0,0,0,--0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,--0,0,--0,0,2,--

R29)

0,0,0,0,0,0,0,7,-->0,0,--0,0,0,2,--0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,--0,--

R30)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,9,--

R31)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R32)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R33)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--

R34)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R35)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--

R36)

0,0,0,0,0,0,0,0,7,-->0,0,0,--0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,--0,0,--0,0,2,--

R37)

0,0,0,0,0,0,0,0,8,-->0,0,--0,0,0,2,--0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,--0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

LEN=3) 0,0,0,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,2,: 0,0,0,3,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,: 0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,: 0,0,0,0,0,0,4,:

0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,4,:

0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,7,:

0,0,0,0,0,0,0,0,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,0,6,:

0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,1,2,3,4,5,6,7,8,9,

-----Class

1018-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][100][110][120][210]]$

-----

--

Rules of  $T[L]$ :

R1)  $0, \rightarrow 0, 0, \rightarrow 0, \rightarrow$

R2)  $0, 0, \rightarrow 0, 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, 2, \rightarrow$

R3)  $0, 0, 0, \rightarrow 0, 0, 0, 0, \rightarrow 0, 0, 0, \rightarrow 0, 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow$

R4)  $0, 0, 2, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow$

R5)  $0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow$

R6)  $0, 0, 0, 2, \rightarrow 0, 0, 0, \rightarrow 0, 0, 0, \rightarrow 0, 0, \rightarrow 0, 0, 2, \rightarrow$

R7)  $0, 0, 0, 3, \rightarrow 0, 0, 0, 2, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow$

R8)

$0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 5, \rightarrow$

R9)  $0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow$

R10)  $0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, \rightarrow 0, 0, 2, \rightarrow$

R11)  $0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, \rightarrow 0, 0, \rightarrow$

R12)

$0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 6, \rightarrow$

R13)

$0, 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow$

--

R14)  $0, 0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow$

R15)  $0, 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, \rightarrow 0, 0, 2, \rightarrow$

R16)  $0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, \rightarrow 0, 0, \rightarrow$

R17)

$0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 0, 6, \rightarrow 0, 0, 0, 0, 0, 0, 7, \rightarrow$

R18)

$0, 0, 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 5, \rightarrow$

R19)

$0, 0, 0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow$

R20)

$0, 0, 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow$

R21)

$0, 0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, \rightarrow 0, 0, 2, \rightarrow$

R22)

$0, 0, 0, 0, 0, 0, 6, \rightarrow 0, 0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, \rightarrow 0, 0, \rightarrow$

--

R23)

$0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, \rightarrow$

0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R24)

0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R25)

0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--

R26)

0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,3,--0,0,0,0,0,0,2,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--

R27)

0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,4,--0,0,0,0,0,0,3,--0,0,0,0,0,2,--0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--

R28)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,5,--0,0,0,0,0,0,4,--0,0,0,0,0,3,--0,0,0,0,2,--0,0,0,0,--0,0,0,0,2,--

R29)

0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,6,--0,0,0,0,0,0,5,--0,0,0,0,0,4,--0,0,0,0,3,--0,0,0,2,--0,0,--0,0,--0,0,--

R30)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R31)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R32)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R33)

0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--

R34)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,2,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,4,--

R35)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,3,--0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,2,--0,0,0,0,0,0,2,--0,0,0,0,3,--

R36)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,4,--0,0,0,0,0,3,--0,0,0,0,0,2,--0,0,0,0,0,0,2,--0,0,0,0,0,0,2,--

R37)

0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,5,--0,0,0,0,0,4,--0,0,0,0,0,3,--0,0,0,0,2,--0,0,0,0,0,0,2,--0,0,0,0,0,0,2,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

LEN=3) 0,0,0, : 0,0,2, :  
 LEN=4) 0,0,0,0, : 0,0,0,2, : 0,0,0,3, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, :  
 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, :  
 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7, :  
 0,0,0,0,0,0,0,0,8, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, :  
 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, :  
 Number new nodes in level n is given by : 1,1,2,3,4,5,6,7,8,9,

-----Class

1019-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][100][110][201][210]]$

-----

--

Rules of  $T[L]$ :

- R1) 0, -->0,0, --0, --
- R2) 0,0, -->0,0,0, --0,0, --0,0,2, --
- R3) 0,0,0, -->0,0,0,0, --0,0,0, --0,0,0,2, --0,0,0,3, --
- R4) 0,0,2, -->0,0, --0,0, --0,0,2, --
- R5) 0,0,0,0, -->0,0,0,0,0, --0,0,0,0, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --
- R6) 0,0,0,2, -->0,0,0, --0,0,0, --0,0,0,2, --0,0,0,3, --
- R7) 0,0,0,3, -->0,0, --0,0, --0,0, --0,0,0,3, --
- R8)  
0,0,0,0,0, -->0,0,0,0,0,0, --0,0,0,0,0, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,  
0,0,0,0,5, --
- R9) 0,0,0,0,2, -->0,0,0,0, --0,0,0,0, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --
- R10) 0,0,0,0,3, -->0,0,0, --0,0,0, --0,0,0, --0,0,0,0,3, --0,0,0,0,4, --
- R11) 0,0,0,0,4, -->0,0, --0,0, --0,0, --0,0, --0,0,0,0,4, --
- R12)  
0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,0,0,0,0,0, --0,0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,0,  
0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --
- R13)  
0,0,0,0,0,2, -->0,0,0,0,0, --0,0,0,0,0, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,  
0,0,0,0,5, --
- R14)  
0,0,0,0,0,3, -->0,0,0,0, --0,0,0,0, --0,0,0,0, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,  
5, --
- R15) 0,0,0,0,0,4, -->0,0,0, --0,0,0, --0,0,0, --0,0,0, --0,0,0,0,0,4, --0,0,0,0,0,5, --
- R16) 0,0,0,0,0,5, -->0,0, --0,0, --0,0, --0,0, --0,0, --0,0,0,0,0,5, --
- R17)  
0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0, --0,0,0,0,0,0,0,2, --0,0,0,0,0,0,0,  
3, --0,0,0,0,0,0,0,4, --0,0,0,0,0,0,0,5, --0,0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --
- R18)

0,0,0,0,0,0,2,-->0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R19)

0,0,0,0,0,0,3,-->0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R20)

0,0,0,0,0,0,4,-->0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R21)

0,0,0,0,0,0,5,-->0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R22) 0,0,0,0,0,0,6,-->0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,6,--

R23)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R24)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R25)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R26)

0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R27)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R28)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R29)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,7,--

R30)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R31)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R32)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R33)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R34)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,5,-->0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,8,--

R35)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,0,6,-->0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,8,--

R36)

0,0,0,0,0,0,0,0,7,-->0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,0,7,-->0,0,0,0,0,0,0,8,--

R37)

0,0,0,0,0,0,0,0,8,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,0,0,0,0,0,8,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

LEN=3) 0,0,0,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,2,: 0,0,0,3,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,: 0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,: 0,0,0,0,0,0,4,:

0,0,0,0,0,0,5, : 0,0,0,0,0,0,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,4,:

0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7,:

0,0,0,0,0,0,0,0,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6,:

0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,1,2,3,4,5,6,7,8,9,

-----Class

1020-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][100][120][201][210]]

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,0,--0,0,--0,0,2,--

R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--

R4) 0,0,2,-->0,0,--0,0,0,2,--0,--

R5) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R6) 0,0,0,2,-->0,0,0,--0,0,0,0,2,--0,0,--0,0,2,--

R7) 0,0,0,3,-->0,0,--0,0,--0,0,0,0,3,--0,--

R8)

0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,5,--

R9) 0,0,0,0,2,-->0,0,0,0,--0,0,0,0,0,2,--0,0,0,--0,0,0,2,--0,0,0,3,--

R10) 0,0,0,0,3,-->0,0,0,--0,0,0,--0,0,0,0,0,3,--0,0,--0,0,2,--

R11) 0,0,0,0,4,-->0,0,--0,0,--0,0,--0,0,0,0,0,4,--0,--

R12)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R13)

0,0,0,0,0,2,-->0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R14)

0,0,0,0,0,3,-->0,0,0,0,--0,0,0,0,--0,0,0,0,0,0,3,--0,0,0,--0,0,0,2,--0,0,0,3,--

R15) 0,0,0,0,0,4,-->0,0,0,--0,0,0,--0,0,0,--0,0,0,0,0,0,4,--0,0,--0,0,2,--

R16) 0,0,0,0,0,5,-->0,0,--0,0,--0,0,--0,0,--0,0,0,0,0,0,5,--0,0,--

R17)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R18)

0,0,0,0,0,0,2,-->0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R19)

0,0,0,0,0,0,3,-->0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,0,0,3,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R20)

0,0,0,0,0,0,4,-->0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,0,0,0,4,--0,0,0,--0,0,0,2,--0,0,0,3,--

R21)

0,0,0,0,0,0,5,-->0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,0,0,0,0,5,--0,0,--0,0,2,--

R22) 0,0,0,0,0,0,6,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,0,0,0,0,0,6,--0,0,--

R23)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R24)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R25)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,0,3,--0,0,0,0,0,--0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R26)

0,0,0,0,0,0,0,4,-->0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,0,0,4,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R27)

0,0,0,0,0,0,0,5,-->0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,0,0,0,5,--0,0,0,--0,0,0,2,--0,0,0,3,--

R28)

0,0,0,0,0,0,0,6,-->0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,0,0,0,0,6,--0,0,0,--0,0,2,--

R29)

0,0,0,0,0,0,0,7,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,0,0,0,0,0,7,--0,0,--

R30)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,9,--

R31)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R32)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--

R33)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--

R34)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--

R35)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--

R36)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,2,--

R37)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,2,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, :

LEN=3) 0,0,0, : 0,0,2, :

LEN=4) 0,0,0,0, : 0,0,0,2, : 0,0,0,3, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, :

Number new nodes in level n is given by : 1,1,2,3,4,5,6,7,8,9,

-----Class

1021-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][101][102][110][120]]

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,0,--0,0,--0,0,2,--

R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--



R4) 0,0,2,-->0,0,2,1,--0,0,--0,--  
R5) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R6) 0,0,0,2,-->0,0,2,1,--0,0,0,--0,0,--0,0,2,--  
R7) 0,0,0,3,-->0,0,0,3,1,--0,0,0,3,2,--0,0,--0,--  
R8) 0,0,2,1,-->0,0,2,1,--  
R9)  
0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,  
0,0,0,0,5,--  
R10) 0,0,0,0,2,-->0,0,2,1,--0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--  
R11) 0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,2,--0,0,0,--0,0,--0,0,2,--  
R12) 0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,3,--0,0,--0,--  
R13) 0,0,0,3,1,-->0,0,0,3,1,--0,0,2,1,--  
R14) 0,0,0,3,2,-->0,0,2,1,--0,0,2,1,--  
R15)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,  
0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R16)  
0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R17) 0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,2,--0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--  
R18)  
0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,3,--0,0,0,--0,0,--0,0,2,--  
R19)  
0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,4,--0,0,  
--0,--  
R20) 0,0,0,0,4,1,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,0,3,2,--  
R21) 0,0,0,0,4,2,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--  
R22) 0,0,0,0,4,3,-->0,0,0,3,1,--0,0,0,3,2,--0,0,2,1,--  
R23)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R24)  
0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,  
0,0,0,0,4,--0,0,0,0,0,5,--  
R25)  
0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,2,--0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,  
3,--0,0,0,0,4,--  
R26)  
0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,3,--0,0,0,0,--0,0,0,--0,0,0,  
2,--0,0,0,3,--  
R27)  
0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,4,--0,  
0,0,--0,0,--0,0,2,--  
R28)  
0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,  
6,4,--0,0,0,0,0,0,6,5,--0,0,--0,--  
R29) 0,0,0,0,0,5,1,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,3,--  
R30) 0,0,0,0,0,5,2,-->0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,0,3,2,--  
R31) 0,0,0,0,0,5,3,-->0,0,0,3,1,--0,0,0,3,2,--0,0,0,3,1,--0,0,2,1,--  
R32) 0,0,0,0,0,5,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,3,--0,0,2,1,--  
R33)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R34)

0,0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--

R35)

0,0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,2,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--

R36)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,3,--0,0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R37)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,4,--0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--

R38)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,5,--0,0,0,--0,0,--0,0,2,--

R39)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,7,2,--0,0,0,0,0,0,0,7,3,--0,0,0,0,0,0,0,7,4,--0,0,0,0,0,0,0,7,5,--0,0,0,0,0,0,0,7,6,--0,0,--0,--

R40)

0,0,0,0,0,0,0,0,6,1,-->0,0,0,0,0,0,0,6,1,--0,0,0,0,0,0,5,1,--0,0,0,0,0,0,5,2,--0,0,0,0,0,0,5,3,--0,0,0,0,0,0,5,4,--

R41)

0,0,0,0,0,0,0,0,6,2,-->0,0,2,1,--0,0,0,0,0,0,5,1,--0,0,0,0,0,4,1,--0,0,0,0,0,4,2,--0,0,0,0,0,4,3,--

R42)

0,0,0,0,0,0,0,0,6,3,-->0,0,0,3,1,--0,0,0,3,2,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,0,3,2,--

R43)

0,0,0,0,0,0,0,0,6,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,3,--0,0,0,3,1,--0,0,2,1,--

R44)

0,0,0,0,0,0,0,0,6,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,4,--0,0,2,1,--

R45)

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R46)

0,0,0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R47)

0,0,0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,2,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R48)

0,0,0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,3,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R49)

0,0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,4,--

```

--0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
R50)
0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,
0,0,6,4,--0,0,0,0,0,0,6,5,--0,0,0,0,--0,0,0,--0,0,2,--0,0,3,--
R51)
0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,7,1,--0,0,0,0,0,0,7,2,--0,0,0,0,0,0,7,3,--0,
0,0,0,0,0,0,7,4,--0,0,0,0,0,0,7,5,--0,0,0,0,0,0,7,6,--0,0,0,--0,0,--0,0,2,--
R52)
0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,8,1,--0,0,0,0,0,0,8,2,--0,0,0,0,0,0,8,3,--0,0,0,0,0,0,8,
3,--0,0,0,0,0,0,8,4,--0,0,0,0,0,0,8,5,--0,0,0,0,0,0,8,6,--0,0,0,0,0,0,0,
,0,8,7,--0,0,--0,--
R53)
0,0,0,0,0,0,7,1,-->0,0,0,0,0,0,7,1,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,
0,0,0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,5,--
R54)
0,0,0,0,0,0,7,2,-->0,0,2,1,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,
0,0,0,0,5,3,--0,0,0,0,0,5,4,--
R55)
0,0,0,0,0,0,7,3,-->0,0,0,3,1,--0,0,0,3,2,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,0,
4,2,--0,0,0,0,4,3,--
R56)
0,0,0,0,0,0,7,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,3,--0,0,0,0,4,1,--0,0,0,
3,1,--0,0,0,3,2,--
R57)
0,0,0,0,0,0,7,5,-->0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,4,
--0,0,0,3,1,--0,0,2,1,--
R58)
0,0,0,0,0,0,7,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,
0,0,6,4,--0,0,0,0,0,0,6,5,--0,0,2,1,--
List of different nodes in T[L]
LEN=1) 0, :
LEN=2) 0,0, :
LEN=3) 0,0,0, : 0,0,2, :
LEN=4) 0,0,0,0, : 0,0,0,2, : 0,0,0,3, : 0,0,2,1, :
LEN=5) 0,0,0,0,0, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,3,1, : 0,0,0,3,2, :
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :
0,0,0,0,4,1, : 0,0,0,0,4,2, : 0,0,0,0,4,3, :
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, :
0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,1, : 0,0,0,0,0,5,2, : 0,0,0,0,0,5,3, :
0,0,0,0,0,5,4, :
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, :
0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,1, :
0,0,0,0,0,0,6,2, : 0,0,0,0,0,0,6,3, : 0,0,0,0,0,0,6,4, : 0,0,0,0,0,0,6,5, :
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,3, :
0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7, :
0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,1, : 0,0,0,0,0,0,0,7,2, : 0,0,0,0,0,0,0,7,3, :
0,0,0,0,0,0,0,7,4, : 0,0,0,0,0,0,0,7,5, : 0,0,0,0,0,0,0,7,6, :
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,0,3, :
0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, :
0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, :

```

0,0,0,0,0,0,0,0,8,1, : 0,0,0,0,0,0,0,0,8,2, : 0,0,0,0,0,0,0,0,8,3, :  
 0,0,0,0,0,0,0,0,8,4, : 0,0,0,0,0,0,0,0,8,5, : 0,0,0,0,0,0,0,0,8,6, :  
 0,0,0,0,0,0,0,0,8,7, :  
 Number new nodes in level n is given by : 1,1,2,4,6,8,10,12,14,16,

-----Class

1022-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][101][102][110][201]]$

-----  
 --  
 Rules of T[L]:  
 R1) 0, -->0,0, --0, --  
 R2) 0,0, -->0,0,0, --0,0, --0,0,2, --  
 R3) 0,0,0, -->0,0,0,0, --0,0,0, --0,0,0,2, --0,0,0,3, --  
 R4) 0,0,2, -->0,0,2,1, --0,0, --0,0,2, --  
 R5) 0,0,0,0, -->0,0,0,0,0, --0,0,0,0, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --  
 R6) 0,0,0,2, -->0,0,2,1, --0,0,0, --0,0,0,2, --0,0,0,3, --  
 R7) 0,0,0,3, -->0,0,2,1, --0,0,0,3,2, --0,0, --0,0,0,3, --  
 R8) 0,0,2,1, -->0,0,2,1, --  
 R9)  
 0,0,0,0,0, -->0,0,0,0,0,0, --0,0,0,0,0, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,  
 0,0,0,0,5, --  
 R10) 0,0,0,0,2, -->0,0,2,1, --0,0,0,0, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --  
 R11) 0,0,0,0,3, -->0,0,2,1, --0,0,0,0,3,2, --0,0,0, --0,0,0,0,3, --0,0,0,0,4, --  
 R12) 0,0,0,0,4, -->0,0,2,1, --0,0,0,0,3,2, --0,0,0,0,4,3, --0,0, --0,0,0,0,4, --  
 R13) 0,0,0,3,2, -->0,0,2,1, --0,0,2,1, --  
 R14)  
 0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,0,0,0,0,0, --0,0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,0,  
 0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --  
 R15)  
 0,0,0,0,0,2, -->0,0,2,1, --0,0,0,0,0, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,  
 0,0,0,5, --  
 R16)  
 0,0,0,0,0,3, -->0,0,2,1, --0,0,0,0,3,2, --0,0,0,0, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,  
 0,5, --  
 R17)  
 0,0,0,0,0,4, -->0,0,2,1, --0,0,0,0,3,2, --0,0,0,0,0,4,3, --0,0,0, --0,0,0,0,0,4, --0,0,0,0,0,  
 5, --  
 R18)  
 0,0,0,0,0,5, -->0,0,2,1, --0,0,0,0,3,2, --0,0,0,0,0,4,3, --0,0,0,0,0,5,4, --0,0, --0,0,0,0,0,  
 5, --  
 R19) 0,0,0,0,4,3, -->0,0,2,1, --0,0,0,0,3,2, --0,0,2,1, --  
 R20)  
 0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0, --0,0,0,0,0,0,0,2, --0,0,0,0,0,0,0,  
 3, --0,0,0,0,0,0,0,4, --0,0,0,0,0,0,0,5, --0,0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --  
 R21)  
 0,0,0,0,0,0,2, -->0,0,2,1, --0,0,0,0,0,0, --0,0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,0,0,0,  
 0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --  
 R22)  
 0,0,0,0,0,0,3, -->0,0,2,1, --0,0,0,0,3,2, --0,0,0,0,0, --0,0,0,0,0,0,3, --0,0,0,0,0,0,4, --

0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R23)

0,0,0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,--0,0,0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R24)

0,0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R25)

0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--0,0,--0,0,0,0,0,0,6,--

R26) 0,0,0,0,0,5,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,2,1,--

R27)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R28)

0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R29)

0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R30)

0,0,0,0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R31)

0,0,0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,--0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R32)

0,0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--0,0,0,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R33)

0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,--0,0,0,0,0,0,7,--

R34)

0,0,0,0,0,0,6,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,2,1,--

R35)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R36)

0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R37)

0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R38)

0,0,0,0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

,8,--  
R39)  
0,0,0,0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--  
R40)  
0,0,0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--0,0,0,0,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--  
R41)  
0,0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--0,0,0,0,0,0,0,0,7,6,--0,0,0,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--  
R42)  
0,0,0,0,0,0,0,0,8,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--0,0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,0,8,7,--0,0,--0,0,0,0,0,0,0,8,--  
R43)  
0,0,0,0,0,0,0,0,7,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--0,0,2,1,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, :  
LEN=3) 0,0,0, : 0,0,2, :  
LEN=4) 0,0,0,0, : 0,0,0,2, : 0,0,0,3, : 0,0,2,1, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,3,2, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :  
0,0,0,0,4,3, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, :  
0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,4, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, :  
0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,5, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,3, :  
0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7, :  
0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,6, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,0,3, :  
0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, :  
0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, :  
0,0,0,0,0,0,0,0,8,7, :

Number new nodes in level n is given by : 1,1,2,4,5,6,7,8,9,10,

-----Class

1023-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][101][102][110][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,0,--0,0,--0,0,2,--  
R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--  
R4) 0,0,2,-->0,0,2,1,--0,0,--0,0,2,--  
R5) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R6) 0,0,0,2,-->0,0,2,1,--0,0,0,--0,0,0,2,--0,0,0,2,4,--  
R7) 0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,--0,0,0,3,--

R8) 0,0,2,1,-->0,0,2,1,--  
R9)  
0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,  
0,0,0,0,5,--  
R10) 0,0,0,0,2,-->0,0,2,1,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,2,4,--0,0,0,0,2,5,--  
R11) 0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,--0,0,0,0,3,--0,0,0,0,3,5,--  
R12) 0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,--0,0,0,0,4,--  
R13) 0,0,0,2,4,-->0,0,2,1,--0,0,2,1,--0,0,--0,0,0,2,4,--  
R14) 0,0,0,3,1,-->0,0,0,3,1,--0,0,2,1,--  
R15)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,  
0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R16)  
0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,2,4,--0,0,0,0,0,2,5,--  
0,0,0,0,0,2,6,--  
R17)  
0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,3,--0,0,0,0,0,3,5,--0,0,0,  
0,0,3,6,--  
R18)  
0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,--0,0,0,0,0,4,--0,0,0,0,0,  
4,6,--  
R19)  
0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,--0,0,0,0,0,  
5,--  
R20) 0,0,0,0,2,4,-->0,0,2,1,--0,0,2,1,--0,0,0,--0,0,0,0,2,4,--0,0,0,0,2,4,6,--  
R21) 0,0,0,0,2,5,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,--0,0,0,0,2,5,--  
R22) 0,0,0,0,3,5,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,--0,0,0,0,3,5,--  
R23) 0,0,0,0,4,1,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--  
R24)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R25)  
0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,2,4,--0,0,0,0,  
0,0,2,5,--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,2,7,--  
R26)  
0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,--0,0,0,0,0,0,3,--0,0,0,0,0,0,3,5,  
--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,7,--  
R27)  
0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,0,4,--0,0,  
0,0,0,0,4,6,--0,0,0,0,0,0,4,7,--  
R28)  
0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,--0,0,0,  
0,0,0,5,--0,0,0,0,0,0,5,7,--  
R29)  
0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,  
1,--0,0,--0,0,0,0,0,0,6,--  
R30)  
0,0,0,0,0,2,4,-->0,0,2,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,2,4,--0,0,0,0,0,2,4,6,--0,  
0,0,0,0,2,4,7,--  
R31)

0,0,0,0,0,2,5,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,--0,0,0,0,0,2,5,--0,0,0,0,0,  
2,5,7,--

R32)

0,0,0,0,0,2,6,-->0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,--0,0,0,0,0,2,6,  
--

R33)

0,0,0,0,0,3,5,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,--0,0,0,0,0,3,5,--0,0,0,0,0,  
3,5,7,--

R34)

0,0,0,0,0,3,6,-->0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,--0,0,0,0,0,3,6,--  
R35)

0,0,0,0,0,4,6,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,--0,0,0,0,0,4,6,  
--

R36) 0,0,0,0,0,5,1,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--

R37) 0,0,0,0,2,4,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,--0,0,0,0,2,4,6,--

R38)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,  
,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R39)

0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,2,4,--  
0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,2,8,--

R40)

0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,3,--0,0,0,0,0,  
0,0,3,5,--0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,3,8,--

R41)

0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,0,0,4,  
--0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,4,8,--

R42)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,--0,  
0,0,0,0,0,0,5,--0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,5,8,--

R43)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,  
2,1,--0,0,0,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,6,8,--

R44)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,  
1,--0,0,0,3,1,--0,0,2,1,--0,0,--0,0,0,0,0,0,7,--

R45)

0,0,0,0,0,0,2,4,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,0,2,4,--0,0,0,0,0,0,2,  
4,6,--0,0,0,0,0,0,2,4,7,--0,0,0,0,0,0,2,4,8,--

R46)

0,0,0,0,0,0,2,5,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,0,2,5,--0,0,  
0,0,0,0,2,5,7,--0,0,0,0,0,0,2,5,8,--

R47)

0,0,0,0,0,0,2,6,-->0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,--0,0,0,0,0,  
0,2,6,--0,0,0,0,0,0,2,6,8,--

R48)

0,0,0,0,0,0,2,7,-->0,0,2,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,  
0,--0,0,0,0,0,0,2,7,--

R49)



0,0,0,0,0,0,3,5,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,0,3,5,--0,0,  
0,0,0,0,3,5,7,--0,0,0,0,0,0,3,5,8,--

R50)

0,0,0,0,0,0,3,6,-->0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,--0,0,0,0,0,0,  
3,6,--0,0,0,0,0,0,3,6,8,--

R51)

0,0,0,0,0,0,3,7,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,--  
0,0,0,0,0,0,3,7,--

R52)

0,0,0,0,0,0,4,6,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,--0,0,0,0,0,  
0,4,6,--0,0,0,0,0,0,4,6,8,--

R53)

0,0,0,0,0,0,4,7,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,--  
0,0,0,0,0,0,4,7,--

R54)

0,0,0,0,0,0,5,7,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,  
0,--0,0,0,0,0,0,5,7,--

R55)

0,0,0,0,0,0,6,1,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,  
2,1,--

R56)

0,0,0,0,0,2,4,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,--0,0,0,0,0,2,4,6,--0,0,0,0,  
0,2,4,6,8,--

R57)

0,0,0,0,0,2,4,7,-->0,0,2,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,--0,0,0,0,0,2,4,7,  
--

R58)

0,0,0,0,0,2,5,7,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,--0,0,0,0,0,2,5,7,  
--

R59)

0,0,0,0,0,3,5,7,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,--0,0,0,0,0,3,5,7,  
--

R60)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,0,0,0,0,2,  
--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,  
,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R61)

0,0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
0,2,4,--0,0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,0,2,7,--0,0,0,0,0,  
,0,0,0,2,8,--0,0,0,0,0,0,0,0,2,9,--

R62)

0,0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,3,--0,0,  
0,0,0,0,0,0,3,5,--0,0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,0,3,8,--  
-0,0,0,0,0,0,0,0,3,9,--

R63)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,0,  
0,0,4,--0,0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,0,4,8,--0,0,0,0,0,  
,0,0,0,4,9,--

R64)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,

--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,0,5,8,--0,0,0,0,0,0,0,0,5,9,--

R65)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,0,6,9,--

R66)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,7,9,--

R67)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,1,--0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,--0,0,0,0,0,0,0,0,8,--

R68)

0,0,0,0,0,0,0,2,4,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,0,0,2,4,--0,0,0,0,0,0,2,4,6,--0,0,0,0,0,0,0,2,4,7,--0,0,0,0,0,0,0,2,4,8,--0,0,0,0,0,0,0,2,4,9,--

R69)

0,0,0,0,0,0,0,2,5,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,--0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,2,5,7,--0,0,0,0,0,0,0,2,5,8,--0,0,0,0,0,0,0,2,5,9,--

R70)

0,0,0,0,0,0,0,2,6,-->0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,2,6,8,--0,0,0,0,0,0,0,2,6,9,--

R71)

0,0,0,0,0,0,0,2,7,-->0,0,2,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,--0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,2,7,9,--

R72)

0,0,0,0,0,0,0,2,8,-->0,0,2,1,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,--0,0,0,0,0,0,0,2,8,--

R73)

0,0,0,0,0,0,0,3,5,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,--0,0,0,0,0,0,0,3,5,--0,0,0,0,0,0,0,3,5,7,--0,0,0,0,0,0,0,3,5,8,--0,0,0,0,0,0,0,3,5,9,--

R74)

0,0,0,0,0,0,0,3,6,-->0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,3,6,8,--0,0,0,0,0,0,0,3,6,9,--

R75)

0,0,0,0,0,0,0,3,7,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,--0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,3,7,9,--

R76)

0,0,0,0,0,0,0,3,8,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,--0,0,0,0,0,0,0,3,8,--

R77)

0,0,0,0,0,0,0,4,6,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,4,6,8,--0,0,0,0,0,0,0,4,6,9,--

R78)

0,0,0,0,0,0,0,4,7,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,--0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,4,7,9,--

R79)

0,0,0,0,0,0,0,4,8,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,--0,0,0,0,0,0,0,4,8,--

R80)

0,0,0,0,0,0,0,5,7,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,--0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,5,7,9,--

R81)

0,0,0,0,0,0,0,5,8,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,  
--0,0,2,1,--0,0,--0,0,0,0,0,0,5,8,--

R82)

0,0,0,0,0,0,0,6,8,-->0,0,0,0,0,6,1,--0,0,0,0,5,1,--0,0,0,4,1,--0,0,0,3,1,--0,  
0,2,1,--0,0,2,1,--0,0,--0,0,0,0,0,0,6,8,--

R83)

0,0,0,0,0,0,0,7,1,-->0,0,0,0,0,7,1,--0,0,0,0,6,1,--0,0,0,5,1,--0,0,0,  
4,1,--0,0,3,1,--0,0,2,1,--

R84)

0,0,0,0,0,2,4,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,2,4,6,--0,  
0,0,0,0,2,4,6,8,--0,0,0,0,2,4,6,9,--

R85)

0,0,0,0,0,2,4,7,-->0,0,2,1,--0,0,2,1,--0,0,3,1,--0,0,2,1,--0,0,0,--0,0,0,0,0,  
2,4,7,--0,0,0,0,2,4,7,9,--

R86)

0,0,0,0,0,2,4,8,-->0,0,2,1,--0,0,2,1,--0,0,4,1,--0,0,3,1,--0,0,2,1,--0,0,--  
0,0,0,0,2,4,8,--

R87)

0,0,0,0,0,2,5,7,-->0,0,2,1,--0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,--0,0,0,0,0,  
2,5,7,--0,0,0,0,2,5,7,9,--

R88)

0,0,0,0,0,2,5,8,-->0,0,2,1,--0,0,3,1,--0,0,2,1,--0,0,3,1,--0,0,2,1,--0,0,--0,  
0,0,0,0,2,5,8,--

R89)

0,0,0,0,0,2,6,8,-->0,0,2,1,--0,0,4,1,--0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,--  
0,0,0,0,2,6,8,--

R90)

0,0,0,0,0,3,5,7,-->0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,--0,0,0,0,0,  
3,5,7,--0,0,0,0,3,5,7,9,--

R91)

0,0,0,0,0,3,5,8,-->0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,3,1,--0,0,2,1,--0,0,--0,  
0,0,0,0,3,5,8,--

R92)

0,0,0,0,0,3,6,8,-->0,0,3,1,--0,0,2,1,--0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,--0,  
0,0,0,0,3,6,8,--

R93)

0,0,0,0,0,4,6,8,-->0,0,4,1,--0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,--  
0,0,0,0,4,6,8,--

R94)

0,0,0,0,2,4,6,8,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,--0,0,0,0,2,4,6,  
8,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, :

LEN=3) 0,0,0, : 0,0,2, :

LEN=4) 0,0,0,0, : 0,0,0,2, : 0,0,0,3, : 0,0,2,1, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,2,4, : 0,0,0,3,1, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :

0,0,0,0,2,4, : 0,0,0,0,2,5, : 0,0,0,0,3,5, : 0,0,0,0,4,1, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, :  
 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,2,4, : 0,0,0,0,0,2,5, : 0,0,0,0,0,2,6, :  
 0,0,0,0,0,3,5, : 0,0,0,0,0,3,6, : 0,0,0,0,0,4,6, : 0,0,0,0,0,5,1, : 0,0,0,0,2,4,6, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, :  
 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,2,4, :  
 0,0,0,0,0,0,2,5, : 0,0,0,0,0,0,2,6, : 0,0,0,0,0,0,2,7, : 0,0,0,0,0,0,3,5, :  
 0,0,0,0,0,0,3,6, : 0,0,0,0,0,0,3,7, : 0,0,0,0,0,0,4,6, : 0,0,0,0,0,0,4,7, :  
 0,0,0,0,0,0,5,7, : 0,0,0,0,0,0,6,1, : 0,0,0,0,0,2,4,6, : 0,0,0,0,0,2,4,7, :  
 0,0,0,0,0,2,5,7, : 0,0,0,0,0,3,5,7, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7, :  
 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,2,4, : 0,0,0,0,0,0,0,2,5, : 0,0,0,0,0,0,0,2,6, :  
 0,0,0,0,0,0,0,2,7, : 0,0,0,0,0,0,0,2,8, : 0,0,0,0,0,0,0,3,5, : 0,0,0,0,0,0,0,3,6, :  
 0,0,0,0,0,0,0,3,7, : 0,0,0,0,0,0,0,3,8, : 0,0,0,0,0,0,0,4,6, : 0,0,0,0,0,0,0,4,7, :  
 0,0,0,0,0,0,0,4,8, : 0,0,0,0,0,0,0,5,7, : 0,0,0,0,0,0,0,5,8, : 0,0,0,0,0,0,0,6,8, :  
 0,0,0,0,0,0,0,7,1, : 0,0,0,0,0,0,2,4,6, : 0,0,0,0,0,0,2,4,7, : 0,0,0,0,0,0,2,4,8, :  
 0,0,0,0,0,0,2,5,7, : 0,0,0,0,0,0,2,5,8, : 0,0,0,0,0,0,2,6,8, : 0,0,0,0,0,0,3,5,7, :  
 0,0,0,0,0,0,3,5,8, : 0,0,0,0,0,0,3,6,8, : 0,0,0,0,0,0,4,6,8, : 0,0,0,0,0,2,4,6,8, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, :  
 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, :  
 0,0,0,0,0,0,0,0,2,4, : 0,0,0,0,0,0,0,0,2,5, : 0,0,0,0,0,0,0,0,2,6, :  
 0,0,0,0,0,0,0,0,2,7, : 0,0,0,0,0,0,0,0,2,8, : 0,0,0,0,0,0,0,0,2,9, :  
 0,0,0,0,0,0,0,0,3,5, : 0,0,0,0,0,0,0,0,3,6, : 0,0,0,0,0,0,0,0,3,7, :  
 0,0,0,0,0,0,0,0,3,8, : 0,0,0,0,0,0,0,0,3,9, : 0,0,0,0,0,0,0,0,4,6, :  
 0,0,0,0,0,0,0,0,4,7, : 0,0,0,0,0,0,0,0,4,8, : 0,0,0,0,0,0,0,0,4,9, :  
 0,0,0,0,0,0,0,0,5,7, : 0,0,0,0,0,0,0,0,5,8, : 0,0,0,0,0,0,0,0,5,9, :  
 0,0,0,0,0,0,0,0,6,8, : 0,0,0,0,0,0,0,0,6,9, : 0,0,0,0,0,0,0,0,7,9, :  
 0,0,0,0,0,0,0,0,8,1, : 0,0,0,0,0,0,0,2,4,6, : 0,0,0,0,0,0,0,2,4,7, :  
 0,0,0,0,0,0,0,2,4,8, : 0,0,0,0,0,0,0,2,4,9, : 0,0,0,0,0,0,0,2,5,7, :  
 0,0,0,0,0,0,0,2,5,8, : 0,0,0,0,0,0,0,2,5,9, : 0,0,0,0,0,0,0,2,6,8, :  
 0,0,0,0,0,0,0,2,6,9, : 0,0,0,0,0,0,0,2,7,9, : 0,0,0,0,0,0,0,3,5,7, :  
 0,0,0,0,0,0,0,3,5,8, : 0,0,0,0,0,0,0,3,5,9, : 0,0,0,0,0,0,0,3,6,8, :  
 0,0,0,0,0,0,0,3,6,9, : 0,0,0,0,0,0,0,3,7,9, : 0,0,0,0,0,0,0,4,6,8, :  
 0,0,0,0,0,0,0,4,6,9, : 0,0,0,0,0,0,0,4,7,9, : 0,0,0,0,0,0,0,5,7,9, :  
 0,0,0,0,0,0,2,4,6,8, : 0,0,0,0,0,0,2,4,6,9, : 0,0,0,0,0,0,2,4,7,9, :  
 0,0,0,0,0,0,2,5,7,9, : 0,0,0,0,0,0,3,5,7,9, :

Number new nodes in level n is given by : 1,1,2,4,6,9,14,22,35,56,

-----Class

1024-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][101][102][120][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,0,--0,0,--0,0,2,--

R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--

R4) 0,0,2,-->0,0,2,1,--0,0,0,2,--0,--

R5) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R6) 0,0,0,2,-->0,0,2,1,--0,0,0,0,2,--0,0,--0,0,2,--  
R7) 0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,3,--0,--  
R8) 0,0,2,1,-->0,0,2,1,--  
R9)  
0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,  
0,0,0,0,5,--  
R10) 0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,2,--0,0,0,--0,0,0,2,--0,0,0,3,--  
R11) 0,0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,3,--0,0,--0,0,2,--  
R12) 0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,4,--0,--  
R13) 0,0,0,3,2,-->0,0,2,1,--0,0,0,3,2,--  
R14)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,  
0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R15)  
0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,2,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,  
4,--  
R16)  
0,0,0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,3,--0,0,0,--0,0,0,2,--0,0,0,3,--  
R17)  
0,0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,4,--0,0,--0,0,2,--  
R18)  
0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,5,--  
0,--  
R19) 0,0,0,0,4,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--  
R20)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R21)  
0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,  
--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R22)  
0,0,0,0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,0,3,--0,0,0,0,--0,0,0,0,2,--0,0,  
0,0,3,--0,0,0,0,4,--  
R23)  
0,0,0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,0,4,--0,0,0,--0,0,  
0,2,--0,0,0,3,--  
R24)  
0,0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,0,  
5,--0,0,--0,0,2,--  
R25)  
0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,  
5,--0,0,0,0,0,0,6,--0,--  
R26) 0,0,0,0,0,5,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--  
R27)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,  
0,0,0,7,--0,0,0,0,0,0,0,0,8,--  
R28)  
0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,  
0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--



LEN=3) 0,0,0, : 0,0,2, :  
 LEN=4) 0,0,0,0, : 0,0,0,2, : 0,0,0,3, : 0,0,2,1, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,3,2, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :  
 0,0,0,0,4,3, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, :  
 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,4, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, :  
 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,5, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7, :  
 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,6, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, :  
 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, :  
 0,0,0,0,0,0,0,0,8,7, :

Number new nodes in level n is given by : 1,1,2,4,5,6,7,8,9,10,

-----Class

1025-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][101][102][120][210]]$

-----

--

Rules of T[L]:

- R1) 0, -->0,0, --0, --
- R2) 0,0, -->0,0,0, --0,0, --0,0,2, --
- R3) 0,0,0, -->0,0,0,0, --0,0,0, --0,0,0,2, --0,0,0,3, --
- R4) 0,0,2, -->0,0,2,1, --0,0,0,2, --0, --
- R5) 0,0,0,0, -->0,0,0,0,0, --0,0,0,0, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --
- R6) 0,0,0,2, -->0,0,2,1, --0,0,0,0,2, --0,0, --0,0,2, --
- R7) 0,0,0,3, -->0,0,0,3,1, --0,0,2,1, --0,0,0,0,3, --0, --
- R8) 0,0,2,1, -->0,0,2,1, --
- R9) 0,0,0,0,0, -->0,0,0,0,0,0, --0,0,0,0,0, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5, --
- R10) 0,0,0,0,2, -->0,0,2,1, --0,0,0,0,0,2, --0,0,0, --0,0,0,2, --0,0,0,3, --
- R11) 0,0,0,0,3, -->0,0,0,3,1, --0,0,2,1, --0,0,0,0,0,3, --0,0, --0,0,2, --
- R12) 0,0,0,0,4, -->0,0,0,0,4,1, --0,0,0,3,1, --0,0,2,1, --0,0,0,0,0,4, --0, --
- R13) 0,0,0,3,1, -->0,0,0,3,1, --0,0,2,1, --
- R14) 0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,0,0,0,0,0, --0,0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --
- R15) 0,0,0,0,0,2, -->0,0,2,1, --0,0,0,0,0,0,2, --0,0,0,0, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --
- R16) 0,0,0,0,0,3, -->0,0,0,3,1, --0,0,2,1, --0,0,0,0,0,0,3, --0,0,0, --0,0,0,2, --0,0,0,3, --
- R17) 0,0,0,0,0,4, -->0,0,0,0,4,1, --0,0,0,3,1, --0,0,2,1, --0,0,0,0,0,0,4, --0,0, --0,0,2, --
- R18)

0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,5,--  
0,--

R19) 0,0,0,0,4,1,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--

R20)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R21)

0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,  
--0,0,0,0,0,4,--0,0,0,0,0,5,--

R22)

0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,3,--0,0,0,0,--0,0,0,0,2,--0,0,  
0,0,3,--0,0,0,0,4,--

R23)

0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,4,--0,0,0,--0,0,  
0,2,--0,0,0,3,--

R24)

0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,  
5,--0,0,--0,0,2,--

R25)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,  
1,--0,0,0,0,0,0,6,--0,--

R26) 0,0,0,0,0,5,1,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--

R27)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,  
,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R28)

0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,  
0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R29)

0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,--0,0,0,0,0,  
2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R30)

0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,4,--0,0,0,0,  
--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R31)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,  
0,0,5,--0,0,0,--0,0,0,2,--0,0,0,3,--

R32)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,  
2,1,--0,0,0,0,0,0,0,6,--0,0,--0,0,2,--

R33)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,  
1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,7,--0,--

R34)

0,0,0,0,0,0,0,6,1,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,  
2,1,--

R35)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,  
--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0



,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R36)

0,0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,  
,0,0,0,7,--

R37)

0,0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,--0,0,  
0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R38)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,4,--0,0,  
0,0,0,--0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R39)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,  
0,0,0,0,5,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R40)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,  
0,2,1,--0,0,0,0,0,0,0,0,6,--0,0,0,--0,0,0,2,--0,0,0,3,--

R41)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,  
4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,7,--0,0,--0,0,2,--

R42)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,1,--0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,6,1,--0,  
0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,8,--0,--

R43)

0,0,0,0,0,0,0,0,7,1,-->0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,  
4,1,--0,0,0,3,1,--0,0,2,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

LEN=3) 0,0,0,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,2,: 0,0,0,3,: 0,0,2,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,: 0,0,0,3,1,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,: 0,0,0,0,0,5,:  
0,0,0,0,4,1,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,: 0,0,0,0,0,0,4,:

0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,1,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,4,:

0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,1,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7,:

0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,1,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6,:

0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9,:

0,0,0,0,0,0,0,0,8,1,:

Number new nodes in level n is given by : 1,1,2,4,5,6,7,8,9,10,

-----Class

1026-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][101][102][201][210]]$





List of different nodes in T[L]

- LEN=1) 0, :
  - LEN=2) 0,0, :
  - LEN=3) 0,0,0, : 0,0,2, :
  - LEN=4) 0,0,0,0, : 0,0,0,2, : 0,0,0,3, : 0,0,2,1, :
  - LEN=5) 0,0,0,0,0, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, :
  - LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :
  - LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, :  
0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, :
  - LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, :  
0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :
  - LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,3, :  
0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7, :  
0,0,0,0,0,0,0,0,8, :
  - LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,0,3, :  
0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, :  
0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, :
- Number new nodes in level n is given by : 1,1,2,4,4,5,6,7,8,9,

-----Class

1027-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][101][110][120][201]]$

- 
- Rules of T[L]:
- R1) 0, -->0,0, --0, --
  - R2) 0,0, -->0,0,0, --0,0, --0,0,2, --
  - R3) 0,0,0, -->0,0,0,0, --0,0,0, --0,0,0,2, --0,0,0,3, --
  - R4) 0,0,2, -->0,0, --0,0, --0, --
  - R5) 0,0,0,0, -->0,0,0,0,0, --0,0,0,0, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --
  - R6) 0,0,0,2, -->0,0,0, --0,0,0, --0,0, --0,0,2, --
  - R7) 0,0,0,3, -->0,0, --0,0,0,2, --0,0, --0, --
  - R8)  
0,0,0,0,0, -->0,0,0,0,0,0, --0,0,0,0,0, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,  
0,0,0,0,5, --
  - R9) 0,0,0,0,2, -->0,0,0,0, --0,0,0,0, --0,0,0, --0,0,0,2, --0,0,0,3, --
  - R10) 0,0,0,0,3, -->0,0,0, --0,0,0,0,2, --0,0,0, --0,0, --0,0,2, --
  - R11) 0,0,0,0,4, -->0,0, --0,0,0,2, --0,0,0,0,3, --0,0, --0, --
  - R12)  
0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,0,0,0,0,0, --0,0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,0,  
0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --
  - R13)  
0,0,0,0,0,2, -->0,0,0,0,0,0, --0,0,0,0,0,0, --0,0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4,  
--
  - R14) 0,0,0,0,0,3, -->0,0,0,0, --0,0,0,0,0,2, --0,0,0,0, --0,0,0, --0,0,0,2, --0,0,0,3, --
  - R15) 0,0,0,0,0,4, -->0,0,0, --0,0,0,0,2, --0,0,0,0,0,3, --0,0,0, --0,0, --0,0,2, --
  - R16) 0,0,0,0,0,5, -->0,0, --0,0,0,2, --0,0,0,0,3, --0,0,0,0,0,4, --0,0, --0, --
  - R17)  
0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0, --0,0,0,0,0,0,0,2, --0,0,0,0,0,0,0,  
3, --0,0,0,0,0,0,0,0,4, --0,0,0,0,0,0,0,5, --0,0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --

R18)

0,0,0,0,0,0,2,-->0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,  
--0,0,0,0,0,4,--0,0,0,0,0,5,--

R19)

0,0,0,0,0,0,3,-->0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,--0,0,0,0,2,--0,0,  
0,0,3,--0,0,0,0,4,--

R20)

0,0,0,0,0,0,4,-->0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,--0,0,0,2,  
--0,0,0,3,--

R21)

0,0,0,0,0,0,5,-->0,0,0,--0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,--0,0,--0,  
0,2,--

R22)

0,0,0,0,0,0,6,-->0,0,--0,0,0,2,--0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--0,0,--0,  
--

R23)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,  
,0,0,0,7,--0,0,0,0,0,0,0,8,--

R24)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,  
0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R25)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,--0,0,0,0,  
0,0,2,--0,0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--

R26)

0,0,0,0,0,0,0,4,-->0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,--0,0,0,  
0,--0,0,0,2,--0,0,0,3,--0,0,0,4,--

R27)

0,0,0,0,0,0,0,5,-->0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--0,0,0,  
0,--0,0,0,--0,0,2,--0,0,3,--

R28)

0,0,0,0,0,0,0,6,-->0,0,0,--0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,0,  
5,--0,0,0,--0,0,--0,0,2,--

R29)

0,0,0,0,0,0,0,7,-->0,0,--0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,  
0,0,0,0,6,--0,0,--0,0,--

R30)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,  
--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,9,--

R31)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,  
0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,  
,0,0,0,0,0,7,--

R32)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,--0,0,0,0,0,  
0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--

R33)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R34)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--

R35)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--

R36)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,2,--

R37)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, :

LEN=3) 0,0,0, : 0,0,2, :

LEN=4) 0,0,0,0, : 0,0,0,2, : 0,0,0,3, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, :

Number new nodes in level n is given by : 1,1,2,3,4,5,6,7,8,9,

-----Class

1028-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][101][110][120][210]]

-----

--

Rules of T[L]:

R1) 0, -->0,0,--0,--

R2) 0,0, -->0,0,0,--0,0,--0,0,2,--

R3) 0,0,0, -->0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--

R4) 0,0,2, -->0,0,--0,0,--0,--

R5) 0,0,0,0, -->0,0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R6) 0,0,0,2, -->0,0,0,--0,0,0,--0,0,--0,0,2,--

R7) 0,0,0,3, -->0,0,0,3,1,--0,0,--0,0,--0,--

R8)

0,0,0,0,0, -->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R9) 0,0,0,0,2, -->0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--

R10) 0,0,0,0,3,-->0,0,0,0,3,1,--0,0,0,--0,0,0,--0,0,--0,0,2,--  
R11) 0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,--0,0,--0,--  
R12) 0,0,0,3,1,-->0,0,0,0,3,1,--0,0,0,--0,0,--0,0,2,--  
R13)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,  
0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R14)  
0,0,0,0,0,2,-->0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,  
--  
R15)  
0,0,0,0,0,3,-->0,0,0,0,0,3,1,--0,0,0,0,--0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--  
R16) 0,0,0,0,0,4,-->0,0,0,0,0,4,1,--0,0,0,0,3,1,--0,0,0,--0,0,0,--0,0,--0,0,2,--  
R17) 0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,--0,0,--0,--  
R18) 0,0,0,0,3,1,-->0,0,0,0,0,3,1,--0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--  
R19) 0,0,0,0,4,1,-->0,0,0,0,0,4,1,--0,0,0,0,3,1,--0,0,0,--0,0,--0,0,2,--  
R20)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R21)  
0,0,0,0,0,0,2,-->0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,  
--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R22)  
0,0,0,0,0,0,3,-->0,0,0,0,0,0,3,1,--0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,  
0,0,0,3,--0,0,0,0,4,--  
R23)  
0,0,0,0,0,0,4,-->0,0,0,0,0,0,4,1,--0,0,0,0,0,3,1,--0,0,0,0,--0,0,0,0,--0,0,0,--0,0,  
0,2,--0,0,0,3,--  
R24)  
0,0,0,0,0,0,5,-->0,0,0,0,0,0,5,1,--0,0,0,0,0,4,1,--0,0,0,0,3,1,--0,0,0,--0,0,0,--0,  
0,--0,0,2,--  
R25)  
0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,--  
0,0,--0,--  
R26)  
0,0,0,0,0,3,1,-->0,0,0,0,0,0,3,1,--0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,  
0,0,0,4,--  
R27)  
0,0,0,0,0,4,1,-->0,0,0,0,0,0,4,1,--0,0,0,0,0,3,1,--0,0,0,0,--0,0,0,0,--0,0,0,2,--0,0,  
0,3,--  
R28)  
0,0,0,0,0,5,1,-->0,0,0,0,0,0,5,1,--0,0,0,0,0,4,1,--0,0,0,0,3,1,--0,0,0,--0,0,--0,0,  
2,--  
R29)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,  
0,0,0,7,--0,0,0,0,0,0,0,0,8,--  
R30)  
0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,  
0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R31)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R32)

0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,4,1,--0,0,0,0,0,0,3,1,--0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R33)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,5,1,--0,0,0,0,0,0,4,1,--0,0,0,0,0,3,1,--0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--

R34)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,6,1,--0,0,0,0,0,0,5,1,--0,0,0,0,0,4,1,--0,0,0,0,3,1,--0,0,0,0,--0,0,0,0,2,--

R35)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,--0,0,--0,--

R36)

0,0,0,0,0,0,3,1,-->0,0,0,0,0,0,3,1,--0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--

R37)

0,0,0,0,0,0,4,1,-->0,0,0,0,0,0,4,1,--0,0,0,0,0,0,3,1,--0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,2,--0,0,0,3,--0,0,0,4,--

R38)

0,0,0,0,0,0,5,1,-->0,0,0,0,0,0,5,1,--0,0,0,0,0,0,4,1,--0,0,0,0,0,3,1,--0,0,0,0,0,--0,0,0,0,2,--0,0,0,3,--

R39)

0,0,0,0,0,0,6,1,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,5,1,--0,0,0,0,0,4,1,--0,0,0,0,3,1,--0,0,0,0,--0,0,0,2,--

R40)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R41)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R42)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R43)

0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,4,1,--0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R44)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,5,1,--0,0,0,0,0,0,0,4,1,--0,0,0,0,0,0,3,1,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R45)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,6,1,--0,0,0,0,0,0,0,5,1,--0,0,0,0,0,0,4,1,--0,0,0,0,0,3,1,--0,0,0,0,--0,0,0,0,2,--0,0,0,3,--

R46)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,6,1,--0,0,0,0,0,0,5,1,--0,0,0,0,0,4,1,--0,0,0,0,3,1,--0,0,0,0,--0,0,0,0,2,--



R47)  
0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,8,1,--0,0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,0,6,1,--0,  
0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,0,3,1,--0,0,--0,0,--0,--

R48)  
0,0,0,0,0,0,0,0,3,1,-->0,0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,  
0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R49)  
0,0,0,0,0,0,0,0,4,1,-->0,0,0,0,0,0,0,0,4,1,--0,0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,0,--0,0,0,  
0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R50)  
0,0,0,0,0,0,0,0,5,1,-->0,0,0,0,0,0,0,0,5,1,--0,0,0,0,0,0,0,0,4,1,--0,0,0,0,0,0,0,3,1,--0,  
0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R51)  
0,0,0,0,0,0,0,0,6,1,-->0,0,0,0,0,0,0,0,6,1,--0,0,0,0,0,0,0,0,5,1,--0,0,0,0,0,0,0,4,1,--0,  
0,0,0,0,0,3,1,--0,0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--

R52)  
0,0,0,0,0,0,0,0,7,1,-->0,0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,0,6,1,--0,0,0,0,0,0,0,5,1,--0,  
0,0,0,0,0,4,1,--0,0,0,0,0,3,1,--0,0,0,0,--0,0,--0,0,2,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

LEN=3) 0,0,0, : 0,0,2, :

LEN=4) 0,0,0,0, : 0,0,0,2, : 0,0,0,3, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,3,1, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :

0,0,0,0,3,1, : 0,0,0,0,4,1, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, :

0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,3,1, : 0,0,0,0,0,4,1, : 0,0,0,0,0,5,1, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, :

0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,3,1, :

0,0,0,0,0,0,4,1, : 0,0,0,0,0,0,5,1, : 0,0,0,0,0,0,6,1, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,3, :

0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7, :

0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,3,1, : 0,0,0,0,0,0,0,4,1, : 0,0,0,0,0,0,0,5,1, :

0,0,0,0,0,0,0,6,1, : 0,0,0,0,0,0,0,7,1, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,0,3, :

0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, :

0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, :

0,0,0,0,0,0,0,0,3,1, : 0,0,0,0,0,0,0,0,4,1, : 0,0,0,0,0,0,0,0,5,1, :

0,0,0,0,0,0,0,0,6,1, : 0,0,0,0,0,0,0,0,7,1, : 0,0,0,0,0,0,0,0,8,1, :

Number new nodes in level n is given by : 1,1,2,3,5,7,9,11,13,15,

-----Class

1029-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][101][110][201][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,0,--0,0,--0,0,2,--

R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--  
R4) 0,0,2,-->0,0,--0,0,--0,0,2,--  
R5) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R6) 0,0,0,2,-->0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--  
R7) 0,0,0,3,-->0,0,--0,0,--0,0,--0,0,0,3,--  
R8)  
0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,  
0,0,0,0,5,--  
R9) 0,0,0,0,2,-->0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R10) 0,0,0,0,3,-->0,0,0,--0,0,0,--0,0,0,--0,0,0,0,3,--0,0,0,0,4,--  
R11) 0,0,0,0,4,-->0,0,--0,0,--0,0,--0,0,--0,0,0,0,4,--  
R12)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,  
0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R13)  
0,0,0,0,0,2,-->0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,  
0,0,0,0,5,--  
R14)  
0,0,0,0,0,3,-->0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,  
5,--  
R15) 0,0,0,0,0,4,-->0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R16) 0,0,0,0,0,5,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,0,0,0,5,--  
R17)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R18)  
0,0,0,0,0,0,2,-->0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,  
0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R19)  
0,0,0,0,0,0,3,-->0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,  
--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R20)  
0,0,0,0,0,0,4,-->0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,0,0,4,--0,0,0,0,0,  
0,5,--0,0,0,0,0,0,6,--  
R21)  
0,0,0,0,0,0,5,-->0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,0,0,0,5,--0,0,0,0,0,  
0,6,--  
R22) 0,0,0,0,0,0,6,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,0,0,0,0,6,--  
R23)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,  
0,0,0,7,--0,0,0,0,0,0,0,0,8,--  
R24)  
0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R25)  
0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,0,3,--0,0,  
0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R26)  
0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,0,4,

--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R27)

0,0,0,0,0,0,0,5,-->0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R28)

0,0,0,0,0,0,0,6,-->0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R29)

0,0,0,0,0,0,0,7,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,0,0,0,0,0,7,--

R30)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,9,--

R31)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R32)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R33)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R34)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R35)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R36)

0,0,0,0,0,0,0,0,7,-->0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R37)

0,0,0,0,0,0,0,0,8,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,0,0,0,0,0,8,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, :

LEN=3) 0,0,0, : 0,0,2, :

LEN=4) 0,0,0,0, : 0,0,0,2, : 0,0,0,3, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, :

0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, :

0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,3, :

0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7, :

0,0,0,0,0,0,0,0,8, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, :  
 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, :  
 Number new nodes in level n is given by : 1,1,2,3,4,5,6,7,8,9,

-----Class

1030-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][101][120][201][210]]$

-----

--  
 Rules of T[L]:

- R1) 0, -->0,0, --0, --
- R2) 0,0, -->0,0,0, --0,0, --0,0,2, --
- R3) 0,0,0, -->0,0,0,0, --0,0,0, --0,0,0,2, --0,0,0,3, --
- R4) 0,0,2, -->0,0, --0,0,0,2, --0, --
- R5) 0,0,0,0, -->0,0,0,0,0, --0,0,0,0, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --
- R6) 0,0,0,2, -->0,0,0, --0,0,0,0,2, --0,0, --0,0,2, --
- R7) 0,0,0,3, -->0,0, --0,0, --0,0,0,0,3, --0, --
- R8)  
 0,0,0,0,0, -->0,0,0,0,0,0, --0,0,0,0,0, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,  
 0,0,0,0,5, --
- R9) 0,0,0,0,2, -->0,0,0,0, --0,0,0,0,0,2, --0,0,0, --0,0,0,2, --0,0,0,3, --
- R10) 0,0,0,0,3, -->0,0,0, --0,0,0, --0,0,0,0,0,3, --0,0, --0,0,2, --
- R11) 0,0,0,0,4, -->0,0, --0,0, --0,0, --0,0,0,0,0,4, --0, --
- R12)  
 0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,0,0,0,0,0, --0,0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,0,  
 0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --
- R13)  
 0,0,0,0,0,2, -->0,0,0,0,0, --0,0,0,0,0,0,2, --0,0,0,0, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,  
 0,4, --
- R14)  
 0,0,0,0,0,3, -->0,0,0,0, --0,0,0,0, --0,0,0,0,0,0,3, --0,0,0, --0,0,0,2, --0,0,0,3, --
- R15) 0,0,0,0,0,4, -->0,0,0, --0,0,0, --0,0,0, --0,0,0,0,0,0,4, --0,0, --0,0,2, --
- R16) 0,0,0,0,0,5, -->0,0, --0,0, --0,0, --0,0, --0,0,0,0,0,0,5, --0, --
- R17)  
 0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0, --0,0,0,0,0,0,0,2, --0,0,0,0,0,0,0,  
 3, --0,0,0,0,0,0,0,4, --0,0,0,0,0,0,0,5, --0,0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --
- R18)  
 0,0,0,0,0,0,2, -->0,0,0,0,0,0, --0,0,0,0,0,0,0,2, --0,0,0,0,0, --0,0,0,0,0,2, --0,0,0,0,  
 0,3, --0,0,0,0,0,4, --0,0,0,0,0,5, --
- R19)  
 0,0,0,0,0,0,3, -->0,0,0,0,0, --0,0,0,0,0, --0,0,0,0,0,0,0,3, --0,0,0,0, --0,0,0,0,2, --0,  
 0,0,0,3, --0,0,0,0,4, --
- R20)  
 0,0,0,0,0,0,4, -->0,0,0,0, --0,0,0,0, --0,0,0,0, --0,0,0,0,0,0,0,4, --0,0,0, --0,0,0,2, --  
 0,0,0,3, --
- R21)  
 0,0,0,0,0,0,5, -->0,0,0, --0,0,0, --0,0,0, --0,0,0, --0,0,0,0,0,0,0,5, --0,0, --0,0,2, --
- R22) 0,0,0,0,0,0,6, -->0,0, --0,0, --0,0, --0,0, --0,0, --0,0,0,0,0,0,0,6, --0, --

R23)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R24)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--

R25)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--

R26)

0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R27)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,2,--0,0,0,3,--

R28)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,6,--0,0,0,2,--

R29)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,7,--

R30)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R31)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

R32)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R33)

0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R34)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--

R35)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,2,--0,0,0,0,3,--

R36)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,2,--

R37)

0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,8,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:  
 LEN=3) 0,0,0,: 0,0,2,:  
 LEN=4) 0,0,0,0,: 0,0,0,2,: 0,0,0,3,:  
 LEN=5) 0,0,0,0,0,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,:  
 LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,: 0,0,0,0,0,5,:  
 LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,: 0,0,0,0,0,0,4,:  
 0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,:  
 LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,4,:  
 0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,0,3,:  
 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,7,:  
 0,0,0,0,0,0,0,0,8,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,0,0,3,:  
 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,0,6,:  
 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,0,0,9,:  
 Number new nodes in level n is given by : 1,1,2,3,4,5,6,7,8,9,

-----Class

1031-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][102][110][120][201]]$

-----

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,--
- R2) 0,0,-->0,0,0,--0,0,--0,0,2,--
- R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--
- R4) 0,0,2,-->0,0,2,1,--0,0,--0,--
- R5) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R6) 0,0,0,2,-->0,0,2,1,--0,0,0,--0,0,--0,0,2,--
- R7) 0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,--0,--
- R8) 0,0,2,1,-->0,0,2,1,--0,0,2,1,2,--
- R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--
- R10) 0,0,0,0,2,-->0,0,2,1,--0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--
- R11) 0,0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,--0,0,--0,0,2,--
- R12) 0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,--0,--
- R13) 0,0,0,3,2,-->0,0,2,1,2,--0,0,2,1,--0,0,2,1,2,--
- R14) 0,0,2,1,2,-->0,0,2,1,2,--
- R15) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--
- R16) 0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R17) 0,0,0,0,0,3,-->0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--
- R18) 0,0,0,0,0,4,-->0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,--0,0,--0,0,2,--
- R19) 0,0,0,0,0,5,-->0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,--0,--
- R20) 0,0,0,0,4,3,-->0,0,2,1,2,--0,0,0,0,4,3,2,--0,0,2,1,--0,0,2,1,2,--
- R21) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,--

3, --0,0,0,0,0,0,0,4, --0,0,0,0,0,0,0,5, --0,0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --  
 R22)  
 0,0,0,0,0,0,2, -->0,0,2,1, --0,0,0,0,0,0, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,  
 0,0,0,0,4, --0,0,0,0,0,5, --  
 R23)  
 0,0,0,0,0,0,3, -->0,0,2,1, --0,0,0,3,2, --0,0,0,0,0, --0,0,0,0, --0,0,0,0,2, --0,0,0,0,3,  
 --0,0,0,0,4, --  
 R24)  
 0,0,0,0,0,0,4, -->0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0, --0,0,0, --0,0,0,2, --0,  
 0,0,3, --  
 R25)  
 0,0,0,0,0,0,5, -->0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,0,5,4, --0,0,0, --0,0, --  
 0,0,2, --  
 R26)  
 0,0,0,0,0,0,6, -->0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,0,5,4, --0,0,0,0,0,0,6,  
 5, --0,0, --0, --  
 R27)  
 0,0,0,0,0,5,4, -->0,0,2,1,2, --0,0,0,0,4,3,2, --0,0,0,0,0,5,4,3, --0,0,2,1, --0,0,2,1,2,  
 --  
 R28) 0,0,0,0,4,3,2, -->0,0,2,1,2, --0,0,2,1,2, --  
 R29)  
 0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0,2, --0,0,0,  
 0,0,0,0,0,3, --0,0,0,0,0,0,0,0,0,4, --0,0,0,0,0,0,0,0,0,5, --0,0,0,0,0,0,0,0,6, --0,0,0,0,0,  
 ,0,0,0,7, --0,0,0,0,0,0,0,0,8, --  
 R30)  
 0,0,0,0,0,0,0,2, -->0,0,2,1, --0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0, --0,0,0,0,0,0,2, --0,0,0,0,  
 0,0,3, --0,0,0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --  
 R31)  
 0,0,0,0,0,0,0,3, -->0,0,2,1, --0,0,0,3,2, --0,0,0,0,0,0, --0,0,0,0,0, --0,0,0,0,0,2, --0,  
 0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5, --  
 R32)  
 0,0,0,0,0,0,0,4, -->0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,0, --0,0,0,0, --0,0,0,  
 0,2, --0,0,0,0,3, --0,0,0,0,4, --  
 R33)  
 0,0,0,0,0,0,0,5, -->0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,0,5,4, --0,0,0,0, --0,  
 0,0, --0,0,0,2, --0,0,0,3, --  
 R34)  
 0,0,0,0,0,0,0,6, -->0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,0,5,4, --0,0,0,0,0,0,  
 6,5, --0,0,0, --0,0, --0,0,2, --  
 R35)  
 0,0,0,0,0,0,0,7, -->0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,0,5,4, --0,0,0,0,0,0,  
 6,5, --0,0,0,0,0,0,7,6, --0,0, --0, --  
 R36)  
 0,0,0,0,0,0,6,5, -->0,0,2,1,2, --0,0,0,0,4,3,2, --0,0,0,0,0,5,4,3, --0,0,0,0,0,0,6,5,4,  
 --0,0,2,1, --0,0,2,1,2, --  
 R37) 0,0,0,0,0,5,4,3, -->0,0,2,1,2, --0,0,0,0,4,3,2, --0,0,2,1,2, --  
 R38)  
 0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0,2,  
 --0,0,0,0,0,0,0,0,0,3, --0,0,0,0,0,0,0,0,0,4, --0,0,0,0,0,0,0,0,0,5, --0,0,0,0,0,0,0,0,  
 ,0,6, --0,0,0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,0,0,8, --0,0,0,0,0,0,0,0,0,9, --

R39)

0,0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--  
0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,  
,0,7,--

R40)

0,0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,  
0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R41)

0,0,0,0,0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,--0,0,0,0,0,0,--  
0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--

R42)

0,0,0,0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,  
--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R43)

0,0,0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,  
0,6,5,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--

R44)

0,0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,  
0,6,5,--0,0,0,0,0,0,7,6,--0,0,0,--0,0,--0,0,2,--

R45)

0,0,0,0,0,0,0,0,8,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,  
0,6,5,--0,0,0,0,0,0,7,6,--0,0,0,0,0,0,8,7,--0,0,--0,--

R46)

0,0,0,0,0,0,0,7,6,-->0,0,2,1,2,--0,0,0,0,4,3,2,--0,0,0,0,0,5,4,3,--0,0,0,0,0,0,6,5,  
4,--0,0,0,0,0,0,7,6,5,--0,0,2,1,--0,0,2,1,2,--

R47)

0,0,0,0,0,0,6,5,4,-->0,0,2,1,2,--0,0,0,0,4,3,2,--0,0,0,0,0,5,4,3,--0,0,2,1,2,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, :

LEN=3) 0,0,0, : 0,0,2, :

LEN=4) 0,0,0,0, : 0,0,0,2, : 0,0,0,3, : 0,0,2,1, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,3,2, : 0,0,2,1,2, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :  
0,0,0,0,4,3, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, :

0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,4, : 0,0,0,0,4,3,2, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, :

0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,5, :

0,0,0,0,0,5,4,3, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,3, :

0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7, :

0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,6, : 0,0,0,0,0,0,6,5,4, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,0,3, :

0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, :

0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, :

0,0,0,0,0,0,0,0,8,7, : 0,0,0,0,0,0,7,6,5, :

Number new nodes in level n is given by : 1,1,2,4,6,6,8,9,10,11,

-----Class



1032-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][102][110][120][210]]$

-----

--  
Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,--
- R2) 0,0,-->0,0,0,--0,0,--0,0,2,--
- R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--
- R4) 0,0,2,-->0,0,2,1,--0,0,--0,--
- R5) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R6) 0,0,0,2,-->0,0,2,1,--0,0,0,--0,0,--0,0,2,--
- R7) 0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,--0,--
- R8) 0,0,2,1,-->0,0,2,1,--0,0,2,1,2,--
- R9)  
0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,  
0,0,0,0,5,--
- R10) 0,0,0,0,2,-->0,0,2,1,--0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--
- R11) 0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,--0,0,--0,0,2,--
- R12) 0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,--0,--
- R13) 0,0,0,3,1,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,2,--
- R14) 0,0,2,1,2,-->0,0,2,1,2,--
- R15)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,  
0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--
- R16)  
0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R17) 0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--
- R18) 0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,--0,0,--0,0,2,--
- R19) 0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,--0,--
- R20) 0,0,0,0,0,4,1,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,2,--
- R21)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--
- R22)  
0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,  
0,0,0,0,4,--0,0,0,0,0,5,--
- R23)  
0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,  
--0,0,0,0,4,--
- R24)  
0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,--0,0,0,--0,0,0,2,--0,  
0,0,3,--
- R25)  
0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,--0,0,--  
0,0,2,--
- R26)  
0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,  
1,--0,0,--0,--
- R27)  
0,0,0,0,0,5,1,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,2,--

R28)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R29)

0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--

R30)

0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R31)

0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R32)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,--0,0,0,--0,0,2,--0,0,3,--

R33)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,6,1,--0,0,0,0,5,1,--0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,--0,0,2,--

R34)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,7,1,--0,0,0,0,6,1,--0,0,0,5,1,--0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,--0,0,--

R35)

0,0,0,0,0,0,6,1,-->0,0,0,0,0,6,1,--0,0,0,0,5,1,--0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,2,--

R36)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R37)

0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R38)

0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R39)

0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R40)

0,0,0,0,0,0,0,5,-->0,0,0,0,5,1,--0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,--0,0,0,0,--0,0,0,2,--0,0,0,3,--0,0,0,4,--

R41)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,6,1,--0,0,0,5,1,--0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,--0,0,0,2,--0,0,0,3,--

R42)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,7,1,--0,0,0,6,1,--0,0,0,5,1,--0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,--0,0,2,--

R43)

0,0,0,0,0,0,0,8,-->0,0,0,0,0,8,1,--0,0,0,7,1,--0,0,0,6,1,--0,

0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,--0,--  
R44)  
0,0,0,0,0,0,0,7,1,-->0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,  
4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,2,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, :  
LEN=3) 0,0,0, : 0,0,2, :  
LEN=4) 0,0,0,0, : 0,0,0,2, : 0,0,0,3, : 0,0,2,1, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,3,1, : 0,0,2,1,2, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :  
0,0,0,0,4,1, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, :  
0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,1, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, :  
0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,1, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,3, :  
0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7, :  
0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,7,1, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,0,3, :  
0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, :  
0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, :  
0,0,0,0,0,0,0,0,8,1, :  
Number new nodes in level n is given by : 1,1,2,4,6,6,7,8,9,10,

-----Class

1033-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][102][110][201][210]]$

-----

--  
Rules of T[L]:

- R1) 0,-->0,0,--0,--
- R2) 0,0,-->0,0,0,--0,0,--0,0,2,--
- R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--
- R4) 0,0,2,-->0,0,2,1,--0,0,--0,0,2,3,--
- R5) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R6) 0,0,0,2,-->0,0,2,1,--0,0,0,--0,0,0,2,3,--0,0,0,2,4,--
- R7) 0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,--0,0,0,3,4,--
- R8) 0,0,2,1,-->0,0,2,1,--0,0,2,1,2,--
- R9) 0,0,2,3,-->0,0,2,1,2,--0,0,--0,0,2,3,--
- R10) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,  
0,0,0,0,5,--
- R11) 0,0,0,0,2,-->0,0,2,1,--0,0,0,0,--0,0,0,0,2,3,--0,0,0,0,2,4,--0,0,0,0,2,5,--
- R12) 0,0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,--0,0,0,0,3,4,--0,0,0,0,3,5,--
- R13) 0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,--0,0,0,0,4,5,--
- R14) 0,0,0,2,3,-->0,0,2,1,2,--0,0,0,--0,0,0,2,3,--0,0,0,2,4,--
- R15) 0,0,0,2,4,-->0,0,2,1,2,--0,0,2,1,--0,0,--0,0,0,3,4,--
- R16) 0,0,0,3,4,-->0,0,2,1,2,--0,0,2,1,2,--0,0,--0,0,0,3,4,--
- R17) 0,0,2,1,2,-->0,0,2,1,2,--

R18)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R19)

0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,--0,0,0,0,0,2,3,--0,0,0,0,0,2,4,--0,0,0,0,0,2,5,--0,0,0,0,0,2,6,--

R20)

0,0,0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,3,4,--0,0,0,0,0,3,5,--0,0,0,0,0,3,6,--

R21)

0,0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,--0,0,0,0,0,4,5,--0,0,0,0,0,4,6,--

R22) 0,0,0,0,0,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,--0,0,0,0,0,5,6,--

R23)

0,0,0,0,2,3,-->0,0,2,1,2,--0,0,0,0,--0,0,0,0,2,3,--0,0,0,0,2,4,--0,0,0,0,2,5,--

R24) 0,0,0,0,2,4,-->0,0,2,1,2,--0,0,2,1,--0,0,0,--0,0,0,0,3,4,--0,0,0,0,3,5,--

R25) 0,0,0,0,2,5,-->0,0,2,1,2,--0,0,2,1,--0,0,2,1,--0,0,--0,0,0,0,4,5,--

R26) 0,0,0,0,3,4,-->0,0,2,1,2,--0,0,2,1,2,--0,0,0,--0,0,0,0,3,4,--0,0,0,0,3,5,--

R27) 0,0,0,0,3,5,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,--0,0,--0,0,0,0,4,5,--

R28) 0,0,0,0,4,5,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,--0,0,0,0,4,5,--

R29)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R30)

0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,0,2,3,--0,0,0,0,0,0,2,4,--0,0,0,0,0,0,2,5,--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,2,7,--

R31)

0,0,0,0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,--0,0,0,0,0,0,3,4,--0,0,0,0,0,0,3,5,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,7,--

R32)

0,0,0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,0,4,5,--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,7,--

R33)

0,0,0,0,0,0,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,--0,0,0,0,0,0,5,6,--0,0,0,0,0,0,5,7,--

R34)

0,0,0,0,0,0,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,--0,0,0,0,0,0,6,7,--

R35)

0,0,0,0,0,2,3,-->0,0,2,1,2,--0,0,0,0,0,--0,0,0,0,0,2,3,--0,0,0,0,0,2,4,--0,0,0,0,0,2,5,--0,0,0,0,0,2,6,--

R36)

0,0,0,0,0,2,4,-->0,0,2,1,2,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,3,4,--0,0,0,0,0,3,5,--0,0,0,0,0,3,6,--

R37)

0,0,0,0,0,2,5,-->0,0,2,1,2,--0,0,2,1,--0,0,2,1,--0,0,0,--0,0,0,0,0,4,5,--0,0,0,0,0,4,6,--

R38)

0,0,0,0,0,2,6,-->0,0,2,1,2,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,--0,0,0,0,0,5,6,--

R39)

0,0,0,0,0,3,4,-->0,0,2,1,2,--0,0,2,1,2,--0,0,0,0,--0,0,0,0,0,3,4,--0,0,0,0,0,3,5,--  
0,0,0,0,0,3,6,--

R40)

0,0,0,0,0,3,5,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,--0,0,0,--0,0,0,0,0,4,5,--0,0,0,0,  
0,4,6,--

R41)

0,0,0,0,0,3,6,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,--0,0,2,1,--0,0,--0,0,0,0,0,5,6,--

R42)

0,0,0,0,0,4,5,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,0,--0,0,0,0,0,4,5,--0,0,0,  
0,0,4,6,--

R43)

0,0,0,0,0,4,6,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,--0,0,--0,0,0,0,0,5,6,  
--

R44)

0,0,0,0,0,5,6,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,--0,0,0,0,0,5,  
6,--

R45)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,  
0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R46)

0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,3,--0,0,0,0,0,0,0,0,2,4,  
--0,0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,0,2,8,--

R47)

0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,3,4,--0,0,0,0,0,  
0,0,3,5,--0,0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,0,3,8,--

R48)

0,0,0,0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,0,0,0,4,5,--0,  
0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,0,4,8,--

R49)

0,0,0,0,0,0,0,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,0,0,0,  
5,6,--0,0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,0,5,8,--

R50)

0,0,0,0,0,0,0,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,--0,0,0,  
0,0,0,0,6,7,--0,0,0,0,0,0,0,0,6,8,--

R51)

0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,  
--0,0,0,0,0,0,0,7,8,--

R52)

0,0,0,0,0,0,2,3,-->0,0,2,1,2,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,3,--0,0,0,0,0,0,0,0,2,4,--0,  
0,0,0,0,0,2,5,--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,2,7,--

R53)

0,0,0,0,0,0,2,4,-->0,0,2,1,2,--0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,0,0,0,3,4,--0,0,0,0,0,0,  
3,5,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,7,--

R54)

0,0,0,0,0,0,2,5,-->0,0,2,1,2,--0,0,2,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,0,0,0,4,5,--0,0,  
0,0,0,0,4,6,--0,0,0,0,0,0,4,7,--

R55)

0,0,0,0,0,0,2,6,-->0,0,2,1,2,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,--0,0,0,0,0,0,5,  
6,--0,0,0,0,0,0,5,7,--

R56)

0,0,0,0,0,0,2,7,-->0,0,2,1,2,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,--0,0,0,  
0,0,0,6,7,--

R57)

0,0,0,0,0,0,3,4,-->0,0,2,1,2,--0,0,2,1,2,--0,0,0,0,0,--0,0,0,0,0,0,3,4,--0,0,0,0,0,  
0,3,5,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,7,--

R58)

0,0,0,0,0,0,3,5,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,0,4,5,--0,  
0,0,0,0,0,4,6,--0,0,0,0,0,0,4,7,--

R59)

0,0,0,0,0,0,3,6,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,--0,0,2,1,--0,0,0,--0,0,0,0,0,0,  
5,6,--0,0,0,0,0,0,5,7,--

R60)

0,0,0,0,0,0,3,7,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,--0,0,  
0,0,0,0,6,7,--

R61)

0,0,0,0,0,0,4,5,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,0,0,--0,0,0,0,0,0,4,5,--  
0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,7,--

R62)

0,0,0,0,0,0,4,6,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,--0,0,0,--0,0,0,0,0,  
0,5,6,--0,0,0,0,0,0,5,7,--

R63)

0,0,0,0,0,0,4,7,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,--0,0,2,1,--0,0,--0,  
0,0,0,0,0,6,7,--

R64)

0,0,0,0,0,0,5,6,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,0,--0,0,0,0,  
0,0,5,6,--0,0,0,0,0,0,5,7,--

R65)

0,0,0,0,0,0,5,7,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,--0,0,--  
0,0,0,0,0,0,6,7,--

R66)

0,0,0,0,0,0,6,7,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,  
--0,0,0,0,0,6,7,--

R67)

0,0,0,0,0,0,0,0,0,-->0,2,  
--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,  
0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R68)

0,0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,2,3,--0,0,0,0,0,0,  
0,0,2,4,--0,0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,0,2,7,--0,0,0,0,  
0,0,0,0,2,8,--0,0,0,0,0,0,0,0,2,9,--

R69)

0,0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,3,4,--0,0,  
0,0,0,0,0,0,3,5,--0,0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,0,3,8,--  
-0,0,0,0,0,0,0,0,3,9,--

R70)

0,0,0,0,0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,0,0,0,4,  
5,--0,0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,0,4,8,--0,0,0,0,0,0,0,  
0,4,9,--

R71)

0,0,0,0,0,0,0,0,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,--0,0,0,0,0,  
0,0,0,5,6,--0,0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,0,5,8,--0,0,0,0,0,0,0,0,5,9,--

R72)

0,0,0,0,0,0,0,0,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,--0,  
0,0,0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,0,6,9,--

R73)

0,0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,  
0,0,--0,0,0,0,0,0,0,0,7,8,--0,0,0,0,0,0,0,0,7,9,--

R74)

0,0,0,0,0,0,0,0,8,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,  
0,2,1,--0,0,--0,0,0,0,0,0,0,0,8,9,--

R75)

0,0,0,0,0,0,0,0,2,3,-->0,0,2,1,2,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,3,--0,0,0,0,0,0,0,0,  
2,4,--0,0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,0,2,8,  
,--

R76)

0,0,0,0,0,0,0,0,2,4,-->0,0,2,1,2,--0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,3,4,--0,0,0,  
0,0,0,0,3,5,--0,0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,0,3,8,--

R77)

0,0,0,0,0,0,0,0,2,5,-->0,0,2,1,2,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,--0,0,0,0,0,0,0,0,4,5,  
--0,0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,0,4,8,--

R78)

0,0,0,0,0,0,0,0,2,6,-->0,0,2,1,2,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,0,  
0,0,5,6,--0,0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,0,5,8,--

R79)

0,0,0,0,0,0,0,0,2,7,-->0,0,2,1,2,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,--0,  
0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,0,6,8,--

R80)

0,0,0,0,0,0,0,0,2,8,-->0,0,2,1,2,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--  
0,0,--0,0,0,0,0,0,0,0,7,8,--

R81)

0,0,0,0,0,0,0,0,3,4,-->0,0,2,1,2,--0,0,2,1,2,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,3,4,--0,0,  
0,0,0,0,0,3,5,--0,0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,0,3,8,--

R82)

0,0,0,0,0,0,0,0,3,5,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,--0,0,0,0,0,--0,0,0,0,0,0,0,0,4,  
5,--0,0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,0,4,8,--

R83)

0,0,0,0,0,0,0,0,3,6,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,  
0,0,0,5,6,--0,0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,0,5,8,--

R84)

0,0,0,0,0,0,0,0,3,7,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,--  
0,0,0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,0,6,8,--

R85)

0,0,0,0,0,0,0,0,3,8,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--  
--0,0,--0,0,0,0,0,0,0,0,7,8,--

R86)

0,0,0,0,0,0,0,0,4,5,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,0,0,0,--0,0,0,0,0,0,0,0,  
4,5,--0,0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,0,4,8,--

R87)

0,0,0,0,0,0,0,0,4,6,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,--0,0,0,0,--0,0,0,

0,0,0,0,5,6,--0,0,0,0,0,0,5,7,--0,0,0,0,0,0,5,8,--  
R88)

0,0,0,0,0,0,0,4,7,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,--0,0,2,1,--0,0,0,  
--0,0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,6,8,--

R89)  
0,0,0,0,0,0,0,4,8,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,--0,0,2,1,--0,0,2,  
1,--0,0,--0,0,0,0,0,0,7,8,--

R90)  
0,0,0,0,0,0,0,5,6,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,0,0,--0,0,  
0,0,0,0,0,5,6,--0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,5,8,--

R91)  
0,0,0,0,0,0,0,5,7,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,--0,0,  
0,--0,0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,6,8,--

R92)  
0,0,0,0,0,0,0,5,8,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,--0,0,  
2,1,--0,0,--0,0,0,0,0,0,7,8,--

R93)  
0,0,0,0,0,0,0,6,7,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,  
0,0,--0,0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,6,8,--

R94)  
0,0,0,0,0,0,0,6,8,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,  
0,2,1,--0,0,--0,0,0,0,0,0,7,8,--

R95)  
0,0,0,0,0,0,0,7,8,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,  
0,2,1,2,--0,0,--0,0,0,0,0,0,7,8,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, :  
LEN=3) 0,0,0, : 0,0,2, :  
LEN=4) 0,0,0,0, : 0,0,0,2, : 0,0,0,3, : 0,0,2,1, : 0,0,2,3, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,2,3, : 0,0,0,2,4, :  
0,0,0,3,4, : 0,0,2,1,2, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :  
0,0,0,0,2,3, : 0,0,0,0,2,4, : 0,0,0,0,2,5, : 0,0,0,0,3,4, : 0,0,0,0,3,5, : 0,0,0,0,4,5, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, :  
0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,2,3, : 0,0,0,0,0,2,4, : 0,0,0,0,0,2,5, :  
0,0,0,0,0,2,6, : 0,0,0,0,0,3,4, : 0,0,0,0,0,3,5, : 0,0,0,0,0,3,6, : 0,0,0,0,0,4,5, :  
0,0,0,0,0,4,6, : 0,0,0,0,0,5,6, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, :  
0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,2,3, :  
0,0,0,0,0,0,2,4, : 0,0,0,0,0,0,2,5, : 0,0,0,0,0,0,2,6, : 0,0,0,0,0,0,2,7, :  
0,0,0,0,0,0,3,4, : 0,0,0,0,0,0,3,5, : 0,0,0,0,0,0,3,6, : 0,0,0,0,0,0,3,7, :  
0,0,0,0,0,0,4,5, : 0,0,0,0,0,0,4,6, : 0,0,0,0,0,0,4,7, : 0,0,0,0,0,0,5,6, :  
0,0,0,0,0,0,5,7, : 0,0,0,0,0,0,6,7, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,3, :  
0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7, :  
0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,2,3, : 0,0,0,0,0,0,0,2,4, : 0,0,0,0,0,0,0,2,5, :  
0,0,0,0,0,0,0,2,6, : 0,0,0,0,0,0,0,2,7, : 0,0,0,0,0,0,0,2,8, : 0,0,0,0,0,0,0,3,4, :  
0,0,0,0,0,0,0,3,5, : 0,0,0,0,0,0,0,3,6, : 0,0,0,0,0,0,0,3,7, : 0,0,0,0,0,0,0,3,8, :



0,0,0,0,0,0,0,4,5, : 0,0,0,0,0,0,0,4,6, : 0,0,0,0,0,0,0,4,7, : 0,0,0,0,0,0,0,4,8, :  
 0,0,0,0,0,0,0,5,6, : 0,0,0,0,0,0,0,5,7, : 0,0,0,0,0,0,0,5,8, : 0,0,0,0,0,0,0,6,7, :  
 0,0,0,0,0,0,0,6,8, : 0,0,0,0,0,0,0,7,8, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, :  
 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, :  
 0,0,0,0,0,0,0,0,2,3, : 0,0,0,0,0,0,0,0,2,4, : 0,0,0,0,0,0,0,0,2,5, :  
 0,0,0,0,0,0,0,0,2,6, : 0,0,0,0,0,0,0,0,2,7, : 0,0,0,0,0,0,0,0,2,8, :  
 0,0,0,0,0,0,0,0,2,9, : 0,0,0,0,0,0,0,0,3,4, : 0,0,0,0,0,0,0,0,3,5, :  
 0,0,0,0,0,0,0,0,3,6, : 0,0,0,0,0,0,0,0,3,7, : 0,0,0,0,0,0,0,0,3,8, :  
 0,0,0,0,0,0,0,0,3,9, : 0,0,0,0,0,0,0,0,4,5, : 0,0,0,0,0,0,0,0,4,6, :  
 0,0,0,0,0,0,0,0,4,7, : 0,0,0,0,0,0,0,0,4,8, : 0,0,0,0,0,0,0,0,4,9, :  
 0,0,0,0,0,0,0,0,5,6, : 0,0,0,0,0,0,0,0,5,7, : 0,0,0,0,0,0,0,0,5,8, :  
 0,0,0,0,0,0,0,0,5,9, : 0,0,0,0,0,0,0,0,6,7, : 0,0,0,0,0,0,0,0,6,8, :  
 0,0,0,0,0,0,0,0,6,9, : 0,0,0,0,0,0,0,0,7,8, : 0,0,0,0,0,0,0,0,7,9, :  
 0,0,0,0,0,0,0,0,8,9, :

Number new nodes in level n is given by : 1,1,2,5,8,11,16,22,29,37,

-----Class

1034-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][102][120][201][210]]$

-----

--

Rules of T[L]:

R1) 0, -->0,0, --0, --

R2) 0,0, -->0,0,0, --0,0, --0,0,2, --

R3) 0,0,0, -->0,0,0,0, --0,0,0, --0,0,0,2, --0,0,0,3, --

R4) 0,0,2, -->0,0,2,1, --0,0,0,2, --0, --

R5) 0,0,0,0, -->0,0,0,0,0, --0,0,0,0, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --

R6) 0,0,0,2, -->0,0,2,1, --0,0,0,0,2, --0,0, --0,0,2, --

R7) 0,0,0,3, -->0,0,2,1, --0,0,2,1, --0,0,0,0,3, --0, --

R8) 0,0,2,1, -->0,0,2,1, --0,0,2,1,2, --

R9)

0,0,0,0,0, -->0,0,0,0,0,0, --0,0,0,0,0, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5, --

R10) 0,0,0,0,2, -->0,0,2,1, --0,0,0,0,0,2, --0,0,0, --0,0,0,2, --0,0,0,3, --

R11) 0,0,0,0,3, -->0,0,2,1, --0,0,2,1, --0,0,0,0,0,3, --0,0, --0,0,2, --

R12) 0,0,0,0,4, -->0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,0,0,0,4, --0, --

R13) 0,0,2,1,2, -->0,0,2,1,2, --

R14)

0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,0,0,0,0,0, --0,0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --

R15)

0,0,0,0,0,2, -->0,0,2,1, --0,0,0,0,0,0,2, --0,0,0,0, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --

R16)

0,0,0,0,0,3, -->0,0,2,1, --0,0,2,1, --0,0,0,0,0,0,3, --0,0,0, --0,0,0,2, --0,0,0,3, --

R17) 0,0,0,0,0,4, -->0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,0,0,0,0,4, --0,0, --0,0,2, --

R18) 0,0,0,0,0,5, -->0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,0,0,0,0,5, --0, --

R19)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

R20)

0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--

R21)

0,0,0,0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--

R22)

0,0,0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,4,--0,0,0,0,0,2,--0,0,0,3,--

R23)

0,0,0,0,0,0,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,5,--0,0,0,2,--

R24)

0,0,0,0,0,0,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,6,--0,--

R25)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R26)

0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R27)

0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R28)

0,0,0,0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R29)

0,0,0,0,0,0,0,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,5,--0,0,0,0,2,--0,0,0,3,--

R30)

0,0,0,0,0,0,0,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,6,--0,0,0,2,--

R31)

0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,7,--0,--

R32)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R33)

0,0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,7,--

R34)

0,0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,2,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--

R35)  
0,0,0,0,0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,  
--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R36)  
0,0,0,0,0,0,0,0,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,0,0,5,--  
0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R37)  
0,0,0,0,0,0,0,0,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,  
0,0,0,6,--0,0,0,--0,0,0,2,--0,0,0,3,--

R38)  
0,0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,  
0,0,0,0,0,0,0,7,--0,0,--0,0,2,--

R39)  
0,0,0,0,0,0,0,0,8,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,  
0,2,1,--0,0,0,0,0,0,0,8,--0,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, :

LEN=3) 0,0,0, : 0,0,2, :

LEN=4) 0,0,0,0, : 0,0,0,2, : 0,0,0,3, : 0,0,2,1, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,2,1,2, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, :

0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, :

0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,3, :

0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7, :

0,0,0,0,0,0,0,0,8, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,0,3, :

0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, :

0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, :

Number new nodes in level n is given by : 1,1,2,4,5,5,6,7,8,9,

-----Class

1035-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][110][120][201][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,--

R2) 0,0,-->0,0,0,--0,0,--0,0,2,--

R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--

R4) 0,0,2,-->0,0,0,2,--0,0,--0,--

R5) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R6) 0,0,0,2,-->0,0,0,0,2,--0,0,0,--0,0,--0,0,2,--

R7) 0,0,0,3,-->0,0,0,2,--0,0,0,2,--0,0,--0,--

R8)

0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,

0,0,0,0,5,--

R9) 0,0,0,0,2,-->0,0,0,0,0,2,--0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--  
R10) 0,0,0,0,3,-->0,0,0,0,2,--0,0,0,0,2,--0,0,0,--0,0,--0,0,2,--  
R11) 0,0,0,0,4,-->0,0,0,2,--0,0,0,2,--0,0,0,2,--0,0,--0,--  
R12)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,  
0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R13)  
0,0,0,0,0,2,-->0,0,0,0,0,0,2,--0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,  
0,4,--  
R14)  
0,0,0,0,0,3,-->0,0,0,0,0,2,--0,0,0,0,0,2,--0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--  
R15) 0,0,0,0,0,4,-->0,0,0,0,2,--0,0,0,0,2,--0,0,0,0,2,--0,0,0,--0,0,--0,0,2,--  
R16) 0,0,0,0,0,5,-->0,0,0,2,--0,0,0,2,--0,0,0,2,--0,0,0,2,--0,0,--0,--  
R17)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R18)  
0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,2,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,  
0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R19)  
0,0,0,0,0,0,3,-->0,0,0,0,0,0,2,--0,0,0,0,0,0,2,--0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--  
0,0,0,0,3,--0,0,0,0,4,--  
R20)  
0,0,0,0,0,0,4,-->0,0,0,0,0,2,--0,0,0,0,0,2,--0,0,0,0,0,2,--0,0,0,0,--0,0,0,--0,0,0,  
2,--0,0,0,3,--  
R21)  
0,0,0,0,0,0,5,-->0,0,0,0,2,--0,0,0,0,2,--0,0,0,0,2,--0,0,0,0,2,--0,0,0,--0,0,--0,0,  
2,--  
R22) 0,0,0,0,0,0,6,-->0,0,0,2,--0,0,0,2,--0,0,0,2,--0,0,0,2,--0,0,0,2,--0,0,--0,--  
R23)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,  
,0,0,0,7,--0,0,0,0,0,0,0,8,--  
R24)  
0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,2,  
--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R25)  
0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,--0,0,0,0,0,--0,  
0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R26)  
0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,2,--0,0,0,0,0,0,2,--0,0,0,0,0,0,2,--0,0,0,0,0,--0,0,  
0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R27)  
0,0,0,0,0,0,0,5,-->0,0,0,0,0,2,--0,0,0,0,0,2,--0,0,0,0,0,2,--0,0,0,0,0,2,--0,0,0,0,  
--0,0,0,--0,0,0,2,--0,0,0,3,--  
R28)  
0,0,0,0,0,0,0,6,-->0,0,0,0,2,--0,0,0,0,2,--0,0,0,0,2,--0,0,0,0,2,--0,0,0,0,2,--0,0,  
0,--0,0,--0,0,2,--  
R29)  
0,0,0,0,0,0,0,7,-->0,0,0,2,--0,0,0,2,--0,0,0,2,--0,0,0,2,--0,0,0,2,--0,0,0,2,--0,0,



--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,1,--

R3) 0,1,-->0,1,0,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--

R5) 0,1,0,-->

R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--

R7) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--

R8) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

R9) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

R10)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

R11)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,1,0,:

LEN=4) 0,0,0,0,:

LEN=5) 0,0,0,0,0,:

LEN=6) 0,0,0,0,0,0,:

LEN=7) 0,0,0,0,0,0,0,:

LEN=8) 0,0,0,0,0,0,0,0,:

LEN=9) 0,0,0,0,0,0,0,0,0,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,:

Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,

-----Class

1037-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][021][100][102]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,1,--

R3) 0,1,-->0,1,0,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--

R5) 0,1,0,-->

R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--

R7) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--

R8) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

R9) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

R10)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

R11)

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, : 0,1, :
- LEN=3) 0,0,0, : 0,1,0, :
- LEN=4) 0,0,0,0, :
- LEN=5) 0,0,0,0,0, :
- LEN=6) 0,0,0,0,0,0, :
- LEN=7) 0,0,0,0,0,0,0, :
- LEN=8) 0,0,0,0,0,0,0,0, :
- LEN=9) 0,0,0,0,0,0,0,0,0, :
- LEN=10) 0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,

-----Class

1038-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][012][021][100][110]]

-----

--

Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,0, --0,1, --0,1, --
- R3) 0,1, -->0,1,0, --
- R4) 0,0,0, -->0,0,0,0, --0,1, --0,1, --0,1, --
- R5) 0,1,0, -->
- R6) 0,0,0,0, -->0,0,0,0,0, --0,1, --0,1, --0,1, --0,1, --
- R7) 0,0,0,0,0, -->0,0,0,0,0,0, --0,1, --0,1, --0,1, --0,1, --0,1, --
- R8) 0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --
- R9) 0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --
- R10) 0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --
- R11) 0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, : 0,1, :
- LEN=3) 0,0,0, : 0,1,0, :
- LEN=4) 0,0,0,0, :
- LEN=5) 0,0,0,0,0, :
- LEN=6) 0,0,0,0,0,0, :
- LEN=7) 0,0,0,0,0,0,0, :
- LEN=8) 0,0,0,0,0,0,0,0, :
- LEN=9) 0,0,0,0,0,0,0,0,0, :
- LEN=10) 0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,

-----Class

1039-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][021][100][120]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,1,--
- R3) 0,1,-->0,1,0,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--
- R5) 0,1,0,-->
- R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--
- R7) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R8) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R9) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R10) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R11) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,: 0,1,:
- LEN=3) 0,0,0,: 0,1,0,:
- LEN=4) 0,0,0,0,:
- LEN=5) 0,0,0,0,0,:
- LEN=6) 0,0,0,0,0,0,:
- LEN=7) 0,0,0,0,0,0,0,:
- LEN=8) 0,0,0,0,0,0,0,0,:
- LEN=9) 0,0,0,0,0,0,0,0,0,:
- LEN=10) 0,0,0,0,0,0,0,0,0,0,:

Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,

-----Class

1040-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][021][100][201]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,1,--
- R3) 0,1,-->0,1,0,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--
- R5) 0,1,0,-->
- R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--
- R7) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R8) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R9) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R10) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--



1,--  
R11)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,  
--0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,1,0, :  
LEN=4) 0,0,0,0, :  
LEN=5) 0,0,0,0,0, :  
LEN=6) 0,0,0,0,0,0, :  
LEN=7) 0,0,0,0,0,0,0, :  
LEN=8) 0,0,0,0,0,0,0,0, :  
LEN=9) 0,0,0,0,0,0,0,0,0, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,

-----Class

1041-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][012][021][100][210]]

-----

--  
Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,1,--0,1,--  
R3) 0,1,-->0,1,0,--  
R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--  
R5) 0,1,0,-->  
R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--  
R7) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R8) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R9) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R10)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,  
1,--  
R11)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,  
--0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,1,0, :  
LEN=4) 0,0,0,0, :  
LEN=5) 0,0,0,0,0, :  
LEN=6) 0,0,0,0,0,0, :  
LEN=7) 0,0,0,0,0,0,0, :  
LEN=8) 0,0,0,0,0,0,0,0, :  
LEN=9) 0,0,0,0,0,0,0,0,0, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,

-----Class

1042-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][021][101][102]]$

-----

--

Rules of T[L]:

- R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$
- R2)  $0, 0, \rightarrow 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow$
- R3)  $0, 1, \rightarrow 0, 1, \rightarrow$
- R4)  $0, 0, 0, \rightarrow 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow$
- R5)  $0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow$
- R6)  $0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow$
- R7)  $0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow$
- R8)  $0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow$
- R9)  
 $0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow$   
 $1, \rightarrow$
- R10)  
 $0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow$   
 $\rightarrow 0, 1, \rightarrow 0, 1, \rightarrow$

List of different nodes in T[L]

- LEN=1)  $0, :$
- LEN=2)  $0, 0, : 0, 1, :$
- LEN=3)  $0, 0, 0, :$
- LEN=4)  $0, 0, 0, 0, :$
- LEN=5)  $0, 0, 0, 0, 0, :$
- LEN=6)  $0, 0, 0, 0, 0, 0, :$
- LEN=7)  $0, 0, 0, 0, 0, 0, 0, :$
- LEN=8)  $0, 0, 0, 0, 0, 0, 0, 0, :$
- LEN=9)  $0, 0, 0, 0, 0, 0, 0, 0, 0, :$
- LEN=10)  $0, 0, 0, 0, 0, 0, 0, 0, 0, 0, :$

Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,1,

-----Class

1043-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][021][101][110]]$

-----

--

Rules of T[L]:

- R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$
- R2)  $0, 0, \rightarrow 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow$
- R3)  $0, 1, \rightarrow 0, 1, \rightarrow$
- R4)  $0, 0, 0, \rightarrow 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow$
- R5)  $0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow$
- R6)  $0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow$
- R7)  $0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow$
- R8)  $0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow$
- R9)  
 $0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow$   
 $\rightarrow 0, 1, \rightarrow 0, 1, \rightarrow$





R10)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,  
 --0,1,--0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, :  
 LEN=4) 0,0,0,0, :  
 LEN=5) 0,0,0,0,0, :  
 LEN=6) 0,0,0,0,0,0, :  
 LEN=7) 0,0,0,0,0,0,0, :  
 LEN=8) 0,0,0,0,0,0,0,0, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, :  
 Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,1,

-----Class

1047-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][021][102][110]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,1,--0,1,--  
 R3) 0,1,-->0,1,--  
 R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--  
 R5) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--  
 R6) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R7) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R8) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R9)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 1,--  
 R10)  
 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 --0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, :  
 LEN=4) 0,0,0,0, :  
 LEN=5) 0,0,0,0,0, :  
 LEN=6) 0,0,0,0,0,0, :  
 LEN=7) 0,0,0,0,0,0,0, :  
 LEN=8) 0,0,0,0,0,0,0,0, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, :  
 Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,1,

-----Class

1048-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][021][102][120]]$

-----

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,1,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--
- R5) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--
- R6) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R7) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R8) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R9) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R10) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

List of different nodes in  $T[L]$

- LEN=1) 0,:
- LEN=2) 0,0,: 0,1,:
- LEN=3) 0,0,0,:
- LEN=4) 0,0,0,0,:
- LEN=5) 0,0,0,0,0,:
- LEN=6) 0,0,0,0,0,0,:
- LEN=7) 0,0,0,0,0,0,0,:
- LEN=8) 0,0,0,0,0,0,0,0,:
- LEN=9) 0,0,0,0,0,0,0,0,0,:
- LEN=10) 0,0,0,0,0,0,0,0,0,0,:

Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,1,

-----Class

1049-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][021][102][201]]$

-----

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,1,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--
- R5) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--
- R6) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R7) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R8) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R9) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R10) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, : 0,1, :
- LEN=3) 0,0,0, :
- LEN=4) 0,0,0,0, :
- LEN=5) 0,0,0,0,0, :
- LEN=6) 0,0,0,0,0,0, :
- LEN=7) 0,0,0,0,0,0,0, :
- LEN=8) 0,0,0,0,0,0,0,0, :
- LEN=9) 0,0,0,0,0,0,0,0,0, :
- LEN=10) 0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,1,

-----Class

1050-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][012][021][102][210]]

-----

--

Rules of T[L]:

- R1) 0, -->0,0,--0,1,--
- R2) 0,0, -->0,0,0,--0,1,--0,1,--
- R3) 0,1, -->0,1,--
- R4) 0,0,0, -->0,0,0,0,--0,1,--0,1,--0,1,--
- R5) 0,0,0,0, -->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--
- R6) 0,0,0,0,0, -->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R7) 0,0,0,0,0,0, -->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R8) 0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R9) 0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R10) 0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, : 0,1, :
- LEN=3) 0,0,0, :
- LEN=4) 0,0,0,0, :
- LEN=5) 0,0,0,0,0, :
- LEN=6) 0,0,0,0,0,0, :
- LEN=7) 0,0,0,0,0,0,0, :
- LEN=8) 0,0,0,0,0,0,0,0, :
- LEN=9) 0,0,0,0,0,0,0,0,0, :
- LEN=10) 0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,1,

-----Class

1051-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][021][110][120]]$

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,1,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--
- R5) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--
- R6) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R7) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R8) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R9) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R10) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

List of different nodes in T[L]

- LEN=1) 0,:
  - LEN=2) 0,0,: 0,1,:
  - LEN=3) 0,0,0,:
  - LEN=4) 0,0,0,0,:
  - LEN=5) 0,0,0,0,0,:
  - LEN=6) 0,0,0,0,0,0,:
  - LEN=7) 0,0,0,0,0,0,0,:
  - LEN=8) 0,0,0,0,0,0,0,0,:
  - LEN=9) 0,0,0,0,0,0,0,0,0,:
  - LEN=10) 0,0,0,0,0,0,0,0,0,0,:
- Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,1,

-----Class

1052-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][021][110][201]]$

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,1,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--
- R5) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--
- R6) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R7) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R8) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R9) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R10) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--



--0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,:

LEN=4) 0,0,0,0,:

LEN=5) 0,0,0,0,0,:

LEN=6) 0,0,0,0,0,0,:

LEN=7) 0,0,0,0,0,0,0,:

LEN=8) 0,0,0,0,0,0,0,0,:

LEN=9) 0,0,0,0,0,0,0,0,0,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,:

Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class

1053-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][021][110][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,1,--

R3) 0,1,-->0,1,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--

R5) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--

R6) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--

R7) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

R8) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

R9)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,

1,--

R10)

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

--0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,:

LEN=4) 0,0,0,0,:

LEN=5) 0,0,0,0,0,:

LEN=6) 0,0,0,0,0,0,:

LEN=7) 0,0,0,0,0,0,0,:

LEN=8) 0,0,0,0,0,0,0,0,:

LEN=9) 0,0,0,0,0,0,0,0,0,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,:

Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class

1054-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][021][120][201]]$

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,1,--

R3) 0,1,-->0,1,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--

R5) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--

R6) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--

R7) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

R8) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

R9)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

R10)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,:

LEN=4) 0,0,0,0,:

LEN=5) 0,0,0,0,0,:

LEN=6) 0,0,0,0,0,0,:

LEN=7) 0,0,0,0,0,0,0,:

LEN=8) 0,0,0,0,0,0,0,0,:

LEN=9) 0,0,0,0,0,0,0,0,0,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,:

Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,1,

-----Class

1055-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][012][021][120][210]]

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,1,--

R3) 0,1,-->0,1,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--

R5) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--

R6) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--

R7) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

R8) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

R9)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

R10)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, : 0,1, :
- LEN=3) 0,0,0, :
- LEN=4) 0,0,0,0, :
- LEN=5) 0,0,0,0,0, :
- LEN=6) 0,0,0,0,0,0, :
- LEN=7) 0,0,0,0,0,0,0, :
- LEN=8) 0,0,0,0,0,0,0,0, :
- LEN=9) 0,0,0,0,0,0,0,0,0, :
- LEN=10) 0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class

1056-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][012][021][201][210]]

-----

--  
Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,0, --0,1, --0,1, --
- R3) 0,1, -->0,1, --
- R4) 0,0,0, -->0,0,0,0, --0,1, --0,1, --0,1, --
- R5) 0,0,0,0, -->0,0,0,0,0, --0,1, --0,1, --0,1, --0,1, --
- R6) 0,0,0,0,0, -->0,0,0,0,0,0, --0,1, --0,1, --0,1, --0,1, --0,1, --
- R7) 0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --
- R8) 0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --
- R9) 0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --
- R10) 0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, : 0,1, :
- LEN=3) 0,0,0, :
- LEN=4) 0,0,0,0, :
- LEN=5) 0,0,0,0,0, :
- LEN=6) 0,0,0,0,0,0, :
- LEN=7) 0,0,0,0,0,0,0, :
- LEN=8) 0,0,0,0,0,0,0,0, :
- LEN=9) 0,0,0,0,0,0,0,0,0, :
- LEN=10) 0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class

1057-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][012][100][101][102]]

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->0,1,0,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,1,--0,1,--

R6) 0,1,0,-->

R7) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R8) 0,0,0,3,-->0,0,0,3,0,--0,1,--0,0,2,--

R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R10) 0,0,0,0,4,-->0,0,0,0,4,0,--0,1,--0,0,2,--0,0,0,3,--

R11) 0,0,0,3,0,-->0,1,0,--0,1,--

R12)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--

R13) 0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R14) 0,0,0,0,4,0,-->0,1,0,--0,1,--0,0,0,3,0,--

R15)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R16)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

--

R17) 0,0,0,0,0,5,0,-->0,1,0,--0,1,--0,0,0,3,0,--0,0,0,0,4,0,--

R18)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--

R19)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--

R20) 0,0,0,0,0,0,6,0,-->0,1,0,--0,1,--0,0,0,3,0,--0,0,0,0,4,0,--0,0,0,0,0,5,0,--

R21)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--0,0,0,0,0,0,9,--

--

R22)

0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R23)

0,0,0,0,0,0,7,0,-->0,1,0,--0,1,--0,0,0,3,0,--0,0,0,0,4,0,--0,0,0,0,5,0,--0,0,0,0,6,0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,: 0,1,0,:

LEN=4) 0,0,0,0,: 0,0,0,3,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,,: 0,0,0,3,0,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,,: 0,0,0,0,4,0,:

LEN=7) 0,0,0,0,0,0,0,,: 0,0,0,0,0,0,6,,: 0,0,0,0,0,5,0,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,6,0,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,7,0,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,0,8,0,:  
 Number new nodes in level n is given by : 1,2,3,2,3,3,3,3,3,3,

-----Class

1058-----  
 Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][012][100][101][110]]  
 -----

- Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,1,--0,0,2,--  
 R3) 0,1,-->0,1,0,--  
 R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--  
 R5) 0,0,2,-->0,1,--0,1,--  
 R6) 0,1,0,-->  
 R7) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--  
 R8) 0,0,0,3,-->0,0,0,3,0,--0,1,--0,0,2,--  
 R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
 R10) 0,0,0,0,4,-->0,0,0,0,4,0,--0,1,--0,0,2,--0,0,0,3,--  
 R11) 0,0,0,3,0,-->0,1,0,--0,1,--  
 R12)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
 0,0,0,0,0,6,--  
 R13) 0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--  
 R14) 0,0,0,0,4,0,-->0,1,0,--0,1,--0,0,0,3,0,--  
 R15)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
 --0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
 R16)  
 0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
 --  
 R17) 0,0,0,0,0,5,0,-->0,1,0,--0,1,--0,0,0,3,0,--0,0,0,0,4,0,--  
 R18)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
 0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--  
 R19)  
 0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
 0,5,--0,0,0,0,0,6,--  
 R20) 0,0,0,0,0,0,6,0,-->0,1,0,--0,1,--0,0,0,3,0,--0,0,0,0,4,0,--0,0,0,0,0,5,0,--  
 R21)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
 0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--0,0,0,0,0,0,9,  
 ,--  
 R22)  
 0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
 0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
 R23)  
 0,0,0,0,0,0,0,7,0,-->0,1,0,--0,1,--0,0,0,3,0,--0,0,0,0,4,0,--0,0,0,0,0,5,0,--0,0,0,

0,0,0,6,0,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,2, : 0,1,0, :  
 LEN=4) 0,0,0,0, : 0,0,0,3, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,4, : 0,0,0,3,0, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, : 0,0,0,0,4,0, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,0, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,0, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,0, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,8,0, :  
 Number new nodes in level n is given by : 1,2,3,2,3,3,3,3,3,3,

-----Class

1059-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][100][101][120]]$

-----  
 --

Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,0, --0,1, --0,0,2, --
- R3) 0,1, -->0,1,0, --
- R4) 0,0,0, -->0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --
- R5) 0,0,2, -->0,1, --0,1, --
- R6) 0,1,0, -->
- R7) 0,0,0,0, -->0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,4, --
- R8) 0,0,0,3, -->0,0,0,3,0, --0,1, --0,0,2, --
- R9) 0,0,0,0,0, -->0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,4, --0,0,0,0,5, --
- R10) 0,0,0,0,4, -->0,0,0,4,0, --0,1, --0,0,2, --0,0,0,3, --
- R11) 0,0,0,3,0, -->0,1,0, --0,1, --
- R12) 0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,4, --0,0,0,0,5, --0,0,0,0,0,6, --
- R13) 0,0,0,0,0,5, -->0,0,0,0,0,5,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,4, --
- R14) 0,0,0,0,4,0, -->0,1,0, --0,1, --0,0,0,3,0, --
- R15) 0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,4, --0,0,0,0,5, --0,0,0,0,0,6, --0,0,0,0,0,0,7, --
- R16) 0,0,0,0,0,0,6, -->0,0,0,0,0,0,6,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,4, --0,0,0,0,5, --
- R17) 0,0,0,0,0,5,0, -->0,1,0, --0,1, --0,0,0,3,0, --0,0,0,4,0, --
- R18) 0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --0,0,0,0,0,0,7, --0,0,0,0,0,0,8, --
- R19) 0,0,0,0,0,0,0,7, -->0,0,0,0,0,0,7,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --
- R20) 0,0,0,0,0,0,6,0, -->0,1,0, --0,1, --0,0,0,3,0, --0,0,0,4,0, --0,0,0,0,5,0, --

R21)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9  
,--  
R22)  
0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R23)  
0,0,0,0,0,0,0,7,0,-->0,1,0,--0,1,--0,0,0,3,0,--0,0,0,0,4,0,--0,0,0,0,0,5,0,--0,0,0,  
0,0,0,6,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,2, : 0,1,0, :  
LEN=4) 0,0,0,0, : 0,0,0,3, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,4, : 0,0,0,3,0, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, : 0,0,0,0,4,0, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,0, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,0, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,0, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,8,0, :  
Number new nodes in level n is given by : 1,2,3,2,3,3,3,3,3,3,3,

-----Class

1060-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][012][100][101][201]]

-----

--  
Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
- R3) 0,1,-->0,1,0,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--
- R5) 0,0,2,-->0,1,0,--0,1,--
- R6) 0,1,0,-->
- R7) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R8) 0,0,0,3,-->0,1,0,--0,1,--0,0,2,--
- R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
- R10) 0,0,0,0,4,-->0,1,0,--0,1,--0,0,2,--0,0,0,3,--
- R11)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--
- R12) 0,0,0,0,0,5,-->0,1,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R13)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,6,--0,0,0,0,0,0,7,--
- R14) 0,0,0,0,0,0,6,-->0,1,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
- R15)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R16)  
0,0,0,0,0,0,0,7,-->0,1,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,  
0,0,0,6,--

R17)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,9,  
,--

R18)  
0,0,0,0,0,0,0,0,8,-->0,1,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,  
0,0,0,0,6,--0,0,0,0,0,0,7,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,: 0,1,0,:

LEN=4) 0,0,0,0,: 0,0,0,3,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

-----Class

1061-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][100][101][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->0,1,0,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,1,--0,1,0,--

R6) 0,1,0,-->

R7) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R8) 0,0,0,3,-->0,0,0,3,0,--0,1,0,--0,1,0,--

R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R10) 0,0,0,0,4,-->0,0,0,0,4,0,--0,1,0,--0,1,0,--0,1,0,--

R11) 0,0,0,3,0,-->0,1,0,--0,1,0,--

R12)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--

R13) 0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--

R14) 0,0,0,0,4,0,-->0,1,0,--0,1,0,--0,1,0,--

R15)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R16) 0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--

R17) 0,0,0,0,0,5,0,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--



R18) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R19) 0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--

R20) 0,0,0,0,0,0,6,0,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--

R21) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R22) 0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--

R23) 0,0,0,0,0,0,0,7,0,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,: 0,1,0,:

LEN=4) 0,0,0,0,: 0,0,0,3,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,: 0,0,0,3,0,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,: 0,0,0,0,4,0,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,: 0,0,0,0,0,5,0,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,6,0,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,7,0,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,0,8,0,:

Number new nodes in level n is given by : 1,2,3,2,3,3,3,3,3,3,3,

-----Class

1062-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][100][102][110]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->0,1,0,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,1,--0,1,--

R6) 0,1,0,-->

R7) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R8) 0,0,0,3,-->0,0,0,3,0,--0,1,--0,0,2,--

R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R10) 0,0,0,0,4,-->0,0,0,0,4,0,--0,1,--0,0,2,--0,0,0,3,--

R11) 0,0,0,3,0,-->0,1,0,--0,1,--

R12) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--

R13) 0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R14) 0,0,0,0,4,0,-->0,1,0,--0,1,--0,0,0,3,0,--

R15)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R16)  
0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--  
R17) 0,0,0,0,0,5,0,-->0,1,0,--0,1,--0,0,0,3,0,--0,0,0,0,4,0,--  
R18)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--  
R19)  
0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,0,6,--  
R20) 0,0,0,0,0,0,6,0,-->0,1,0,--0,1,--0,0,0,3,0,--0,0,0,0,4,0,--0,0,0,0,0,5,0,--  
R21)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9  
,--  
R22)  
0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,8,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R23)  
0,0,0,0,0,0,0,7,0,-->0,1,0,--0,1,--0,0,0,3,0,--0,0,0,0,4,0,--0,0,0,0,0,5,0,--0,0,0,  
0,0,0,6,0,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,2, : 0,1,0, :  
LEN=4) 0,0,0,0, : 0,0,0,3, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,4, : 0,0,0,3,0, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, : 0,0,0,0,4,0, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,0, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,0, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,0, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,8,0, :  
Number new nodes in level n is given by : 1,2,3,2,3,3,3,3,3,3,

-----Class

1063-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][100][102][120]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,1,--0,0,2,--  
R3) 0,1,-->0,1,0,--  
R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--  
R5) 0,0,2,-->0,1,--0,1,--  
R6) 0,1,0,-->  
R7) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R8) 0,0,0,3,-->0,0,0,3,0,--0,1,--0,0,2,--  
R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--  
R10) 0,0,0,0,4,-->0,0,0,0,4,0,--0,1,--0,0,2,--0,0,0,3,--  
R11) 0,0,0,3,0,-->0,1,0,--0,1,--  
R12) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--0,0,0,0,6,--  
R13) 0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--  
R14) 0,0,0,0,4,0,-->0,1,0,--0,1,--0,0,0,3,0,--  
R15) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--0,0,0,0,6,--0,0,0,0,7,--  
R16) 0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--  
R17) 0,0,0,0,0,5,0,-->0,1,0,--0,1,--0,0,0,3,0,--0,0,0,0,4,0,--  
R18) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--0,0,0,0,6,--0,0,0,0,7,--0,0,0,0,8,--  
R19) 0,0,0,0,0,0,7,-->0,0,0,0,0,0,7,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--0,0,0,0,6,--  
R20) 0,0,0,0,0,0,6,0,-->0,1,0,--0,1,--0,0,0,3,0,--0,0,0,0,4,0,--0,0,0,0,5,0,--  
R21) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--0,0,0,0,6,--0,0,0,0,7,--0,0,0,0,8,--0,0,0,0,9,--  
R22) 0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--0,0,0,0,6,--0,0,0,0,7,--  
R23) 0,0,0,0,0,0,7,0,-->0,1,0,--0,1,--0,0,0,3,0,--0,0,0,0,4,0,--0,0,0,0,5,0,--0,0,0,0,6,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,2, : 0,1,0, :  
LEN=4) 0,0,0,0, : 0,0,0,3, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,4, : 0,0,0,3,0, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, : 0,0,0,0,4,0, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,0, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,0, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,0, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,8,0, :  
Number new nodes in level n is given by : 1,2,3,2,3,3,3,3,3,3,

-----Class  
1064-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][100][102][201]]$   
-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->0,1,0,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,1,0,--0,1,--

R6) 0,1,0,-->

R7) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R8) 0,0,0,3,-->0,1,0,--0,1,--0,0,2,--

R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R10) 0,0,0,0,4,-->0,1,0,--0,1,--0,0,2,--0,0,0,3,--

R11)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--

R12) 0,0,0,0,0,5,-->0,1,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,4,--

R13)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R14) 0,0,0,0,0,0,6,-->0,1,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R15)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R16)

0,0,0,0,0,0,0,7,-->0,1,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--

R17)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R18)

0,0,0,0,0,0,0,0,8,-->0,1,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,: 0,1,0,:

LEN=4) 0,0,0,0,: 0,0,0,3,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

-----Class

1065-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][012][100][102][210]]

-----

--

Rules of T[L]:

R1) 0, -->0,0,--0,1,--

R2) 0,0, -->0,0,0,--0,1,--0,0,2,--

R3) 0,1, -->0,1,0,--

R4) 0,0,0, -->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2, -->0,1,--0,1,0,--

R6) 0,1,0, -->

R7) 0,0,0,0, -->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R8) 0,0,0,3, -->0,0,0,3,0,--0,1,0,--0,1,0,--

R9) 0,0,0,0,0, -->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R10) 0,0,0,0,4, -->0,0,0,0,4,0,--0,1,0,--0,1,0,--0,1,0,--

R11) 0,0,0,3,0, -->0,1,0,--0,1,0,--

R12)

0,0,0,0,0,0, -->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--

R13) 0,0,0,0,0,5, -->0,0,0,0,0,5,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--

R14) 0,0,0,0,4,0, -->0,1,0,--0,1,0,--0,1,0,--

R15)

0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R16) 0,0,0,0,0,0,6, -->0,0,0,0,0,0,6,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--

R17) 0,0,0,0,0,5,0, -->0,1,0,--0,1,0,--0,1,0,--0,1,0,--

R18)

0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R19)

0,0,0,0,0,0,0,7, -->0,0,0,0,0,0,0,7,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--

R20) 0,0,0,0,0,0,6,0, -->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--

R21)

0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R22)

0,0,0,0,0,0,0,0,8, -->0,0,0,0,0,0,0,0,8,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--

R23) 0,0,0,0,0,0,0,7,0, -->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,0, : 0,0,2, : 0,1,0, :

LEN=4) 0,0,0,0, : 0,0,0,3, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,4, : 0,0,0,3,0, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, : 0,0,0,0,4,0, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,0, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,0, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,0, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,8,0, :

Number new nodes in level n is given by : 1,2,3,2,3,3,3,3,3,3,3,

-----Class

1066-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][100][110][120]]$

-----

--

Rules of  $T[L]$ :

R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

R2)  $0, 0, \rightarrow 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow$

R3)  $0, 1, \rightarrow 0, 1, 0, \rightarrow$

R4)  $0, 0, 0, \rightarrow 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow$

R5)  $0, 0, 2, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow$

R6)  $0, 1, 0, \rightarrow$

R7)  $0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow$

R8)  $0, 0, 0, 3, \rightarrow 0, 0, 0, 3, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow$

R9)  $0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 5, \rightarrow$

R10)  $0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 4, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow$

R11)  $0, 0, 0, 3, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, \rightarrow$

R12)

$0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 6, \rightarrow$

R13)  $0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 5, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow$

R14)  $0, 0, 0, 0, 4, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, \rightarrow 0, 0, 0, 3, 0, \rightarrow$

R15)

$0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 0, 6, \rightarrow 0, 0, 0, 0, 0, 0, 0, 7, \rightarrow$

R16)

$0, 0, 0, 0, 0, 0, 6, \rightarrow 0, 0, 0, 0, 0, 0, 6, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 5, \rightarrow$

--

R17)  $0, 0, 0, 0, 0, 5, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, \rightarrow 0, 0, 0, 3, 0, \rightarrow 0, 0, 0, 0, 4, 0, \rightarrow$

R18)

$0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 0, 6, \rightarrow 0, 0, 0, 0, 0, 0, 0, 7, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 8, \rightarrow$

R19)

$0, 0, 0, 0, 0, 0, 0, 7, \rightarrow 0, 0, 0, 0, 0, 0, 0, 7, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 0, 6, \rightarrow$

R20)  $0, 0, 0, 0, 0, 0, 0, 6, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, \rightarrow 0, 0, 0, 3, 0, \rightarrow 0, 0, 0, 0, 4, 0, \rightarrow 0, 0, 0, 0, 0, 5, 0, \rightarrow$

R21)

$0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 0, 6, \rightarrow 0, 0, 0, 0, 0, 0, 0, 7, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 8, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 9, \rightarrow$

--

R22)

$0, 0, 0, 0, 0, 0, 0, 0, 8, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 8, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 0, 6, \rightarrow 0, 0, 0, 0, 0, 0, 0, 7, \rightarrow$

R23)

$0, 0, 0, 0, 0, 0, 0, 7, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, \rightarrow 0, 0, 0, 3, 0, \rightarrow 0, 0, 0, 0, 4, 0, \rightarrow 0, 0, 0, 0, 0, 5, 0, \rightarrow 0, 0, 0, 0, 6, 0, \rightarrow$

List of different nodes in  $T[L]$

LEN=1)  $0, :$

LEN=2)  $0, 0, : 0, 1, :$

LEN=3) 0,0,0,: 0,0,2,: 0,1,0,:  
 LEN=4) 0,0,0,0,: 0,0,0,3,:  
 LEN=5) 0,0,0,0,0,: 0,0,0,0,4,: 0,0,0,3,0,:  
 LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,: 0,0,0,0,4,0,:  
 LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,: 0,0,0,0,0,5,0,:  
 LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,6,0,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,7,0,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,0,8,0,:  
 Number new nodes in level n is given by : 1,2,3,2,3,3,3,3,3,3,

-----Class

1067-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][100][110][201]]$

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
- R3) 0,1,-->0,1,0,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--
- R5) 0,0,2,-->0,1,0,--0,1,--
- R6) 0,1,0,-->
- R7) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R8) 0,0,0,3,-->0,1,0,--0,1,--0,0,2,--
- R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
- R10) 0,0,0,0,4,-->0,1,0,--0,1,--0,0,2,--0,0,0,3,--
- R11) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--
- R12) 0,0,0,0,0,5,-->0,1,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R13) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--
- R14) 0,0,0,0,0,0,6,-->0,1,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
- R15) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--
- R16) 0,0,0,0,0,0,0,7,-->0,1,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--
- R17) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,9,--
- R18) 0,0,0,0,0,0,0,0,8,-->0,1,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,: 0,1,0,:  
 LEN=4) 0,0,0,0,: 0,0,0,3,:  
 LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:  
 LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:  
 LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:  
 LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:  
 Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

-----Class

1068-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][100][110][210]]$

-----

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
- R3) 0,1,-->0,1,0,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--
- R5) 0,0,2,-->0,1,--0,1,0,--
- R6) 0,1,0,-->
- R7) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R8) 0,0,0,3,-->0,0,0,3,0,--0,1,0,--0,1,0,--
- R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
- R10) 0,0,0,0,4,-->0,0,0,0,4,0,--0,1,0,--0,1,0,--0,1,0,--
- R11) 0,0,0,3,0,-->0,1,0,--0,1,0,--
- R12) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--
- R13) 0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--
- R14) 0,0,0,0,4,0,-->0,1,0,--0,1,0,--0,1,0,--
- R15) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--
- R16) 0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--
- R17) 0,0,0,0,0,5,0,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--
- R18) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--
- R19) 0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--
- R20) 0,0,0,0,0,0,6,0,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--
- R21) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--
- R22) 0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,8,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--



0,1,0,--0,1,0,--  
R23) 0,0,0,0,0,0,0,7,0,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,2, : 0,1,0, :  
LEN=4) 0,0,0,0, : 0,0,0,3, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,4, : 0,0,0,3,0, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, : 0,0,0,0,4,0, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,0, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,0, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,0, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,8,0, :  
Number new nodes in level n is given by : 1,2,3,2,3,3,3,3,3,3,

-----Class

1069-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][012][100][120][201]]

-----  
Rules of T[L]:

- R1) 0, -->0,0,--0,1,--
- R2) 0,0, -->0,0,0,--0,1,--0,0,2,--
- R3) 0,1, -->0,1,0,--
- R4) 0,0,0, -->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--
- R5) 0,0,2, -->0,1,0,--0,1,--
- R6) 0,1,0, -->
- R7) 0,0,0,0, -->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R8) 0,0,0,3, -->0,1,0,--0,1,--0,0,2,--
- R9) 0,0,0,0,0, -->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
- R10) 0,0,0,0,4, -->0,1,0,--0,1,--0,0,2,--0,0,0,3,--
- R11)  
0,0,0,0,0,0, -->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--
- R12) 0,0,0,0,0,5, -->0,1,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R13)  
0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--
- R14) 0,0,0,0,0,0,6, -->0,1,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
- R15)  
0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--
- R16)  
0,0,0,0,0,0,0,7, -->0,1,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,  
0,0,0,6,--
- R17)  
0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,  
,--
- R18)

0,0,0,0,0,0,0,0,8,-->0,1,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,: 0,1,0,:

LEN=4) 0,0,0,0,: 0,0,0,3,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

-----Class

1070-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][100][120][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->0,1,0,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,1,--0,1,0,--

R6) 0,1,0,-->

R7) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R8) 0,0,0,3,-->0,0,0,3,0,--0,1,0,--0,1,0,--

R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R10) 0,0,0,0,4,-->0,0,0,0,4,0,--0,1,0,--0,1,0,--0,1,0,--

R11) 0,0,0,3,0,-->0,1,0,--0,1,0,--

R12)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--

R13) 0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--

R14) 0,0,0,0,4,0,-->0,1,0,--0,1,0,--0,1,0,--

R15)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R16) 0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--

R17) 0,0,0,0,0,5,0,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--

R18)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--

R19)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--

R20) 0,0,0,0,0,0,6,0,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--

R21)

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R22)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,8,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--

R23) 0,0,0,0,0,0,0,7,0,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,: 0,1,0,:

LEN=4) 0,0,0,0,: 0,0,0,3,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,: 0,0,0,3,0,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,: 0,0,0,0,4,0,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,: 0,0,0,0,0,5,0,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,6,0,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,7,0,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,8,0,:

Number new nodes in level n is given by : 1,2,3,2,3,3,3,3,3,3,

-----Class

1071-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][100][201][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->0,1,0,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,1,0,--0,1,0,--

R6) 0,1,0,-->

R7) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R8) 0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--

R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R10) 0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--

R11)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--

R12) 0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--

R13)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,7,--

R14) 0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--

R15)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,7,--0,0,0,0,0,8,--

R16) 0,0,0,0,0,0,0,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--

R17)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,

0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9  
,--

R18)

0,0,0,0,0,0,0,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,  
--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,: 0,1,0,:

LEN=4) 0,0,0,0,: 0,0,0,3,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,2,

-----Class

1072-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][101][102][110]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->0,1,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,0,2,--0,1,--

R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R7) 0,0,0,3,-->0,0,0,3,--0,1,--0,0,2,--

R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R9) 0,0,0,0,4,-->0,0,0,0,4,--0,1,--0,0,2,--0,0,0,3,--

R10)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--

R11) 0,0,0,0,0,5,-->0,0,0,0,0,5,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R12)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R13)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R14)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--

R15)

0,0,0,0,0,0,7,-->0,0,0,0,0,0,7,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,  
5,--0,0,0,0,0,6,--

R16)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,

0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9  
,--

R17)

0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,  
0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,7,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,3,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

1073-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][101][102][120]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->0,1,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,0,2,--0,1,--

R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R7) 0,0,0,3,-->0,0,0,3,--0,1,--0,0,2,--

R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R9) 0,0,0,0,4,-->0,0,0,0,4,--0,1,--0,0,2,--0,0,0,3,--

R10)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--

R11) 0,0,0,0,0,5,-->0,0,0,0,0,5,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R12)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R13)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R14)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--

R15)

0,0,0,0,0,0,7,-->0,0,0,0,0,0,7,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,  
5,--0,0,0,0,0,6,--

R16)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,

0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9  
,--

R17)

0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,  
0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,7,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,3,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

1074-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][101][102][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->0,1,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,1,--0,1,--

R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R7) 0,0,0,3,-->0,1,--0,1,--0,0,2,--

R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R9) 0,0,0,0,4,-->0,1,--0,1,--0,0,2,--0,0,0,3,--

R10)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--

R11) 0,0,0,0,0,5,-->0,1,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R12)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,6,--0,0,0,0,0,7,--

R13) 0,0,0,0,0,6,-->0,1,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--

R14)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,6,--0,0,0,0,0,7,--0,0,0,0,0,8,--

R15)

0,0,0,0,0,0,7,-->0,1,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,  
0,0,6,--

R16)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,7,--0,0,0,0,0,8,--0,0,0,0,0,9

```

,--
R17)
0,0,0,0,0,0,0,0,8,-->0,1,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,
0,0,0,6,--0,0,0,0,0,0,7,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,0,0,: 0,0,2,:
LEN=4) 0,0,0,0,: 0,0,0,3,:
LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:
LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:
LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:
LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:
LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:
LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:
Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

```

-----Class

1075-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][101][102][210]]$

-----

--

Rules of T[L]:

```

R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
R3) 0,1,-->0,1,--
R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--
R5) 0,0,2,-->0,0,2,--0,0,2,1,--
R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
R7) 0,0,0,3,-->0,0,0,3,--0,0,2,1,--0,0,2,1,--
R8) 0,0,2,1,-->
R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
R10) 0,0,0,0,4,-->0,0,0,0,4,--0,0,2,1,--0,0,2,1,--0,0,2,1,--
R11)
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,
0,0,0,0,0,6,--
R12) 0,0,0,0,0,5,-->0,0,0,0,0,5,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--
R13)
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,
--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--
R14)
0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--
R15)
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,
0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--
R16)
0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,
1,--0,0,2,1,--
R17)
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,

```

0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9  
,--

R18)

0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,  
0,2,1,--0,0,2,1,--0,0,2,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,3,: 0,0,2,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,2,3,2,2,2,2,2,2,2,

-----Class

1076-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][101][110][120]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->0,1,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,0,2,--0,1,--

R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R7) 0,0,0,3,-->0,0,0,3,--0,1,--0,0,2,--

R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R9) 0,0,0,0,4,-->0,0,0,0,4,--0,1,--0,0,2,--0,0,0,3,--

R10)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--

R11) 0,0,0,0,0,5,-->0,0,0,0,0,5,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R12)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R13)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R14)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--

R15)

0,0,0,0,0,0,7,-->0,0,0,0,0,0,7,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,  
5,--0,0,0,0,0,6,--

R16)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,



0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9  
,--

R17)

0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,  
0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,7,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,3,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

1077-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][101][110][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->0,1,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,1,--0,1,--

R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R7) 0,0,0,3,-->0,1,--0,1,--0,0,2,--

R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R9) 0,0,0,0,4,-->0,1,--0,1,--0,0,2,--0,0,0,3,--

R10)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--

R11) 0,0,0,0,0,5,-->0,1,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R12)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,6,--0,0,0,0,0,7,--

R13) 0,0,0,0,0,6,-->0,1,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--

R14)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,6,--0,0,0,0,0,7,--0,0,0,0,0,8,--

R15)

0,0,0,0,0,0,7,-->0,1,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,  
0,0,6,--

R16)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,7,--0,0,0,0,0,8,--0,0,0,0,0,9

```

,--
R17)
0,0,0,0,0,0,0,0,8,-->0,1,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,
0,0,0,6,--0,0,0,0,0,0,7,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,0,0,: 0,0,2,:
LEN=4) 0,0,0,0,: 0,0,0,3,:
LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:
LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:
LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:
LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:
LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:
LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:
Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

```

-----Class

1078-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][101][110][210]]$

-----

--

Rules of T[L]:

```

R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
R3) 0,1,-->0,1,--
R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--
R5) 0,0,2,-->0,0,2,--0,0,2,1,--
R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
R7) 0,0,0,3,-->0,0,0,3,--0,0,2,1,--0,0,2,1,--
R8) 0,0,2,1,-->
R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
R10) 0,0,0,0,4,-->0,0,0,0,4,--0,0,2,1,--0,0,2,1,--0,0,2,1,--
R11)
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,
0,0,0,0,0,6,--
R12) 0,0,0,0,0,5,-->0,0,0,0,0,5,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--
R13)
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,
--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--
R14)
0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--
R15)
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,
0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--
R16)
0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,
1,--0,0,2,1,--
R17)
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,

```

0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9  
,--

R18)

0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,  
0,2,1,--0,0,2,1,--0,0,2,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,3,: 0,0,2,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,2,3,2,2,2,2,2,2,2,

-----Class

1079-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][101][120][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->0,1,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,1,--0,1,--

R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R7) 0,0,0,3,-->0,1,--0,1,--0,0,2,--

R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R9) 0,0,0,0,4,-->0,1,--0,1,--0,0,2,--0,0,0,3,--

R10)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--

R11) 0,0,0,0,0,5,-->0,1,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R12)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R13) 0,0,0,0,0,0,6,-->0,1,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R14)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R15)

0,0,0,0,0,0,0,7,-->0,1,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,  
0,0,6,--

R16)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9

```

,--
R17)
0,0,0,0,0,0,0,0,8,-->0,1,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,
0,0,0,6,--0,0,0,0,0,0,7,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,0,0,: 0,0,2,:
LEN=4) 0,0,0,0,: 0,0,0,3,:
LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:
LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:
LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:
LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:
LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:
LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:
Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

```

-----Class

1080-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][101][120][210]]$

-----

--

Rules of T[L]:

```

R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
R3) 0,1,-->0,1,--
R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--
R5) 0,0,2,-->0,0,2,--0,0,2,1,--
R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
R7) 0,0,0,3,-->0,0,0,3,--0,0,2,1,--0,0,2,1,--
R8) 0,0,2,1,-->
R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
R10) 0,0,0,0,4,-->0,0,0,0,4,--0,0,2,1,--0,0,2,1,--0,0,2,1,--
R11)
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,
0,0,0,0,0,6,--
R12) 0,0,0,0,0,5,-->0,0,0,0,0,5,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--
R13)
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,
--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--
R14)
0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--
R15)
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,
0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--
R16)
0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,
1,--0,0,2,1,--
R17)
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,

```

0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9  
,--

R18)

0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,  
0,2,1,--0,0,2,1,--0,0,2,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,3,: 0,0,2,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,2,3,2,2,2,2,2,2,

-----Class

1081-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][101][201][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->0,1,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,1,--0,0,2,1,--

R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R7) 0,0,0,3,-->0,1,--0,0,2,1,--0,0,2,1,--

R8) 0,0,2,1,-->

R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R10) 0,0,0,0,4,-->0,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--

R11)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--

R12) 0,0,0,0,0,5,-->0,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--

R13)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R14) 0,0,0,0,0,0,6,-->0,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--

R15)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--

R16)

0,0,0,0,0,0,7,-->0,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--

--

R17)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,

0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9  
,--

R18)

0,0,0,0,0,0,0,8,-->0,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,3,: 0,0,2,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,2,3,2,2,2,2,2,2,

-----Class

1082-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][102][110][120]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->0,1,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,0,2,--0,1,--

R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R7) 0,0,0,3,-->0,0,0,3,--0,1,--0,0,2,--

R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R9) 0,0,0,0,4,-->0,0,0,0,4,--0,1,--0,0,2,--0,0,0,3,--

R10)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--

R11) 0,0,0,0,0,5,-->0,0,0,0,0,5,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R12)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R13)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R14)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--

R15)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--

R16)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,

0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9  
,--

R17)

0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,  
0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,7,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,3,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

1083-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][102][110][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->0,1,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,1,--0,1,--

R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R7) 0,0,0,3,-->0,1,--0,1,--0,0,2,--

R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R9) 0,0,0,0,4,-->0,1,--0,1,--0,0,2,--0,0,0,3,--

R10)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--

R11) 0,0,0,0,0,5,-->0,1,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R12)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,6,--0,0,0,0,0,7,--

R13) 0,0,0,0,0,6,-->0,1,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--

R14)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,6,--0,0,0,0,0,7,--0,0,0,0,0,8,--

R15)

0,0,0,0,0,0,7,-->0,1,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,  
0,0,6,--

R16)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,7,--0,0,0,0,0,8,--0,0,0,0,0,9

```

,--
R17)
0,0,0,0,0,0,0,0,8,-->0,1,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,
0,0,0,6,--0,0,0,0,0,0,7,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,0,0,: 0,0,2,:
LEN=4) 0,0,0,0,: 0,0,0,3,:
LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:
LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:
LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:
LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:
LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:
LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:
Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

```

-----Class

1084-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][102][110][210]]$

-----

--

Rules of T[L]:

```

R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
R3) 0,1,-->0,1,--
R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--
R5) 0,0,2,-->0,0,2,--0,0,2,1,--
R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
R7) 0,0,0,3,-->0,0,0,3,--0,0,2,1,--0,0,2,1,--
R8) 0,0,2,1,-->
R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
R10) 0,0,0,0,4,-->0,0,0,0,4,--0,0,2,1,--0,0,2,1,--0,0,2,1,--
R11)
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,
0,0,0,0,0,6,--
R12) 0,0,0,0,0,5,-->0,0,0,0,0,5,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--
R13)
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,
--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--
R14)
0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--
R15)
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,
0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--
R16)
0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,
1,--0,0,2,1,--
R17)
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,

```



0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9  
,--

R18)

0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,  
0,2,1,--0,0,2,1,--0,0,2,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,3,: 0,0,2,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,2,3,2,2,2,2,2,2,

-----Class

1085-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][102][120][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->0,1,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,1,--0,1,--

R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R7) 0,0,0,3,-->0,1,--0,1,--0,0,2,--

R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R9) 0,0,0,0,4,-->0,1,--0,1,--0,0,2,--0,0,0,3,--

R10)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--

R11) 0,0,0,0,0,5,-->0,1,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R12)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R13) 0,0,0,0,0,0,6,-->0,1,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R14)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R15)

0,0,0,0,0,0,0,7,-->0,1,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,  
0,0,6,--

R16)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9

```

,--
R17)
0,0,0,0,0,0,0,0,8,-->0,1,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,
0,0,0,6,--0,0,0,0,0,0,7,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,0,0,: 0,0,2,:
LEN=4) 0,0,0,0,: 0,0,0,3,:
LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:
LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:
LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:
LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:
LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:
LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:
Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

```

-----Class

1086-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][102][120][210]]$

-----

--

Rules of T[L]:

```

R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
R3) 0,1,-->0,1,--
R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--
R5) 0,0,2,-->0,0,2,--0,0,2,1,--
R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
R7) 0,0,0,3,-->0,0,0,3,--0,0,2,1,--0,0,2,1,--
R8) 0,0,2,1,-->
R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
R10) 0,0,0,0,4,-->0,0,0,0,4,--0,0,2,1,--0,0,2,1,--0,0,2,1,--
R11)
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,
0,0,0,0,0,6,--
R12) 0,0,0,0,0,5,-->0,0,0,0,0,5,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--
R13)
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,
--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--
R14)
0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--
R15)
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,
0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--
R16)
0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,
1,--0,0,2,1,--
R17)
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,

```

0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9  
,--

R18)

0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,  
0,2,1,--0,0,2,1,--0,0,2,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,3,: 0,0,2,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,2,3,2,2,2,2,2,2,

-----Class

1087-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][102][201][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->0,1,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,1,--0,0,2,1,--

R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R7) 0,0,0,3,-->0,1,--0,0,2,1,--0,0,2,1,--

R8) 0,0,2,1,-->

R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R10) 0,0,0,0,4,-->0,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--

R11)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--

R12) 0,0,0,0,0,5,-->0,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--

R13)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R14) 0,0,0,0,0,0,6,-->0,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--

R15)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R16)

0,0,0,0,0,0,7,-->0,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--

--

R17)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,

0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9  
,--

R18)

0,0,0,0,0,0,0,8,-->0,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,3,: 0,0,2,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,2,3,2,2,2,2,2,2,

-----Class

1088-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][110][120][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->0,1,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,1,--0,1,--

R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R7) 0,0,0,3,-->0,1,--0,1,--0,0,2,--

R8) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R9) 0,0,0,0,4,-->0,1,--0,1,--0,0,2,--0,0,0,3,--

R10)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--

R11) 0,0,0,0,0,5,-->0,1,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R12)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,7,--

R13) 0,0,0,0,0,0,6,-->0,1,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--

R14)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,7,--0,0,0,0,0,8,--

R15)

0,0,0,0,0,0,0,7,-->0,1,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--

R16)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,7,--0,0,0,0,0,8,--0,0,0,0,0,9,--

```

,--
R17)
0,0,0,0,0,0,0,0,8,-->0,1,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,
0,0,0,6,--0,0,0,0,0,0,7,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,0,0,: 0,0,2,:
LEN=4) 0,0,0,0,: 0,0,0,3,:
LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:
LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:
LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:
LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:
LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:
LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:
Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

```

-----Class

1089-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][110][120][210]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
- R3) 0,1,-->0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--
- R5) 0,0,2,-->0,0,2,--0,0,2,1,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R7) 0,0,0,3,-->0,0,0,3,--0,0,2,1,--0,0,2,1,--
- R8) 0,0,2,1,-->
- R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
- R10) 0,0,0,0,4,-->0,0,0,0,4,--0,0,2,1,--0,0,2,1,--0,0,2,1,--
- R11)
  - 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--
- R12) 0,0,0,0,0,5,-->0,0,0,0,0,5,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--
- R13)
  - 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--
- R14)
  - 0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--
- R15)
  - 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--
- R16)
  - 0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--
- R17)
  - 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,

0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9  
,--

R18)

0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,  
0,2,1,--0,0,2,1,--0,0,2,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,3,: 0,0,2,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,2,3,2,2,2,2,2,2,

-----Class

1090-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][110][201][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->0,1,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,1,--0,0,2,1,--

R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R7) 0,0,0,3,-->0,1,--0,0,2,1,--0,0,2,1,--

R8) 0,0,2,1,-->

R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R10) 0,0,0,0,4,-->0,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--

R11)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--

R12) 0,0,0,0,0,5,-->0,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--

R13)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R14) 0,0,0,0,0,0,6,-->0,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--

R15)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--

R16)

0,0,0,0,0,0,7,-->0,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--

--

R17)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,

0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9  
,--

R18)

0,0,0,0,0,0,0,8,-->0,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,3,: 0,0,2,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,2,3,2,2,2,2,2,2,

-----Class

1091-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][120][201][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->0,1,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,1,--0,0,2,1,--

R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R7) 0,0,0,3,-->0,1,--0,0,2,1,--0,0,2,1,--

R8) 0,0,2,1,-->

R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R10) 0,0,0,0,4,-->0,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--

R11)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--

R12) 0,0,0,0,0,5,-->0,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--

R13)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R14) 0,0,0,0,0,0,6,-->0,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--

R15)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R16)

0,0,0,0,0,0,0,7,-->0,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--

--

R17)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,

0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,7,--0,0,0,0,0,8,--0,0,0,0,0,0,9  
,--

R18)

0,0,0,0,0,0,8,-->0,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,3,: 0,0,2,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,2,3,2,2,2,2,2,2,

-----Class

1092-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][100][101][102]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,1,--

R3) 0,1,-->0,1,0,--0,1,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--

R5) 0,0,1,-->0,1,0,--0,0,1,--0,1,--

R6) 0,1,0,-->

R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R8) 0,0,0,1,-->0,1,0,--0,0,0,1,--0,0,1,--0,1,--

R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R10) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R11)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--

0,0,1,--0,1,--

R12)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--

R13)

0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R14)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--

R15)

0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,1,--0,1,--

R16)

0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,1,--0,1,--



R17)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,--  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--0,1,  
,--

R18)

0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--  
0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,0, : 0,0,1, : 0,1,0, :

LEN=4) 0,0,0,0, : 0,0,0,1, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,1, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :

Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

-----Class

1093-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][021][100][101][110]]

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,1,--

R3) 0,1,-->0,1,0,--0,1,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--

R5) 0,0,1,-->0,0,1,0,--0,0,1,--0,1,--

R6) 0,1,0,-->0,1,0,--0,1,0,3,--

R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R8) 0,0,0,1,-->0,0,0,1,0,--0,0,0,1,--0,0,1,--0,1,--

R9) 0,0,1,0,-->0,0,1,0,--0,1,0,--0,1,0,3,--

R10) 0,1,0,3,-->0,1,0,3,--

R11) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R12) 0,0,0,0,1,-->0,0,0,0,1,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R13) 0,0,0,1,0,-->0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,0,3,--

R14)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
0,0,1,--0,1,--

R15)

0,0,0,0,0,1,-->0,0,0,0,0,1,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R16) 0,0,0,0,1,0,-->0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,0,3,--

R17)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R18)

0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,

1,--0,0,1,--0,1,--  
 R19)  
 0,0,0,0,0,1,0,-->0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,1,0,--0,1,0,--0,1,0,  
 3,--  
 R20)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,  
 0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R21)  
 0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,  
 1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R22)  
 0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,  
 1,0,--0,1,0,--0,1,0,3,--  
 R23)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
 --0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,  
 ,--  
 R24)  
 0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,  
 0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R25)  
 0,0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,  
 1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,0,3,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,1, : 0,1,0, :  
 LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,1,0, : 0,1,0,3, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,1,0, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,1,0, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,1,0, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,1,0, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,1,0, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,1,0, :  
 Number new nodes in level n is given by : 1,2,3,4,3,3,3,3,3,3,

-----Class

1094-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][100][101][120]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- R3) 0,1,-->0,1,--0,1,2,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
- R5) 0,0,1,-->0,0,1,--0,1,--0,1,2,--
- R6) 0,1,2,-->0,1,2,--
- R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R8) 0,0,0,1,-->0,0,0,1,--0,0,1,--0,1,--0,1,2,--

R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R10) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,2,--  
R11)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
0,0,1,--0,1,--  
R12) 0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,2,--  
R13)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R14)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
0,1,2,--  
R15)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,  
0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R16)  
0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,  
0,1,--0,0,1,--0,1,--0,1,2,--  
R17)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,  
--  
R18)  
0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,  
0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,2,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, : 0,1,2, :  
LEN=4) 0,0,0,0, : 0,0,0,1, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,1, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :  
Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

-----Class

1095-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][100][101][201]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- R3) 0,1,-->0,1,0,--0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
- R5) 0,0,1,-->0,0,1,0,--0,0,1,--0,1,--
- R6) 0,1,0,-->0,1,0,--0,1,0,3,--

R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R8) 0,0,0,1,-->0,0,0,1,0,--0,0,0,1,--0,0,1,--0,1,--  
R9) 0,0,1,0,-->0,0,1,0,--0,1,0,--0,1,0,3,--  
R10) 0,1,0,3,-->0,1,0,3,--  
R11) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R12) 0,0,0,0,1,-->0,0,0,0,1,0,--0,0,0,1,--0,0,1,--0,1,--  
R13) 0,0,0,1,0,-->0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,0,3,--  
R14)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--  
0,0,1,--0,1,--  
R15)  
0,0,0,0,1,-->0,0,0,0,1,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R16) 0,0,0,0,1,0,-->0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,3,--  
R17)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
0,0,0,1,--0,0,1,--0,1,--  
R18)  
0,0,0,0,0,1,-->0,0,0,0,0,1,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
1,--0,1,--0,1,--  
R19)  
0,0,0,0,1,0,-->0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,0,  
3,--  
R20)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,  
0,0,1,--0,0,1,--0,1,--  
R21)  
0,0,0,0,0,1,-->0,0,0,0,0,1,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
1,--0,1,--0,1,--  
R22)  
0,0,0,0,0,1,0,-->0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,0,  
1,0,--0,1,0,--0,1,0,3,--  
R23)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--  
--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R24)  
0,0,0,0,0,0,1,-->0,0,0,0,0,1,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
0,0,0,1,--0,1,--  
R25)  
0,0,0,0,0,1,0,-->0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,0,1,  
1,0,--0,0,1,0,--0,1,0,--0,1,0,3,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, : 0,1,0, :  
LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,1,0, : 0,1,0,3, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,1,0, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,1,0, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,1,0, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,1,0, :

LEN=9) 0,0,0,0,0,0,0,0,0,0: 0,0,0,0,0,0,0,0,0,1,0: 0,0,0,0,0,0,0,0,1,0,0,  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,0,0: 0,0,0,0,0,0,0,0,0,0,1,0: 0,0,0,0,0,0,0,0,0,1,0,0,  
 Number new nodes in level n is given by : 1,2,3,4,3,3,3,3,3,3,

-----Class

1096-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][100][101][210]]$

-----

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- R3) 0,1,-->0,1,0,--0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
- R5) 0,0,1,-->0,0,1,0,--0,0,1,--0,1,--
- R6) 0,1,0,-->0,1,0,--0,1,0,3,--
- R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R8) 0,0,0,1,-->0,0,0,1,0,--0,0,0,1,--0,0,1,--0,1,--
- R9) 0,0,1,0,-->0,0,1,0,--0,1,0,--0,1,0,3,--
- R10) 0,1,0,3,-->0,1,0,3,--
- R11) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--
- R12) 0,0,0,0,1,-->0,0,0,0,1,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--
- R13) 0,0,0,1,0,-->0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,0,3,--
- R14) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--
- R15) 0,0,0,0,0,1,-->0,0,0,0,0,1,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--
- R16) 0,0,0,0,1,0,-->0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,0,3,--
- R17) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--
- R18) 0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--
- R19) 0,0,0,0,0,1,0,-->0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,0,3,--
- R20) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,1,--
- R21) 0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--
- R22) 0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,3,--
- R23) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--

```

,--
R24)
0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,
0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,0,1,--0,1,--
R25)
0,0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,
1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,0,3,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,0,0,: 0,0,1,: 0,1,0,:
LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,1,0,: 0,1,0,3,:
LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,1,0,:
LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,1,0,:
LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,1,0,:
LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,1,0,:
LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,1,0,:
LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,1,0,:
Number new nodes in level n is given by : 1,2,3,4,3,3,3,3,3,3,

```

-----Class

1097-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][100][102][110]]$   
-----

--  
Rules of T[L]:

```

R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
R3) 0,1,-->0,1,0,--0,1,--
R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
R5) 0,0,1,-->0,1,0,--0,0,1,--0,1,--
R6) 0,1,0,-->
R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
R8) 0,0,0,1,-->0,1,0,--0,0,0,1,--0,0,1,--0,1,--
R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
R10) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
R11)
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--
0,0,1,--0,1,--
R12) 0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
R13)
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--
0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
R14)
0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--
--0,1,--
R15)
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,
0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
R16)

```

0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,  
1,--0,0,0,1,--0,0,1,--0,1,--

R17)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,  
,--

R18)

0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--  
0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

List of different nodes in  $T[L]$

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,0, : 0,0,1, : 0,1,0, :

LEN=4) 0,0,0,0, : 0,0,0,1, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,1, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :

Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

-----Class

1098-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][100][102][120]]$

--

Rules of  $T[L]$ :

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,1,--

R3) 0,1,-->0,1,0,--0,1,2,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--

R5) 0,0,1,-->0,1,0,--0,0,1,2,--0,1,2,--

R6) 0,1,0,-->

R7) 0,1,2,-->0,1,2,--

R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R9) 0,0,0,1,-->0,1,0,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R10) 0,0,1,2,-->0,0,1,2,--0,1,2,--

R11) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R12) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R13) 0,0,0,1,2,-->0,0,0,1,2,--0,0,1,2,--0,1,2,--

R14)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
0,0,1,--0,1,--

R15)

0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R16) 0,0,0,0,1,2,-->0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R17)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R18)  
0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--  
--0,0,1,2,--0,1,2,--  
R19) 0,0,0,0,0,1,2,-->0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R20)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,  
0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R21)  
0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,  
0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R22)  
0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,  
1,2,--0,1,2,--  
R23)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,  
,--  
R24)  
0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,  
1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R25)  
0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,  
1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, : 0,1,0, : 0,1,2, :  
LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,1,2, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,1,2, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,1,2, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,1,2, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,1,2, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,1,2, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,1,2, :  
Number new nodes in level n is given by : 1,2,4,3,3,3,3,3,3,3,

-----Class  
1099-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][100][102][201]]$   
-----

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,0,1,--0,1,--  
R3) 0,1,-->0,1,0,--0,1,--  
R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--  
R5) 0,0,1,-->0,1,0,--0,0,1,--0,1,--  
R6) 0,1,0,-->  
R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R8) 0,0,0,1,-->0,1,0,--0,0,0,1,--0,0,1,--0,1,--



R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R10) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R11)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
0,0,1,--0,1,--  
R12) 0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R13)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R14)  
0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,  
--0,1,--  
R15)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,  
0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R16)  
0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,  
1,--0,0,0,1,--0,0,1,--0,1,--  
R17)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--0,1,  
--  
R18)  
0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--  
0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, : 0,1,0, :  
LEN=4) 0,0,0,0, : 0,0,0,1, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,1, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :  
Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

-----Class

1100-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][100][102][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,0,1,--0,1,--  
R3) 0,1,-->0,1,0,--0,1,--  
R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--  
R5) 0,0,1,-->0,1,0,--0,0,1,--0,1,--  
R6) 0,1,0,-->

R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R8) 0,0,0,1,-->0,1,0,--0,0,0,1,--0,0,1,--0,1,--  
R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--  
R10) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R11)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
0,0,1,--0,1,--  
R12) 0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--0,1,--  
R13)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R14)  
0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--  
--0,1,--  
R15)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,  
0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R16)  
0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,  
1,--0,0,0,1,--0,0,1,--0,1,--  
R17)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
,--  
R18)  
0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--  
0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, : 0,1,0, :  
LEN=4) 0,0,0,0, : 0,0,0,1, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,1, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :  
Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

-----Class

1101-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][100][110][120]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- R3) 0,1,-->0,1,--0,1,2,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--

R5) 0,0,1,-->0,0,1,--0,1,--0,1,2,--  
 R6) 0,1,2,-->0,1,2,--  
 R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R8) 0,0,0,1,-->0,0,0,1,--0,0,1,--0,1,--0,1,2,--  
 R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R10) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,2,--  
 R11)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
 0,0,1,--0,1,--  
 R12) 0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,2,--  
 R13)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
 0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R14)  
 0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 0,1,2,--  
 R15)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,  
 0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R16)  
 0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,  
 0,1,--0,0,1,--0,1,--0,1,2,--  
 R17)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
 --0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,  
 ,--  
 R18)  
 0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,  
 0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,2,--

List of different nodes in T[L]

LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,1, : 0,1,2, :  
 LEN=4) 0,0,0,0, : 0,0,0,1, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,1, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :  
 Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

-----Class

1102-----  
 Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][021][100][110][201]]  
 -----

--  
Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,0,1,--0,1,--

R3) 0,1,-->0,1,0,--0,1,--  
R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--  
R5) 0,0,1,-->0,0,1,0,--0,0,1,--0,1,--  
R6) 0,1,0,-->0,1,0,--0,1,0,3,--  
R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R8) 0,0,0,1,-->0,0,0,1,0,--0,0,0,1,--0,0,1,--0,1,--  
R9) 0,0,1,0,-->0,0,1,0,--0,1,0,--0,1,0,3,--  
R10) 0,1,0,3,-->0,1,0,3,--  
R11) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R12) 0,0,0,0,1,-->0,0,0,0,1,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R13) 0,0,0,1,0,-->0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,0,3,--  
R14)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R15)  
0,0,0,0,0,1,-->0,0,0,0,0,1,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R16) 0,0,0,0,1,0,-->0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,0,3,--  
R17)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--  
R18)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R19)  
0,0,0,0,0,1,0,-->0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,0,3,--  
R20)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--  
R21)  
0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--  
R22)  
0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,3,--  
R23)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--0,1,--  
R24)  
0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--  
R25)  
0,0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,3,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, : 0,1,0, :  
LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,1,0, : 0,1,0,3, :

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,1,0,:  
 LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,1,0,:  
 LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,1,0,:  
 LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,1,0,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,1,0,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,1,0,:  
 Number new nodes in level n is given by : 1,2,3,4,3,3,3,3,3,3,

-----Class

1103-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][100][110][210]]$

-----

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- R3) 0,1,-->0,1,0,--0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
- R5) 0,0,1,-->0,0,1,0,--0,0,1,--0,1,--
- R6) 0,1,0,-->0,1,0,--0,1,0,3,--
- R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R8) 0,0,0,1,-->0,0,0,1,0,--0,0,0,1,--0,0,1,--0,1,--
- R9) 0,0,1,0,-->0,0,1,0,--0,1,0,--0,1,0,3,--
- R10) 0,1,0,3,-->0,1,0,3,--
- R11) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R12) 0,0,0,0,1,-->0,0,0,0,1,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R13) 0,0,0,1,0,-->0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,0,3,--
- R14)
- 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R15)
- 0,0,0,0,0,1,-->0,0,0,0,0,1,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R16) 0,0,0,0,1,0,-->0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,0,3,--
- R17)
- 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R18)
- 0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R19)
- 0,0,0,0,0,1,0,-->0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,0,3,--
- R20)
- 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R21)
- 0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R22)
- 0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,3,--

1,0,--0,1,0,--0,1,0,3,--  
R23)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--0,1,  
,--  
R24)  
0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,  
0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R25)  
0,0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,  
1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,0,3,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, : 0,1,0, :  
LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,1,0, : 0,1,0,3, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,1,0, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,1,0, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,1,0, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,1,0, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,1,0, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,1,0, :  
Number new nodes in level n is given by : 1,2,3,4,3,3,3,3,3,3,

-----Class

1104-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][100][120][201]]$   
-----

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,0,1,--0,1,--  
R3) 0,1,-->0,1,--0,1,2,--  
R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--  
R5) 0,0,1,-->0,0,1,--0,1,--0,1,2,--  
R6) 0,1,2,-->0,1,2,--  
R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R8) 0,0,0,1,-->0,0,0,1,--0,0,1,--0,1,--0,1,2,--  
R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--  
R10) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,2,--  
R11)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
0,0,1,--0,1,--  
R12) 0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,2,--  
R13)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R14)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--  
0,1,2,--

R15)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,  
 0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R16)  
 0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,  
 0,1,--0,0,1,--0,1,--0,1,2,--

R17)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
 --0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,  
 ,--

R18)  
 0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,  
 0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,2,--

List of different nodes in T[L]

- LEN=1) 0,:
  - LEN=2) 0,0,: 0,1,:
  - LEN=3) 0,0,0,: 0,0,1,: 0,1,2,:
  - LEN=4) 0,0,0,0,: 0,0,0,1,:
  - LEN=5) 0,0,0,0,0,: 0,0,0,0,1,:
  - LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,:
  - LEN=7) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,:
  - LEN=8) 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,:
  - LEN=9) 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,:
  - LEN=10) 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,:
- Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

-----Class

1105-----  
 Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][021][100][120][210]]

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- R3) 0,1,-->0,1,--0,1,2,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
- R5) 0,0,1,-->0,0,1,--0,1,--0,1,2,--
- R6) 0,1,2,-->0,1,2,--
- R7) 0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R8) 0,0,0,1,-->0,0,0,1,--0,0,1,--0,1,--0,1,2,--
- R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R10) 0,0,0,0,1,-->0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,2,--
- R11)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
 0,0,1,--0,1,--
- R12) 0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,2,--
- R13)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
 0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R14)

0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--  
0,1,2,--

R15)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,  
0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R16)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,  
0,1,--0,0,1,--0,1,--0,1,2,--

R17)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,  
,--

R18)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,  
0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,2,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,0, : 0,0,1, : 0,1,2, :

LEN=4) 0,0,0,0, : 0,0,0,1, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,1, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :

Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

-----Class

1106-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][100][201][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,1,--

R3) 0,1,-->0,1,0,--0,1,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--

R5) 0,0,1,-->0,0,1,0,--0,0,1,--0,1,--

R6) 0,1,0,-->0,1,0,--0,1,0,3,--

R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R8) 0,0,0,1,-->0,0,0,1,0,--0,0,0,1,--0,0,1,--0,1,--

R9) 0,0,1,0,-->0,0,1,0,--0,1,0,--0,1,0,3,--

R10) 0,1,0,3,-->0,1,0,3,--

R11) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R12) 0,0,0,0,1,-->0,0,0,0,1,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R13) 0,0,0,1,0,-->0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,0,3,--

R14)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--  
0,0,1,--0,1,--



R15)  
0,0,0,0,0,1,-->0,0,0,0,0,1,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--  
R16) 0,0,0,0,1,0,-->0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,0,3,--  
R17)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R18)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,  
1,--0,0,1,--0,1,--  
R19)  
0,0,0,0,0,1,0,-->0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,0,  
3,--  
R20)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,  
0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R21)  
0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,  
1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R22)  
0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,  
1,0,--0,1,0,--0,1,0,3,--  
R23)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,  
,--  
R24)  
0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,  
0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R25)  
0,0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,  
1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,0,3,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, : 0,1,0, :  
LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,1,0, : 0,1,0,3, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,1,0, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,1,0, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,1,0, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,1,0, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,1,0, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,1,0, :  
Number new nodes in level n is given by : 1,2,3,4,3,3,3,3,3,3,3,

-----Class

1107-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][021][101][102][110]]

-----

--

Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,0, --0,0,1, --0,1, --
- R3) 0,1, -->0,1,0, --0,1, --
- R4) 0,0,0, -->0,0,0,0, --0,0,0,1, --0,0,1, --0,1, --
- R5) 0,0,1, -->0,1,0, --0,0,1, --0,1, --
- R6) 0,1,0, -->0,1,0, --
- R7) 0,0,0,0, -->0,0,0,0,0, --0,0,0,0,1, --0,0,0,1, --0,0,1, --0,1, --
- R8) 0,0,0,1, -->0,1,0, --0,0,0,1, --0,0,1, --0,1, --
- R9) 0,0,0,0,0, -->0,0,0,0,0,0, --0,0,0,0,0,1, --0,0,0,0,1, --0,0,0,1, --0,0,1, --
- R10) 0,0,0,0,1, -->0,1,0, --0,0,0,0,1, --0,0,0,1, --0,0,1, --0,1, --
- R11) 0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,1, --0,0,0,1, --0,0,1, --
- R12) 0,0,0,0,0,1, -->0,1,0, --0,0,0,0,0,1, --0,0,0,0,1, --0,0,0,1, --0,0,1, --0,1, --
- R13) 0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,1, --0,0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,1, --0,0,0,1, --0,0,1, --
- R14) 0,0,0,0,0,0,1, -->0,1,0, --0,0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,1, --0,0,0,1, --0,0,1, --0,1, --
- R15) 0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0,1, --0,0,0,0,0,0,0,1, --0,0,0,0,0,0,1, --0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,1, --0,0,0,1, --0,0,1, --
- R16) 0,0,0,0,0,0,0,1, -->0,1,0, --0,0,0,0,0,0,0,1, --0,0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,1, --0,0,0,1, --0,0,1, --0,1, --
- R17) 0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0,0,1, --0,0,0,0,0,0,0,0,1, --0,0,0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,1, --0,0,1, --0,1, --
- R18) 0,0,0,0,0,0,0,0,1, -->0,1,0, --0,0,0,0,0,0,0,0,1, --0,0,0,0,0,0,0,1, --0,0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,1, --0,0,1, --0,1, --

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, : 0,1, :
- LEN=3) 0,0,0, : 0,0,1, : 0,1,0, :
- LEN=4) 0,0,0,0, : 0,0,0,1, :
- LEN=5) 0,0,0,0,0, : 0,0,0,0,1, :
- LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, :
- LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, :
- LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, :
- LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, :
- LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :

Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,1,--

R3) 0,1,-->0,1,0,--0,1,0,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--

R5) 0,0,1,-->0,1,0,--0,0,1,2,--0,1,0,--

R6) 0,1,0,-->0,1,0,--

R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R8) 0,0,0,1,-->0,1,0,--0,0,0,1,2,--0,0,1,2,--0,1,0,--

R9) 0,0,1,2,-->0,0,1,2,--0,1,0,--

R10) 0,0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R11) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,0,--

R12) 0,0,0,1,2,-->0,0,0,1,2,--0,0,1,2,--0,1,0,--

R13)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R14)

0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,0,--

R15) 0,0,0,0,1,2,-->0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,0,--

R16)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R17)

0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,0,--

R18) 0,0,0,0,0,1,2,-->0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,0,--

R19)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R20)

0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,0,--

R21)

0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,0,--

R22)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R23)

0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,0,--

R24)

0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,1,0,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,1,2,:  
 LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,1,2,:  
 LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,1,2,:  
 LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,1,2,:  
 LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,1,2,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,1,2,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,1,2,:  
 Number new nodes in level n is given by : 1,2,3,3,3,3,3,3,3,3,

-----Class

1109-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][101][102][201]]$

-----

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- R3) 0,1,-->0,1,0,--0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
- R5) 0,0,1,-->0,1,0,--0,0,1,--0,1,--
- R6) 0,1,0,-->0,1,0,--
- R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R8) 0,0,0,1,-->0,1,0,--0,0,0,1,--0,0,1,--0,1,--
- R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--
- R10) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,--0,0,0,1,--0,1,--
- R11) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--
- R12) 0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--
- R13) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--
- R14) 0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--
- R15) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,1,--
- R16) 0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--
- R17) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--
- R18) 0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--

List of different nodes in  $T[L]$

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:  
 LEN=3) 0,0,0,: 0,0,1,: 0,1,0,:  
 LEN=4) 0,0,0,0,: 0,0,0,1,:  
 LEN=5) 0,0,0,0,0,: 0,0,0,0,1,:  
 LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,:  
 LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,:  
 LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,:  
 Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

-----Class

1110-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][101][102][210]]$

-----

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- R3) 0,1,-->0,1,0,--0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
- R5) 0,0,1,-->0,1,0,--0,0,1,--0,1,--
- R6) 0,1,0,-->0,1,0,--
- R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R8) 0,0,0,1,-->0,1,0,--0,0,0,1,--0,0,1,--0,1,--
- R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--
- R10) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R11)
  - 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--
  - 0,0,1,--0,1,--
- R12) 0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--
- R13)
  - 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--
  - 0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R14)
  - 0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--
  - 0,0,1,--
- R15)
  - 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--
  - 0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--
- R16)
  - 0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,1,--
  - 0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R17)
  - 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--
  - 0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--
  -
- R18)
  - 0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--
  - 0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,1,0,:

LEN=4) 0,0,0,0,: 0,0,0,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,:

Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

-----Class

1111-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][101][110][120]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,1,--

R3) 0,1,-->0,0,1,--0,1,2,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--

R5) 0,0,1,-->0,0,0,1,--0,0,1,2,--0,1,2,--

R6) 0,1,2,-->0,1,2,--

R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R8) 0,0,0,1,-->0,0,0,0,1,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R9) 0,0,1,2,-->0,0,1,2,--0,1,2,--

R10) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R11) 0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R12) 0,0,0,1,2,-->0,0,0,1,2,--0,0,1,2,--0,1,2,--

R13)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--

R14)

0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R15) 0,0,0,0,1,2,-->0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R16)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--

R17)

0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R18) 0,0,0,0,0,1,2,-->0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R19)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--

R20)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R21)  
0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,  
1,2,--0,1,2,--  
R22)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,0,1,--0,1,  
,--  
R23)  
0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,2,  
--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R24)  
0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,  
1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, : 0,1,2, :  
LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,1,2, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,1,2, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,1,2, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,1,2, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,1,2, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,1,2, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,1,2, :  
Number new nodes in level n is given by : 1,2,3,3,3,3,3,3,3,3,

-----Class

1112-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][101][110][201]]$   
-----

Rules of T[L]:

R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,0,--0,0,--0,--  
R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,--0,--  
R4) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--  
R5) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--  
R6)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,  
,--  
R7)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,  
0,--0,0,0,0,--0,0,0,--0,0,--0,--  
R8)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,  
0,--0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--  
R9)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,  
0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,--0,0,--0,--

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, :
- LEN=3) 0,0,0, :
- LEN=4) 0,0,0,0, :
- LEN=5) 0,0,0,0,0, :
- LEN=6) 0,0,0,0,0,0, :
- LEN=7) 0,0,0,0,0,0,0, :
- LEN=8) 0,0,0,0,0,0,0,0, :
- LEN=9) 0,0,0,0,0,0,0,0,0, :
- LEN=10) 0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,

-----Class

1113-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][101][110][210]]$

-----

--  
Rules of T[L]:

- R1) 0,-->0,0,--0,--
- R2) 0,0,-->0,0,0,--0,0,--0,--
- R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,--0,--
- R4) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--
- R5) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--
- R6) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--
- R7) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--
- R8) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,--0,0,--0,--
- R9) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,--0,0,--0,--

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, :
- LEN=3) 0,0,0, :
- LEN=4) 0,0,0,0, :
- LEN=5) 0,0,0,0,0, :
- LEN=6) 0,0,0,0,0,0, :
- LEN=7) 0,0,0,0,0,0,0, :
- LEN=8) 0,0,0,0,0,0,0,0, :
- LEN=9) 0,0,0,0,0,0,0,0,0, :
- LEN=10) 0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,

-----Class



1114-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][101][120][201]]$

-----  
--  
Rules of  $T[L]$ :  
R1)  $0, -- \rightarrow 0, 0, -- 0, 1, --$   
R2)  $0, 0, -- \rightarrow 0, 0, 0, -- 0, 0, 1, -- 0, 1, --$   
R3)  $0, 1, -- \rightarrow 0, 0, 1, -- 0, 1, 2, --$   
R4)  $0, 0, 0, -- \rightarrow 0, 0, 0, 0, -- 0, 0, 0, 1, -- 0, 0, 1, -- 0, 1, --$   
R5)  $0, 0, 1, -- \rightarrow 0, 0, 0, 1, -- 0, 0, 1, 2, -- 0, 1, 2, --$   
R6)  $0, 1, 2, -- \rightarrow 0, 1, 2, --$   
R7)  $0, 0, 0, 0, -- \rightarrow 0, 0, 0, 0, 0, -- 0, 0, 0, 0, 1, -- 0, 0, 0, 1, -- 0, 0, 1, -- 0, 1, --$   
R8)  $0, 0, 0, 1, -- \rightarrow 0, 0, 0, 0, 1, -- 0, 0, 0, 1, 2, -- 0, 0, 1, 2, -- 0, 1, 2, --$   
R9)  $0, 0, 1, 2, -- \rightarrow 0, 0, 1, 2, -- 0, 1, 2, --$   
R10)  $0, 0, 0, 0, 0, -- \rightarrow 0, 0, 0, 0, 0, 0, -- 0, 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 1, -- 0, 0, 0, 1, -- 0, 0, 1, -- 0, 1, --$   
R11)  $0, 0, 0, 0, 1, -- \rightarrow 0, 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 1, 2, -- 0, 0, 0, 1, 2, -- 0, 0, 1, 2, -- 0, 1, 2, --$   
R12)  $0, 0, 0, 1, 2, -- \rightarrow 0, 0, 0, 1, 2, -- 0, 0, 1, 2, -- 0, 1, 2, --$   
R13)  
 $0, 0, 0, 0, 0, 0, -- \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, -- 0, 0, 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 1, -- 0, 0, 0, 1, --$   
 $0, 0, 1, -- 0, 1, --$   
R14)  
 $0, 0, 0, 0, 0, 1, -- \rightarrow 0, 0, 0, 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 0, 0, 1, 2, -- 0, 0, 0, 0, 1, 2, -- 0, 0, 0, 1, 2, -- 0, 0, 1, 2, --$   
 $0, 1, 2, --$   
R15)  $0, 0, 0, 0, 1, 2, -- \rightarrow 0, 0, 0, 0, 1, 2, -- 0, 0, 0, 1, 2, -- 0, 0, 1, 2, -- 0, 1, 2, --$   
R16)  
 $0, 0, 0, 0, 0, 0, 0, -- \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, -- 0, 0, 0, 0, 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 0, 1, --$   
 $0, 0, 0, 0, 1, -- 0, 0, 0, 0, 1, -- 0, 0, 0, 1, -- 0, 1, --$   
R17)  
 $0, 0, 0, 0, 0, 0, 1, -- \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 0, 0, 0, 1, 2, -- 0, 0, 0, 0, 0, 1, 2, -- 0, 0, 0, 0, 1, 2, --$   
 $0, 0, 0, 1, 2, -- 0, 0, 1, 2, -- 0, 1, 2, --$   
R18)  $0, 0, 0, 0, 0, 1, 2, -- \rightarrow 0, 0, 0, 0, 0, 1, 2, -- 0, 0, 0, 0, 1, 2, -- 0, 0, 0, 1, 2, -- 0, 0, 1, 2, -- 0, 1, 2, --$   
R19)  
 $0, 0, 0, 0, 0, 0, 0, 0, -- \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, -- 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 0, 0, 0, 1, -- 0, 0, 0,$   
 $0, 0, 0, 1, -- 0, 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 1, -- 0, 0, 0, 1, -- 0, 0, 1, -- 0, 1, --$   
R20)  
 $0, 0, 0, 0, 0, 0, 0, 1, -- \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 0, 0, 0, 0, 1, 2, -- 0, 0, 0, 0, 0, 0, 1, 2, -- 0, 0, 0,$   
 $0, 0, 1, 2, -- 0, 0, 0, 0, 1, 2, -- 0, 0, 0, 1, 2, -- 0, 0, 1, 2, -- 0, 1, 2, --$   
R21)  
 $0, 0, 0, 0, 0, 0, 1, 2, -- \rightarrow 0, 0, 0, 0, 0, 0, 0, 1, 2, -- 0, 0, 0, 0, 0, 1, 2, -- 0, 0, 0, 0, 1, 2, -- 0, 0, 0, 1, 2, -- 0, 0,$   
 $1, 2, -- 0, 1, 2, --$   
R22)  
 $0, 0, 0, 0, 0, 0, 0, 0, 0, -- \rightarrow 0,$   
 $-- 0,$   
 $--$   
R23)  
 $0, 0, 0, 0, 0, 0, 0, 0, 1, -- \rightarrow 0,$   
 $-- 0, 0, 0, 0, 0, 0, 0, 1, 2, -- 0, 0, 0, 0, 0, 0, 1, 2, -- 0, 0, 0, 0, 0, 1, 2, -- 0, 0, 0, 0, 1, 2, -- 0, 0, 1, 2, -- 0, 1, 2, --$   
R24)  
 $0, 0, 0, 0, 0, 0, 0, 1, 2, -- \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 1, 2, -- 0, 0, 0, 0, 0, 0, 0, 1, 2, -- 0, 0, 0, 0, 0, 1, 2, -- 0, 0, 0, 0,$   
 $1, 2, -- 0, 0, 0, 1, 2, -- 0, 0, 1, 2, -- 0, 1, 2, --$

List of different nodes in T[L]

- LEN=1) 0,:
  - LEN=2) 0,0,: 0,1,:
  - LEN=3) 0,0,0,: 0,0,1,: 0,1,2,:
  - LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,1,2,:
  - LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,1,2,:
  - LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,1,2,:
  - LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,1,2,:
  - LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,1,2,:
  - LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,1,2,:
  - LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,1,2,:
- Number new nodes in level n is given by : 1,2,3,3,3,3,3,3,3,3,

-----Class

1115-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][101][120][210]]$

-----

--  
Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- R3) 0,1,-->0,0,1,--0,1,2,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
- R5) 0,0,1,-->0,0,0,1,--0,0,1,2,--0,1,2,--
- R6) 0,1,2,-->0,1,2,--
- R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R8) 0,0,0,1,-->0,0,0,0,1,--0,0,0,1,2,--0,0,1,2,--0,1,2,--
- R9) 0,0,1,2,-->0,0,1,2,--0,1,2,--
- R10) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R11) 0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--
- R12) 0,0,0,1,2,-->0,0,0,1,2,--0,0,1,2,--0,1,2,--
- R13)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--
- R14)  
0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--
- R15) 0,0,0,0,1,2,-->0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--
- R16)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--
- R17)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--
- R18) 0,0,0,0,0,1,2,-->0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--
- R19)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,1,--
- R20)  
0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,

0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R21)  
0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,  
1,2,--0,1,2,--  
R22)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,  
,--  
R23)  
0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,2,  
--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R24)  
0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,  
1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, : 0,1,2, :  
LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,1,2, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,1,2, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,1,2, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,1,2, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,1,2, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,1,2, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,1,2, :  
Number new nodes in level n is given by : 1,2,3,3,3,3,3,3,3,3,

-----Class

1116-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][101][201][210]]$

-----

Rules of T[L]:

- R1) 0,-->0,0,--0,--
- R2) 0,0,-->0,0,0,--0,0,--0,--
- R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,--0,--
- R4) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--
- R5) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--
- R6)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--
- R7)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,  
0,--0,0,0,0,--0,0,0,--0,0,--0,--
- R8)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,  
0,--0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--
- R9)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,  
0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,--0,0,--0,--

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, :
- LEN=3) 0,0,0, :
- LEN=4) 0,0,0,0, :
- LEN=5) 0,0,0,0,0, :
- LEN=6) 0,0,0,0,0,0, :
- LEN=7) 0,0,0,0,0,0,0, :
- LEN=8) 0,0,0,0,0,0,0,0, :
- LEN=9) 0,0,0,0,0,0,0,0,0, :
- LEN=10) 0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,

-----Class

1117-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][102][110][120]]$

- 
- 
- Rules of T[L]:
- R1) 0,-->0,0,--0,1,--
  - R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
  - R3) 0,1,-->0,1,0,--0,1,0,--
  - R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
  - R5) 0,0,1,-->0,1,0,--0,0,1,2,--0,1,0,--
  - R6) 0,1,0,-->0,1,0,--
  - R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
  - R8) 0,0,0,1,-->0,1,0,--0,0,0,1,2,--0,0,1,2,--0,1,0,--
  - R9) 0,0,1,2,-->0,0,1,2,--0,1,0,--
  - R10) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
  - R11) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,0,--
  - R12) 0,0,0,1,2,-->0,0,0,1,2,--0,0,1,2,--0,1,0,--
  - R13)
  - 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
  - R14)
  - 0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,0,--
  - R15) 0,0,0,0,1,2,-->0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,0,--
  - R16)
  - 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
  - R17)
  - 0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,0,--
  - R18) 0,0,0,0,0,1,2,-->0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,0,--
  - R19)
  - 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
  - R20)
  - 0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,0,--

```

R21)
0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,
1,2,--0,1,0,--
R22)
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,
--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,
,--
R23)
0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,
1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,0,--
R24)
0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,
1,2,--0,0,0,1,2,--0,0,1,2,--0,1,0,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,0,0,: 0,0,1,: 0,1,0,:
LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,1,2,:
LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,1,2,:
LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,1,2,:
LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,1,2,:
LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,1,2,:
LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,1,2,:
LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,1,2,:
Number new nodes in level n is given by : 1,2,3,3,3,3,3,3,3,3,

```

-----Class

1118-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][102][110][201]]$   
-----

Rules of T[L]:

```

R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
R3) 0,1,-->0,1,0,--0,1,--
R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
R5) 0,0,1,-->0,1,0,--0,0,1,--0,1,--
R6) 0,1,0,-->0,1,0,--
R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
R8) 0,0,0,1,-->0,1,0,--0,0,0,1,--0,0,1,--0,1,--
R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--
R10) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
R11)
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--
0,0,1,--0,1,--
R12) 0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--
R13)
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--
0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
R14)

```

0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,  
--0,1,--

R15)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,  
0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R16)

0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,  
1,--0,0,0,1,--0,0,1,--0,1,--

R17)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,--  
,--

R18)

0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--  
0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,0, : 0,0,1, : 0,1,0, :

LEN=4) 0,0,0,0, : 0,0,0,1, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,1, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :

Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

-----Class

1119-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][102][110][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,1,--

R3) 0,1,-->0,1,0,--0,1,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--

R5) 0,0,1,-->0,1,0,--0,0,1,--0,1,--

R6) 0,1,0,-->0,1,0,--

R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R8) 0,0,0,1,-->0,1,0,--0,0,0,1,--0,0,1,--0,1,--

R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R10) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R11)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
0,0,1,--0,1,--

R12) 0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R13)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--

0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R14)  
 0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,  
 --0,1,--  
 R15)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,  
 0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R16)  
 0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,  
 1,--0,0,0,1,--0,0,1,--0,1,--  
 R17)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
 --0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,--  
 ,--  
 R18)  
 0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--  
 0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,1, : 0,1,0, :  
 LEN=4) 0,0,0,0, : 0,0,0,1, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,1, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :  
 Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

-----Class  
 1120-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][102][120][201]]$   
 -----

Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,0,1,--0,1,--  
 R3) 0,1,-->0,1,0,--0,1,0,--  
 R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--  
 R5) 0,0,1,-->0,1,0,--0,0,1,2,--0,1,0,--  
 R6) 0,1,0,-->0,1,0,--  
 R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R8) 0,0,0,1,-->0,1,0,--0,0,0,1,2,--0,0,1,2,--0,1,0,--  
 R9) 0,0,1,2,-->0,0,1,2,--0,1,0,--  
 R10) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--  
 R11) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,0,--  
 R12) 0,0,0,1,2,-->0,0,0,1,2,--0,0,1,2,--0,1,0,--  
 R13)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--

0,0,1,--0,1,--  
 R14) 0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,0,--  
 R15) 0,0,0,0,1,2,-->0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,0,--  
 R16) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
 0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R17) 0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--  
 --0,0,1,2,--0,1,0,--  
 R18) 0,0,0,0,0,1,2,-->0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,0,--  
 R19) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,  
 0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R20) 0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,  
 0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,0,--  
 R21) 0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,  
 1,2,--0,1,0,--  
 R22) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
 --0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--0,1,  
 ,--  
 R23) 0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,  
 1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,0,--  
 R24) 0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,  
 1,2,--0,0,0,1,2,--0,0,1,2,--0,1,0,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,1, : 0,1,0, :  
 LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,1,2, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,1,2, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,1,2, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,1,2, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,1,2, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,1,2, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,1,2, :  
 Number new nodes in level n is given by : 1,2,3,3,3,3,3,3,3,3,

-----Class  
 1121-----  
 Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][021][102][120][210]]  
 -----  
 --

Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--



R2) 0,0,-->0,0,0,--0,0,1,--0,1,--  
R3) 0,1,-->0,1,0,--0,1,0,--  
R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--  
R5) 0,0,1,-->0,1,0,--0,0,1,2,--0,1,0,--  
R6) 0,1,0,-->0,1,0,--  
R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R8) 0,0,0,1,-->0,1,0,--0,0,0,1,2,--0,0,1,2,--0,1,0,--  
R9) 0,0,1,2,-->0,0,1,2,--0,1,0,--  
R10) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R11) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,0,--  
R12) 0,0,0,1,2,-->0,0,0,1,2,--0,0,1,2,--0,1,0,--  
R13)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
0,0,1,--0,1,--  
R14)  
0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,0,--  
R15) 0,0,0,0,1,2,-->0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,0,--  
R16)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R17)  
0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--  
--0,0,1,2,--0,1,0,--  
R18) 0,0,0,0,0,1,2,-->0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,0,--  
R19)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,  
0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R20)  
0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,  
0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,0,--  
R21)  
0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,  
1,2,--0,1,0,--  
R22)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,  
--  
R23)  
0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,  
1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,0,--  
R24)  
0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,  
1,2,--0,0,0,1,2,--0,0,1,2,--0,1,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, : 0,1,0, :  
LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,1,2, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,1,2, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,1,2, :

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,1,2,:  
 LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,1,2,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,1,2,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,1,2,:  
 Number new nodes in level n is given by : 1,2,3,3,3,3,3,3,3,3,

-----Class

1122-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][102][201][210]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- R3) 0,1,-->0,1,0,--0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
- R5) 0,0,1,-->0,1,0,--0,0,1,--0,1,--
- R6) 0,1,0,-->0,1,0,--
- R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R8) 0,0,0,1,-->0,1,0,--0,0,0,1,--0,0,1,--0,1,--
- R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--
- R10) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R11) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--
- R12) 0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R13) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--
- R14) 0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--
- R15) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--
- R16) 0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--
- R17) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,1,--0,0,1,--
- R18) 0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,1,--0,0,1,--

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,: 0,1,:
- LEN=3) 0,0,0,: 0,0,1,: 0,1,0,:
- LEN=4) 0,0,0,0,: 0,0,0,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,:  
 LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,:  
 LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,:  
 LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,:  
 Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

-----Class

1123-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][110][120][201]]$

-----  
 --

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- R3) 0,1,-->0,0,1,--0,1,2,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
- R5) 0,0,1,-->0,0,0,1,--0,0,1,2,--0,1,2,--
- R6) 0,1,2,-->0,1,2,--
- R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R8) 0,0,0,1,-->0,0,0,0,1,--0,0,0,1,2,--0,0,1,2,--0,1,2,--
- R9) 0,0,1,2,-->0,0,1,2,--0,1,2,--
- R10) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--
- R11) 0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--
- R12) 0,0,0,1,2,-->0,0,0,1,2,--0,0,1,2,--0,1,2,--
- R13)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--
- R14)  
 0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--
- R15) 0,0,0,0,1,2,-->0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--
- R16)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--
- R17)  
 0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--
- R18) 0,0,0,0,0,1,2,-->0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--
- R19)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--
- R20)  
 0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--
- R21)  
 0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--
- R22)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--0,1,--

R23)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R24)

0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,0, : 0,0,1, : 0,1,2, :

LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,1,2, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,1,2, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,1,2, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,1,2, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,1,2, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,1,2, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,1,2, :

Number new nodes in level n is given by : 1,2,3,3,3,3,3,3,3,3,

-----Class

1124-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][110][120][210]]$

-----

--

Rules of T[L]:

R1) 0, -->0,0, --0,1, --

R2) 0,0, -->0,0,0, --0,0,1, --0,1, --

R3) 0,1, -->0,0,1, --0,1,2, --

R4) 0,0,0, -->0,0,0,0, --0,0,0,1, --0,0,1, --0,1, --

R5) 0,0,1, -->0,0,0,1, --0,0,1,2, --0,1,2, --

R6) 0,1,2, -->0,1,2, --

R7) 0,0,0,0, -->0,0,0,0,0, --0,0,0,0,1, --0,0,0,1, --0,0,1, --0,1, --

R8) 0,0,0,1, -->0,0,0,0,1, --0,0,0,1,2, --0,0,1,2, --0,1,2, --

R9) 0,0,1,2, -->0,0,1,2, --0,1,2, --

R10) 0,0,0,0,0, -->0,0,0,0,0,0, --0,0,0,0,0,1, --0,0,0,0,1, --0,0,0,1, --0,0,1, --0,1, --

R11) 0,0,0,0,1, -->0,0,0,0,0,1, --0,0,0,0,1,2, --0,0,0,1,2, --0,0,1,2, --0,1,2, --

R12) 0,0,0,1,2, -->0,0,0,1,2, --0,0,1,2, --0,1,2, --

R13)

0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,1, --0,0,0,0,1, --0,0,0,1, --0,0,1, --

R14)

0,0,0,0,0,1, -->0,0,0,0,0,0,1, --0,0,0,0,0,1,2, --0,0,0,0,1,2, --0,0,0,1,2, --0,0,1,2, --0,1,2, --

R15) 0,0,0,0,1,2, -->0,0,0,0,1,2, --0,0,0,1,2, --0,0,1,2, --0,1,2, --

R16)

0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,1, --0,0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,1, --0,0,0,1, --0,0,1, --0,1, --

R17)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--  
0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R18) 0,0,0,0,0,1,2,-->0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R19)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,  
0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R20)  
0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,  
0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R21)  
0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,  
1,2,--0,1,2,--  
R22)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,  
,--  
R23)  
0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,2,  
--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R24)  
0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,  
1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, : 0,1,2, :  
LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,1,2, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,1,2, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,1,2, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,1,2, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,1,2, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,1,2, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,1,2, :  
Number new nodes in level n is given by : 1,2,3,3,3,3,3,3,3,3,

-----Class  
1125-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][110][201][210]]$   
-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--  
R2) 0,0,-->0,0,0,--0,0,--0,--  
R3) 0,0,0,-->0,0,0,0,--0,0,0,--0,0,--0,--  
R4) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--  
R5) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,--  
R6)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,--0,  
--



R17)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--  
0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R18) 0,0,0,0,0,1,2,-->0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R19)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,  
0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R20)  
0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,  
0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R21)  
0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,  
1,2,--0,1,2,--  
R22)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,  
,--  
R23)  
0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,2,  
--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R24)  
0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,  
1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, : 0,1,2, :  
LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,1,2, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,1,2, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,1,2, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,1,2, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,1,2, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,1,2, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,1,2, :  
Number new nodes in level n is given by : 1,2,3,3,3,3,3,3,3,3,

-----Class  
1127-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][100][101][102][110]]$   
-----

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--  
R3) 0,1,-->0,1,0,--0,1,--  
R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R5) 0,0,1,-->0,1,0,--0,0,1,--0,0,1,3,--  
R6) 0,0,2,-->0,0,2,0,--0,0,2,0,--0,0,2,--  
R7) 0,1,0,-->  
R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R9) 0,0,0,1,-->0,1,0,--0,0,0,1,--0,0,0,1,3,--0,0,0,1,4,--  
R10) 0,0,0,2,-->0,0,2,0,--0,0,2,0,--0,0,0,2,--0,0,0,2,4,--  
R11) 0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,3,--  
R12) 0,0,1,3,-->0,1,0,--0,0,2,0,--0,0,1,3,--  
R13) 0,0,2,0,-->0,1,0,--  
R14)  
0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--  
R15) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--  
R16) 0,0,0,0,2,-->0,0,2,0,--0,0,2,0,--0,0,0,0,2,--0,0,0,0,2,4,--0,0,0,0,2,5,--  
R17) 0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,0,3,--0,0,0,0,3,5,--  
R18)  
0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--0,0,0,0,4,--  
R19) 0,0,0,1,3,-->0,1,0,--0,0,2,0,--0,0,0,1,3,--0,0,0,1,3,5,--  
R20) 0,0,0,1,4,-->0,1,0,--0,0,0,3,1,--0,0,0,3,1,--0,0,0,1,4,--  
R21) 0,0,0,2,4,-->0,0,2,0,--0,0,2,0,--0,0,0,3,0,--0,0,0,2,4,--  
R22) 0,0,0,3,0,-->0,0,2,0,--0,0,2,0,--  
R23) 0,0,0,3,1,-->0,1,0,--0,0,2,0,--  
R24)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R25)  
0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,  
--0,0,0,0,0,1,6,--  
R26)  
0,0,0,0,0,2,-->0,0,2,0,--0,0,2,0,--0,0,0,0,0,2,--0,0,0,0,0,2,4,--0,0,0,0,0,2,5,--0,  
0,0,0,0,2,6,--  
R27)  
0,0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,0,0,3,--0,0,0,0,0,3,5,--0,  
0,0,0,0,3,6,--  
R28)  
0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--0,0,0,0,0,4,  
--0,0,0,0,4,6,--  
R29)  
0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,  
0,0,0,5,0,--0,0,0,0,0,5,--  
R30)  
0,0,0,0,1,3,-->0,1,0,--0,0,2,0,--0,0,0,0,1,3,--0,0,0,0,1,3,5,--0,0,0,0,1,3,6,--  
R31) 0,0,0,0,1,4,-->0,1,0,--0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,1,4,--0,0,0,0,1,4,6,--  
R32)  
0,0,0,0,1,5,-->0,1,0,--0,0,0,0,4,1,--0,0,0,0,1,5,3,--0,0,0,0,4,1,--0,0,0,0,1,5,--  
R33) 0,0,0,0,2,4,-->0,0,2,0,--0,0,2,0,--0,0,0,3,0,--0,0,0,0,2,4,--0,0,0,0,2,4,6,--  
R34) 0,0,0,0,2,5,-->0,0,2,0,--0,0,2,0,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,2,5,--  
R35)  
0,0,0,0,3,5,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,0,4,0,--0,0,0,0,3,5,--  
R36) 0,0,0,0,4,0,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--  
R37) 0,0,0,0,4,1,-->0,1,0,--0,0,0,3,1,--0,0,0,3,1,--  
R38) 0,0,0,0,4,2,-->0,0,2,0,--0,0,2,0,--0,0,0,3,0,--  
R39) 0,0,0,1,3,5,-->0,1,0,--0,0,2,0,--0,0,0,3,1,--0,0,0,1,3,5,--  
R40)



0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R41)

0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--

R42)

0,0,0,0,0,0,2,-->0,0,2,0,--0,0,2,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,2,4,--0,0,0,0,0,0,2,5,--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,2,7,--

R43)

0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,0,0,0,3,--0,0,0,0,0,0,3,5,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,7,--

R44)

0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--0,0,0,0,0,0,4,--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,7,--

R45)

0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,0,--0,0,0,0,0,5,--0,0,0,0,0,5,7,--

R46)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,0,--0,0,0,0,0,0,6,--

R47)

0,0,0,0,0,1,3,-->0,1,0,--0,0,2,0,--0,0,0,0,0,1,3,--0,0,0,0,0,1,3,5,--0,0,0,0,0,1,3,6,--0,0,0,0,0,1,3,7,--

R48)

0,0,0,0,0,1,4,-->0,1,0,--0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,1,4,--0,0,0,0,0,1,4,6,--0,0,0,0,0,1,4,7,--

R49)

0,0,0,0,0,1,5,-->0,1,0,--0,0,0,0,4,1,--0,0,0,0,1,5,3,--0,0,0,0,4,1,--0,0,0,0,0,1,5,--0,0,0,0,0,1,5,7,--

R50)

0,0,0,0,0,1,6,-->0,1,0,--0,0,0,0,0,5,1,--0,0,0,0,0,1,6,3,--0,0,0,0,0,1,6,4,--0,0,0,0,0,5,1,--0,0,0,0,0,1,6,--

R51)

0,0,0,0,0,2,4,-->0,0,2,0,--0,0,2,0,--0,0,0,3,0,--0,0,0,0,0,2,4,--0,0,0,0,0,2,4,6,--0,0,0,0,0,2,4,7,--

R52)

0,0,0,0,0,2,5,-->0,0,2,0,--0,0,2,0,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,2,5,--0,0,0,0,0,2,5,7,--

R53)

0,0,0,0,0,2,6,-->0,0,2,0,--0,0,2,0,--0,0,0,0,0,5,2,--0,0,0,0,0,2,6,4,--0,0,0,0,0,5,2,--0,0,0,0,0,2,6,--

R54)

0,0,0,0,0,3,5,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,0,4,0,--0,0,0,0,0,3,5,--0,0,0,0,0,3,5,7,--

R55)

0,0,0,0,0,3,6,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,0,0,5,3,--0,0,0,0,0,5,3,--0,0,0,0,0,3,6,--

R56)

0,0,0,0,0,4,6,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--0,0,0,0,0,5,0,--0,0,0,0,0,4,6,--

R57) 0,0,0,0,0,5,0,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--  
R58) 0,0,0,0,0,5,1,-->0,1,0,--0,0,0,0,4,1,--0,0,0,0,1,5,3,--0,0,0,0,4,1,--  
R59) 0,0,0,0,0,5,2,-->0,0,2,0,--0,0,2,0,--0,0,0,0,4,2,--0,0,0,0,4,2,--  
R60) 0,0,0,0,0,5,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,0,4,0,--  
R61)  
0,0,0,0,1,3,5,-->0,1,0,--0,0,2,0,--0,0,0,3,1,--0,0,0,0,1,3,5,--0,0,0,0,1,3,5,7,--  
R62)  
0,0,0,0,1,3,6,-->0,1,0,--0,0,2,0,--0,0,0,0,1,5,3,--0,0,0,0,1,5,3,--0,0,0,0,1,3,6,--  
R63)  
0,0,0,0,1,4,6,-->0,1,0,--0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,1,4,6,--  
R64) 0,0,0,0,1,5,3,-->0,1,0,--0,0,2,0,--0,0,0,3,1,--  
R65)  
0,0,0,0,2,4,6,-->0,0,2,0,--0,0,2,0,--0,0,0,3,0,--0,0,0,0,4,2,--0,0,0,0,2,4,6,--  
R66)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--  
R67)  
0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,1,4,  
--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--0,0,0,0,0,0,1,8,--  
R68)  
0,0,0,0,0,0,0,2,-->0,0,2,0,--0,0,2,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,2,4,--0,0,0,  
0,0,0,0,2,5,--0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,2,8,--  
R69)  
0,0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,0,0,0,0,3,--0,0,0,0,0,  
0,0,3,5,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,7,--0,0,0,0,0,0,3,8,--  
R70)  
0,0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--0,0,0,0,  
0,0,0,4,--0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,4,8,--  
R71)  
0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--  
0,0,0,0,0,5,0,--0,0,0,0,0,0,5,--0,0,0,0,0,0,5,7,--0,0,0,0,0,0,5,8,--  
R72)  
0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,  
0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,0,--0,0,0,0,0,0,6,--0,0,0,0,0,0,6,8,--  
R73)  
0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,7,2,--0,0,  
0,0,0,0,0,7,3,--0,0,0,0,0,0,0,7,4,--0,0,0,0,0,0,0,7,5,--0,0,0,0,0,0,0,7,0,--0,0,0,0,  
,0,0,0,7,--  
R74)  
0,0,0,0,0,0,1,3,-->0,1,0,--0,0,2,0,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,3,5,--0,0,0,0,  
0,0,1,3,6,--0,0,0,0,0,0,1,3,7,--0,0,0,0,0,0,1,3,8,--  
R75)  
0,0,0,0,0,0,1,4,-->0,1,0,--0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,  
4,6,--0,0,0,0,0,0,1,4,7,--0,0,0,0,0,0,1,4,8,--  
R76)  
0,0,0,0,0,0,1,5,-->0,1,0,--0,0,0,0,4,1,--0,0,0,0,1,5,3,--0,0,0,0,4,1,--0,0,0,0,0,0,  
1,5,--0,0,0,0,0,0,1,5,7,--0,0,0,0,0,0,1,5,8,--  
R77)  
0,0,0,0,0,0,1,6,-->0,1,0,--0,0,0,0,0,5,1,--0,0,0,0,0,1,6,3,--0,0,0,0,0,1,6,4,--0,0,

0,0,0,5,1,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,6,8,--

R78)

0,0,0,0,0,0,1,7,-->0,1,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,1,7,3,--0,0,0,0,0,0,1,7,4,  
--0,0,0,0,0,0,1,7,5,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,1,7,--

R79)

0,0,0,0,0,0,2,4,-->0,0,2,0,--0,0,2,0,--0,0,0,3,0,--0,0,0,0,0,0,2,4,--0,0,0,0,0,0,2,  
4,6,--0,0,0,0,0,0,2,4,7,--0,0,0,0,0,0,2,4,8,--

R80)

0,0,0,0,0,0,2,5,-->0,0,2,0,--0,0,2,0,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,0,2,5,  
--0,0,0,0,0,0,2,5,7,--0,0,0,0,0,0,2,5,8,--

R81)

0,0,0,0,0,0,2,6,-->0,0,2,0,--0,0,2,0,--0,0,0,0,0,5,2,--0,0,0,0,0,2,6,4,--0,0,0,0,0,  
5,2,--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,2,6,8,--

R82)

0,0,0,0,0,0,2,7,-->0,0,2,0,--0,0,2,0,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,2,7,4,--0,0,0,  
0,0,0,2,7,5,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,2,7,--

R83)

0,0,0,0,0,0,3,5,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,0,4,0,--0,0,0,0,0,0,3,  
5,--0,0,0,0,0,0,3,5,7,--0,0,0,0,0,0,3,5,8,--

R84)

0,0,0,0,0,0,3,6,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,0,0,5,3,--0,0,0,0,0,5,  
3,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,6,8,--

R85)

0,0,0,0,0,0,3,7,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,0,0,0,6,3,--0,0,0,0,0,  
0,3,7,5,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,3,7,--

R86)

0,0,0,0,0,0,4,6,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--0,0,0,0,  
0,5,0,--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,6,8,--

R87)

0,0,0,0,0,0,4,7,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--0,0,0,0,  
0,0,6,4,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,4,7,--

R88)

0,0,0,0,0,0,5,7,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--  
0,0,0,0,0,5,0,--0,0,0,0,0,0,6,0,--0,0,0,0,0,0,5,7,--

R89)

0,0,0,0,0,0,6,0,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--  
0,0,0,0,0,5,0,--

R90)

0,0,0,0,0,0,6,1,-->0,1,0,--0,0,0,0,0,5,1,--0,0,0,0,0,1,6,3,--0,0,0,0,0,1,6,4,--0,0,  
0,0,0,5,1,--

R91)

0,0,0,0,0,0,6,2,-->0,0,2,0,--0,0,2,0,--0,0,0,0,0,5,2,--0,0,0,0,0,2,6,4,--0,0,0,0,0,  
5,2,--

R92)

0,0,0,0,0,0,6,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,0,0,5,3,--0,0,0,0,0,5,  
3,--

R93)

0,0,0,0,0,0,6,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--0,0,0,0,  
0,5,0,--

R94)

0,0,0,0,0,1,3,5,-->0,1,0,--0,0,2,0,--0,0,0,3,1,--0,0,0,0,0,1,3,5,--0,0,0,0,0,1,3,5,  
7,--0,0,0,0,0,1,3,5,8,--

R95)

0,0,0,0,0,1,3,6,-->0,1,0,--0,0,2,0,--0,0,0,0,1,5,3,--0,0,0,0,1,5,3,--0,0,0,0,0,1,3,  
6,--0,0,0,0,0,1,3,6,8,--

R96)

0,0,0,0,0,1,3,7,-->0,1,0,--0,0,2,0,--0,0,0,0,0,1,6,3,--0,0,0,0,0,1,3,7,5,--0,0,0,0,  
0,1,6,3,--0,0,0,0,0,1,3,7,--

R97)

0,0,0,0,0,1,4,6,-->0,1,0,--0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,0,1,4,6,--  
0,0,0,0,0,1,4,6,8,--

R98)

0,0,0,0,0,1,4,7,-->0,1,0,--0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,1,6,4,--0,0,0,0,0,1,6,  
4,--0,0,0,0,0,1,4,7,--

R99)

0,0,0,0,0,1,5,7,-->0,1,0,--0,0,0,0,4,1,--0,0,0,0,1,5,3,--0,0,0,0,4,1,--0,0,0,0,0,5,  
1,--0,0,0,0,0,1,5,7,--

R100) 0,0,0,0,0,1,6,3,-->0,1,0,--0,0,2,0,--0,0,0,0,1,5,3,--0,0,0,0,1,5,3,--

R101) 0,0,0,0,0,1,6,4,-->0,1,0,--0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--

R102)

0,0,0,0,0,2,4,6,-->0,0,2,0,--0,0,2,0,--0,0,0,3,0,--0,0,0,0,4,2,--0,0,0,0,0,2,4,6,--  
0,0,0,0,0,2,4,6,8,--

R103)

0,0,0,0,0,2,4,7,-->0,0,2,0,--0,0,2,0,--0,0,0,3,0,--0,0,0,0,0,2,6,4,--0,0,0,0,0,2,6,  
4,--0,0,0,0,0,2,4,7,--

R104)

0,0,0,0,0,2,5,7,-->0,0,2,0,--0,0,2,0,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,5,2,--  
0,0,0,0,0,2,5,7,--

R105) 0,0,0,0,0,2,6,4,-->0,0,2,0,--0,0,2,0,--0,0,0,3,0,--0,0,0,0,4,2,--

R106)

0,0,0,0,0,3,5,7,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,0,4,0,--0,0,0,0,0,5,3,  
--0,0,0,0,0,3,5,7,--

R107)

0,0,0,0,1,3,5,7,-->0,1,0,--0,0,2,0,--0,0,0,3,1,--0,0,0,0,1,5,3,--0,0,0,0,1,3,5,7,--

R108)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R109)

0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,  
0,0,1,4,--0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,1,7,--0,0,0,0,  
0,0,0,0,1,8,--0,0,0,0,0,0,0,0,1,9,--

R110)

0,0,0,0,0,0,0,0,2,-->0,0,2,0,--0,0,2,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,2,4,--  
0,0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,0,2,  
8,--0,0,0,0,0,0,0,0,2,9,--

R111)

0,0,0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,0,0,0,0,0,3,--0,0,0,  
0,0,0,0,3,5,--0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,0,3,8,--0,  
0,0,0,0,0,0,0,0,3,9,--

R112)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,0,4,8,--0,0,0,0,0,0,0,0,4,9,--

R113)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,5,0,--0,0,0,0,0,0,5,1,--0,0,0,0,0,0,5,2,--0,0,0,0,0,0,5,3,--0,0,0,0,0,0,5,0,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,0,5,8,--0,0,0,0,0,0,0,0,5,9,--

R114)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,0,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,0,6,9,--

R115)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,7,2,--0,0,0,0,0,0,0,7,3,--0,0,0,0,0,0,0,7,4,--0,0,0,0,0,0,0,7,5,--0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,0,7,9,--

R116)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,8,0,--0,0,0,0,0,0,0,0,8,1,--0,0,0,0,0,0,0,0,8,2,--0,0,0,0,0,0,0,0,8,3,--0,0,0,0,0,0,0,0,8,4,--0,0,0,0,0,0,0,0,8,5,--0,0,0,0,0,0,0,0,8,6,--0,0,0,0,0,0,0,0,8,0,--0,0,0,0,0,0,0,0,8,--

R117)

0,0,0,0,0,0,0,1,3,-->0,1,0,--0,0,2,0,--0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,1,3,5,--0,0,0,0,0,0,0,1,3,6,--0,0,0,0,0,0,0,1,3,7,--0,0,0,0,0,0,0,1,3,8,--0,0,0,0,0,0,0,1,3,9,--

R118)

0,0,0,0,0,0,0,1,4,-->0,1,0,--0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,4,6,--0,0,0,0,0,0,0,1,4,7,--0,0,0,0,0,0,0,1,4,8,--0,0,0,0,0,0,0,1,4,9,--

R119)

0,0,0,0,0,0,0,1,5,-->0,1,0,--0,0,0,0,4,1,--0,0,0,0,1,5,3,--0,0,0,0,4,1,--0,0,0,0,0,0,1,5,7,--0,0,0,0,0,0,0,1,5,8,--0,0,0,0,0,0,0,1,5,9,--

R120)

0,0,0,0,0,0,0,1,6,-->0,1,0,--0,0,0,0,0,5,1,--0,0,0,0,0,1,6,3,--0,0,0,0,0,1,6,4,--0,0,0,0,5,1,--0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,1,6,8,--0,0,0,0,0,0,0,1,6,9,--

R121)

0,0,0,0,0,0,0,1,7,-->0,1,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,1,7,3,--0,0,0,0,0,0,1,7,4,--0,0,0,0,0,0,0,1,7,5,--0,0,0,0,0,0,0,6,1,--0,0,0,0,0,0,0,1,7,--0,0,0,0,0,0,0,1,7,9,--

R122)

0,0,0,0,0,0,0,1,8,-->0,1,0,--0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,1,8,3,--0,0,0,0,0,0,0,1,8,4,--0,0,0,0,0,0,0,1,8,5,--0,0,0,0,0,0,0,1,8,6,--0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,1,8,--

R123)

0,0,0,0,0,0,0,2,4,-->0,0,2,0,--0,0,2,0,--0,0,0,3,0,--0,0,0,0,0,0,0,2,4,--0,0,0,0,0,0,0,2,4,6,--0,0,0,0,0,0,0,2,4,7,--0,0,0,0,0,0,0,2,4,8,--0,0,0,0,0,0,0,2,4,9,--

R124)

0,0,0,0,0,0,0,2,5,-->0,0,2,0,--0,0,2,0,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,2,5,7,--0,0,0,0,0,0,0,2,5,8,--0,0,0,0,0,0,0,2,5,9,--

R125)

0,0,0,0,0,0,0,2,6,-->0,0,2,0,--0,0,2,0,--0,0,0,0,0,5,2,--0,0,0,0,0,2,6,4,--0,0,0,0,0,5,2,--0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,2,6,8,--0,0,0,0,0,0,0,2,6,9,--

R126)

0,0,0,0,0,0,0,2,7,-->0,0,2,0,--0,0,2,0,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,2,7,4,--0,0,  
0,0,0,0,2,7,5,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,2,7,--0,0,0,0,0,0,2,7,9,--

R127)

0,0,0,0,0,0,0,2,8,-->0,0,2,0,--0,0,2,0,--0,0,0,0,0,0,7,2,--0,0,0,0,0,0,2,8,4,--  
0,0,0,0,0,0,2,8,5,--0,0,0,0,0,0,2,8,6,--0,0,0,0,0,0,7,2,--0,0,0,0,0,0,2,8,-

R128)

0,0,0,0,0,0,0,3,5,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,0,4,0,--0,0,0,0,0,0,  
0,3,5,--0,0,0,0,0,0,3,5,7,--0,0,0,0,0,0,3,5,8,--0,0,0,0,0,0,3,5,9,--

R129)

0,0,0,0,0,0,0,3,6,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,0,5,3,--0,0,0,0,0,  
5,3,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,6,8,--0,0,0,0,0,0,3,6,9,--

R130)

0,0,0,0,0,0,0,3,7,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,0,6,3,--0,0,0,0,  
0,0,3,7,5,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,3,7,--0,0,0,0,0,0,3,7,9,--

R131)

0,0,0,0,0,0,0,3,8,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,0,7,3,--0,0,0,  
0,0,0,0,3,8,5,--0,0,0,0,0,0,3,8,6,--0,0,0,0,0,0,7,3,--0,0,0,0,0,0,3,8,--

R132)

0,0,0,0,0,0,0,4,6,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--0,0,0,  
0,0,5,0,--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,6,8,--0,0,0,0,0,0,4,6,9,--

R133)

0,0,0,0,0,0,0,4,7,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--0,0,0,  
0,0,0,6,4,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,4,7,--0,0,0,0,0,0,4,7,9,--

R134)

0,0,0,0,0,0,0,4,8,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--0,0,0,  
0,0,0,0,7,4,--0,0,0,0,0,0,4,8,6,--0,0,0,0,0,0,7,4,--0,0,0,0,0,0,4,8,--

R135)

0,0,0,0,0,0,0,5,7,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,  
--0,0,0,0,0,5,0,--0,0,0,0,0,6,0,--0,0,0,0,0,0,5,7,--0,0,0,0,0,0,5,7,9,--

R136)

0,0,0,0,0,0,0,5,8,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,  
--0,0,0,0,0,5,0,--0,0,0,0,0,0,7,5,--0,0,0,0,0,0,7,5,--0,0,0,0,0,0,5,8,--

R137)

0,0,0,0,0,0,0,6,8,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,  
0,0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,0,--0,0,0,0,0,0,7,0,--0,0,0,0,0,0,6,8

R138)

0,0,0,0,0,0,0,7,0,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,  
0,0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,0,--

R139)

0,0,0,0,0,0,0,7,1,-->0,1,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,1,7,3,--0,0,0,0,0,0,1,7,  
4,--0,0,0,0,0,0,1,7,5,--0,0,0,0,0,0,6,1,--

R140)

0,0,0,0,0,0,0,7,2,-->0,0,2,0,--0,0,2,0,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,2,7,4,--0,0,  
0,0,0,0,2,7,5,--0,0,0,0,0,0,6,2,--

R141)

0,0,0,0,0,0,0,7,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,0,0,0,6,3,--0,0,0,0,  
0,0,3,7,5,--0,0,0,0,0,0,6,3,--

R142)

0,0,0,0,0,0,0,7,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--0,0,0,0,0,6,4,--0,0,0,0,0,6,4,--

R143)

0,0,0,0,0,0,0,7,5,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,0,--0,0,0,0,0,6,0,--

R144)

0,0,0,0,0,0,1,3,5,-->0,1,0,--0,0,2,0,--0,0,0,3,1,--0,0,0,0,0,1,3,5,--0,0,0,0,0,0,1,3,5,7,--0,0,0,0,0,1,3,5,8,--0,0,0,0,0,1,3,5,9,--

R145)

0,0,0,0,0,0,1,3,6,-->0,1,0,--0,0,2,0,--0,0,0,0,1,5,3,--0,0,0,0,1,5,3,--0,0,0,0,0,0,1,3,6,--0,0,0,0,0,1,3,6,8,--0,0,0,0,0,1,3,6,9,--

R146)

0,0,0,0,0,0,1,3,7,-->0,1,0,--0,0,2,0,--0,0,0,0,0,1,6,3,--0,0,0,0,0,1,3,7,5,--0,0,0,0,0,1,6,3,--0,0,0,0,0,1,3,7,--0,0,0,0,0,1,3,7,9,--

R147)

0,0,0,0,0,0,1,3,8,-->0,1,0,--0,0,2,0,--0,0,0,0,0,0,1,7,3,--0,0,0,0,0,0,1,3,8,5,--0,0,0,0,0,0,1,3,8,6,--0,0,0,0,0,0,1,7,3,--0,0,0,0,0,0,1,3,8,--

R148)

0,0,0,0,0,0,1,4,6,-->0,1,0,--0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,0,0,1,4,6,--0,0,0,0,0,0,1,4,6,8,--0,0,0,0,0,0,1,4,6,9,--

R149)

0,0,0,0,0,0,1,4,7,-->0,1,0,--0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,1,6,4,--0,0,0,0,0,0,1,6,4,--0,0,0,0,0,0,1,4,7,--0,0,0,0,0,0,1,4,7,9,--

R150)

0,0,0,0,0,0,1,4,8,-->0,1,0,--0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,1,7,4,--0,0,0,0,0,0,1,4,8,6,--0,0,0,0,0,0,1,7,4,--0,0,0,0,0,0,1,4,8,--

R151)

0,0,0,0,0,0,1,5,7,-->0,1,0,--0,0,0,0,4,1,--0,0,0,0,1,5,3,--0,0,0,0,4,1,--0,0,0,0,0,5,1,--0,0,0,0,0,0,1,5,7,--0,0,0,0,0,0,1,5,7,9,--

R152)

0,0,0,0,0,0,1,5,8,-->0,1,0,--0,0,0,0,4,1,--0,0,0,0,1,5,3,--0,0,0,0,4,1,--0,0,0,0,0,0,1,7,5,--0,0,0,0,0,0,1,7,5,--0,0,0,0,0,0,1,5,8,--

R153)

0,0,0,0,0,0,1,6,8,-->0,1,0,--0,0,0,0,0,5,1,--0,0,0,0,0,1,6,3,--0,0,0,0,0,1,6,4,--0,0,0,0,0,5,1,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,1,6,8,--

R154)

0,0,0,0,0,0,1,7,3,-->0,1,0,--0,0,2,0,--0,0,0,0,0,1,6,3,--0,0,0,0,0,1,3,7,5,--0,0,0,0,0,1,6,3,--

R155)

0,0,0,0,0,0,1,7,4,-->0,1,0,--0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,1,6,4,--0,0,0,0,0,1,6,4,--

R156)

0,0,0,0,0,0,1,7,5,-->0,1,0,--0,0,0,0,4,1,--0,0,0,0,1,5,3,--0,0,0,0,4,1,--0,0,0,0,0,5,1,--

R157)

0,0,0,0,0,0,2,4,6,-->0,0,2,0,--0,0,2,0,--0,0,0,3,0,--0,0,0,0,4,2,--0,0,0,0,0,0,2,4,6,--0,0,0,0,0,0,2,4,6,8,--0,0,0,0,0,0,2,4,6,9,--

R158)

0,0,0,0,0,0,2,4,7,-->0,0,2,0,--0,0,2,0,--0,0,0,3,0,--0,0,0,0,0,2,6,4,--0,0,0,0,0,2,

6,4,--0,0,0,0,0,2,4,7,--0,0,0,0,0,2,4,7,9,--  
R159)  
0,0,0,0,0,2,4,8,-->0,0,2,0,--0,0,2,0,--0,0,0,3,0,--0,0,0,0,0,2,7,4,--0,0,0,0,0,  
0,2,4,8,6,--0,0,0,0,0,2,7,4,--0,0,0,0,0,2,4,8,--  
R160)  
0,0,0,0,0,2,5,7,-->0,0,2,0,--0,0,2,0,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,5,2,  
--0,0,0,0,0,2,5,7,--0,0,0,0,0,2,5,7,9,--  
R161)  
0,0,0,0,0,2,5,8,-->0,0,2,0,--0,0,2,0,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,0,2,  
7,5,--0,0,0,0,0,2,7,5,--0,0,0,0,0,2,5,8,--  
R162)  
0,0,0,0,0,2,6,8,-->0,0,2,0,--0,0,2,0,--0,0,0,0,0,5,2,--0,0,0,0,0,2,6,4,--0,0,0,0,  
0,5,2,--0,0,0,0,0,6,2,--0,0,0,0,0,2,6,8,--  
R163)  
0,0,0,0,0,2,7,4,-->0,0,2,0,--0,0,2,0,--0,0,0,3,0,--0,0,0,0,0,2,6,4,--0,0,0,0,0,2,  
6,4,--  
R164)  
0,0,0,0,0,2,7,5,-->0,0,2,0,--0,0,2,0,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,5,2,  
--  
R165)  
0,0,0,0,0,3,5,7,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,0,4,0,--0,0,0,0,0,5,  
3,--0,0,0,0,0,3,5,7,--0,0,0,0,0,3,5,7,9,--  
R166)  
0,0,0,0,0,3,5,8,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,0,4,0,--0,0,0,0,0,0,  
3,7,5,--0,0,0,0,0,3,7,5,--0,0,0,0,0,3,5,8,--  
R167)  
0,0,0,0,0,3,6,8,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,0,0,5,3,--0,0,0,0,0,  
5,3,--0,0,0,0,0,6,3,--0,0,0,0,0,3,6,8,--  
R168)  
0,0,0,0,0,3,7,5,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,0,4,0,--0,0,0,0,0,5,  
3,--  
R169)  
0,0,0,0,0,4,6,8,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--0,0,0,  
0,0,5,0,--0,0,0,0,0,6,4,--0,0,0,0,0,4,6,8,--  
R170)  
0,0,0,0,0,1,3,5,7,-->0,1,0,--0,0,2,0,--0,0,0,3,1,--0,0,0,0,1,5,3,--0,0,0,0,0,1,3,5,  
7,--0,0,0,0,0,1,3,5,7,9,--  
R171)  
0,0,0,0,0,1,3,5,8,-->0,1,0,--0,0,2,0,--0,0,0,3,1,--0,0,0,0,0,1,3,7,5,--0,0,0,0,0,1,  
3,7,5,--0,0,0,0,0,1,3,5,8,--  
R172)  
0,0,0,0,0,1,3,6,8,-->0,1,0,--0,0,2,0,--0,0,0,0,1,5,3,--0,0,0,0,1,5,3,--0,0,0,0,0,1,  
6,3,--0,0,0,0,0,1,3,6,8,--  
R173) 0,0,0,0,0,1,3,7,5,-->0,1,0,--0,0,2,0,--0,0,0,3,1,--0,0,0,0,1,5,3,--  
R174)  
0,0,0,0,0,1,4,6,8,-->0,1,0,--0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,0,1,6,4,  
--0,0,0,0,0,1,4,6,8,--  
R175)  
0,0,0,0,0,2,4,6,8,-->0,0,2,0,--0,0,2,0,--0,0,0,3,0,--0,0,0,0,4,2,--0,0,0,0,0,2,6,4,  
--0,0,0,0,0,2,4,6,8,--



List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,: 0,1,0,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,: 0,0,1,3,: 0,0,2,0,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,: 0,0,0,1,3,:

0,0,0,1,4,: 0,0,0,2,4,: 0,0,0,3,0,: 0,0,0,3,1,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,:

0,0,0,0,0,5,: 0,0,0,0,1,3,: 0,0,0,0,1,4,: 0,0,0,0,1,5,: 0,0,0,0,2,4,: 0,0,0,0,2,5,:

0,0,0,0,3,5,: 0,0,0,0,4,0,: 0,0,0,0,4,1,: 0,0,0,0,4,2,: 0,0,0,1,3,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,:

0,0,0,0,0,0,4,: 0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,: 0,0,0,0,0,1,3,: 0,0,0,0,0,1,4,:

0,0,0,0,0,1,5,: 0,0,0,0,0,1,6,: 0,0,0,0,0,2,4,: 0,0,0,0,0,2,5,: 0,0,0,0,0,2,6,:

0,0,0,0,0,3,5,: 0,0,0,0,0,3,6,: 0,0,0,0,0,4,6,: 0,0,0,0,0,5,0,: 0,0,0,0,0,5,1,:

0,0,0,0,0,5,2,: 0,0,0,0,0,5,3,: 0,0,0,0,1,3,5,: 0,0,0,0,1,3,6,: 0,0,0,0,1,4,6,:

0,0,0,0,1,5,3,: 0,0,0,0,2,4,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:

0,0,0,0,0,0,1,3,: 0,0,0,0,0,0,1,4,: 0,0,0,0,0,0,1,5,: 0,0,0,0,0,0,1,6,:

0,0,0,0,0,0,1,7,: 0,0,0,0,0,0,2,4,: 0,0,0,0,0,0,2,5,: 0,0,0,0,0,0,2,6,:

0,0,0,0,0,0,2,7,: 0,0,0,0,0,0,3,5,: 0,0,0,0,0,0,3,6,: 0,0,0,0,0,0,3,7,:

0,0,0,0,0,0,4,6,: 0,0,0,0,0,0,4,7,: 0,0,0,0,0,0,5,7,: 0,0,0,0,0,0,6,0,:

0,0,0,0,0,0,6,1,: 0,0,0,0,0,0,6,2,: 0,0,0,0,0,0,6,3,: 0,0,0,0,0,0,6,4,:

0,0,0,0,0,1,3,5,: 0,0,0,0,0,1,3,6,: 0,0,0,0,0,1,3,7,: 0,0,0,0,0,1,4,6,:

0,0,0,0,0,1,4,7,: 0,0,0,0,0,1,5,7,: 0,0,0,0,0,1,6,3,: 0,0,0,0,0,1,6,4,:

0,0,0,0,0,2,4,6,: 0,0,0,0,0,2,4,7,: 0,0,0,0,0,2,5,7,: 0,0,0,0,0,2,6,4,:

0,0,0,0,0,3,5,7,: 0,0,0,0,1,3,5,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,:

0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,1,3,: 0,0,0,0,0,0,0,1,4,:

0,0,0,0,0,0,0,1,5,: 0,0,0,0,0,0,0,1,6,: 0,0,0,0,0,0,0,1,7,: 0,0,0,0,0,0,0,1,8,:

0,0,0,0,0,0,0,2,4,: 0,0,0,0,0,0,0,2,5,: 0,0,0,0,0,0,0,2,6,: 0,0,0,0,0,0,0,2,7,:

0,0,0,0,0,0,0,2,8,: 0,0,0,0,0,0,0,3,5,: 0,0,0,0,0,0,0,3,6,: 0,0,0,0,0,0,0,3,7,:

0,0,0,0,0,0,0,3,8,: 0,0,0,0,0,0,0,4,6,: 0,0,0,0,0,0,0,4,7,: 0,0,0,0,0,0,0,4,8,:

0,0,0,0,0,0,0,5,7,: 0,0,0,0,0,0,0,5,8,: 0,0,0,0,0,0,0,6,8,: 0,0,0,0,0,0,0,7,0,:

0,0,0,0,0,0,0,7,1,: 0,0,0,0,0,0,0,7,2,: 0,0,0,0,0,0,0,7,3,: 0,0,0,0,0,0,0,7,4,:

0,0,0,0,0,0,0,7,5,: 0,0,0,0,0,0,1,3,5,: 0,0,0,0,0,0,1,3,6,: 0,0,0,0,0,0,1,3,7,:

0,0,0,0,0,0,1,3,8,: 0,0,0,0,0,0,1,4,6,: 0,0,0,0,0,0,1,4,7,: 0,0,0,0,0,0,1,4,8,:

0,0,0,0,0,0,1,5,7,: 0,0,0,0,0,0,1,5,8,: 0,0,0,0,0,0,1,6,8,: 0,0,0,0,0,0,1,7,3,:

0,0,0,0,0,0,1,7,4,: 0,0,0,0,0,0,1,7,5,: 0,0,0,0,0,0,2,4,6,: 0,0,0,0,0,0,2,4,7,:

0,0,0,0,0,0,2,4,8,: 0,0,0,0,0,0,2,5,7,: 0,0,0,0,0,0,2,5,8,: 0,0,0,0,0,0,2,6,8,:

0,0,0,0,0,0,2,7,4,: 0,0,0,0,0,0,2,7,5,: 0,0,0,0,0,0,3,5,7,: 0,0,0,0,0,0,3,5,8,:

0,0,0,0,0,0,3,6,8,: 0,0,0,0,0,0,3,7,5,: 0,0,0,0,0,0,4,6,8,: 0,0,0,0,0,1,3,5,7,:

0,0,0,0,0,1,3,5,8,: 0,0,0,0,0,1,3,6,8,: 0,0,0,0,0,1,3,7,5,: 0,0,0,0,0,1,4,6,8,:

0,0,0,0,0,2,4,6,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,:

0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,:

0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,0,1,3,: 0,0,0,0,0,0,0,0,1,4,:

0,0,0,0,0,0,0,0,1,5,: 0,0,0,0,0,0,0,0,1,6,: 0,0,0,0,0,0,0,0,1,7,:

0,0,0,0,0,0,0,0,1,8, : 0,0,0,0,0,0,0,0,1,9, : 0,0,0,0,0,0,0,0,2,4, :  
 0,0,0,0,0,0,0,0,2,5, : 0,0,0,0,0,0,0,0,2,6, : 0,0,0,0,0,0,0,0,2,7, :  
 0,0,0,0,0,0,0,0,2,8, : 0,0,0,0,0,0,0,0,2,9, : 0,0,0,0,0,0,0,0,3,5, :  
 0,0,0,0,0,0,0,0,3,6, : 0,0,0,0,0,0,0,0,3,7, : 0,0,0,0,0,0,0,0,3,8, :  
 0,0,0,0,0,0,0,0,3,9, : 0,0,0,0,0,0,0,0,4,6, : 0,0,0,0,0,0,0,0,4,7, :  
 0,0,0,0,0,0,0,0,4,8, : 0,0,0,0,0,0,0,0,4,9, : 0,0,0,0,0,0,0,0,5,7, :  
 0,0,0,0,0,0,0,0,5,8, : 0,0,0,0,0,0,0,0,5,9, : 0,0,0,0,0,0,0,0,6,8, :  
 0,0,0,0,0,0,0,0,6,9, : 0,0,0,0,0,0,0,0,7,9, : 0,0,0,0,0,0,0,0,8,0, :  
 0,0,0,0,0,0,0,0,8,1, : 0,0,0,0,0,0,0,0,8,2, : 0,0,0,0,0,0,0,0,8,3, :  
 0,0,0,0,0,0,0,0,8,4, : 0,0,0,0,0,0,0,0,8,5, : 0,0,0,0,0,0,0,0,8,6, :  
 0,0,0,0,0,0,0,1,3,5, : 0,0,0,0,0,0,0,1,3,6, : 0,0,0,0,0,0,0,1,3,7, :  
 0,0,0,0,0,0,0,1,3,8, : 0,0,0,0,0,0,0,1,3,9, : 0,0,0,0,0,0,0,1,4,6, :  
 0,0,0,0,0,0,0,1,4,7, : 0,0,0,0,0,0,0,1,4,8, : 0,0,0,0,0,0,0,1,4,9, :  
 0,0,0,0,0,0,0,1,5,7, : 0,0,0,0,0,0,0,1,5,8, : 0,0,0,0,0,0,0,1,5,9, :  
 0,0,0,0,0,0,0,1,6,8, : 0,0,0,0,0,0,0,1,6,9, : 0,0,0,0,0,0,0,1,7,9, :  
 0,0,0,0,0,0,0,1,8,3, : 0,0,0,0,0,0,0,1,8,4, : 0,0,0,0,0,0,0,1,8,5, :  
 0,0,0,0,0,0,0,1,8,6, : 0,0,0,0,0,0,0,2,4,6, : 0,0,0,0,0,0,0,2,4,7, :  
 0,0,0,0,0,0,0,2,4,8, : 0,0,0,0,0,0,0,2,4,9, : 0,0,0,0,0,0,0,2,5,7, :  
 0,0,0,0,0,0,0,2,5,8, : 0,0,0,0,0,0,0,2,5,9, : 0,0,0,0,0,0,0,2,6,8, :  
 0,0,0,0,0,0,0,2,6,9, : 0,0,0,0,0,0,0,2,7,9, : 0,0,0,0,0,0,0,2,8,4, :  
 0,0,0,0,0,0,0,2,8,5, : 0,0,0,0,0,0,0,2,8,6, : 0,0,0,0,0,0,0,3,5,7, :  
 0,0,0,0,0,0,0,3,5,8, : 0,0,0,0,0,0,0,3,5,9, : 0,0,0,0,0,0,0,3,6,8, :  
 0,0,0,0,0,0,0,3,6,9, : 0,0,0,0,0,0,0,3,7,9, : 0,0,0,0,0,0,0,3,8,5, :  
 0,0,0,0,0,0,0,3,8,6, : 0,0,0,0,0,0,0,4,6,8, : 0,0,0,0,0,0,0,4,6,9, :  
 0,0,0,0,0,0,0,4,7,9, : 0,0,0,0,0,0,0,4,8,6, : 0,0,0,0,0,0,0,5,7,9, :  
 0,0,0,0,0,0,1,3,5,7, : 0,0,0,0,0,0,1,3,5,8, : 0,0,0,0,0,0,1,3,5,9, :  
 0,0,0,0,0,0,1,3,6,8, : 0,0,0,0,0,0,1,3,6,9, : 0,0,0,0,0,0,1,3,7,9, :  
 0,0,0,0,0,0,1,3,8,5, : 0,0,0,0,0,0,1,3,8,6, : 0,0,0,0,0,0,1,4,6,8, :  
 0,0,0,0,0,0,1,4,6,9, : 0,0,0,0,0,0,1,4,7,9, : 0,0,0,0,0,0,1,4,8,6, :  
 0,0,0,0,0,0,1,5,7,9, : 0,0,0,0,0,0,2,4,6,8, : 0,0,0,0,0,0,2,4,6,9, :  
 0,0,0,0,0,0,2,4,7,9, : 0,0,0,0,0,0,2,4,8,6, : 0,0,0,0,0,0,2,5,7,9, :  
 0,0,0,0,0,0,3,5,7,9, : 0,0,0,0,0,1,3,5,7,9, :

Number new nodes in level n is given by : 1,2,4,6,10,16,26,42,68,110,

-----Class

1128-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][100][101][102][120]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--

R3) 0,1,-->0,1,0,--0,1,2,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R5) 0,0,1,-->0,1,0,--0,0,1,2,--0,1,--

R6) 0,0,2,-->0,0,2,0,--0,0,2,0,--0,1,2,--

R7) 0,1,0,-->

R8) 0,1,2,-->0,1,2,--

R9) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R10) 0,0,0,1,-->0,1,0,--0,0,0,1,2,--0,0,1,--0,0,2,--

R11) 0,0,0,2,-->0,0,2,0,--0,0,2,0,--0,0,1,2,--0,1,--  
R12) 0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,1,2,--  
R13) 0,0,1,2,-->0,0,1,2,--0,1,--  
R14) 0,0,2,0,-->0,1,0,--  
R15)  
0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--  
R16) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R17) 0,0,0,0,2,-->0,0,2,0,--0,0,2,0,--0,0,0,1,2,--0,0,1,--0,0,2,--  
R18) 0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,1,2,--0,1,--  
R19) 0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--0,1,2,--  
R20) 0,0,0,1,2,-->0,0,0,1,2,--0,0,1,--0,0,2,--  
R21) 0,0,0,3,0,-->0,0,2,0,--0,0,2,0,--  
R22) 0,0,0,3,1,-->0,1,0,--0,1,0,--  
R23)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R24)  
0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,2,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,  
4,--  
R25)  
0,0,0,0,0,2,-->0,0,2,0,--0,0,2,0,--0,0,0,0,1,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R26)  
0,0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,1,2,--0,0,1,--0,0,2,--  
R27)  
0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--0,0,1,2,--0,  
1,--  
R28)  
0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,  
0,0,0,5,0,--0,1,2,--  
R29) 0,0,0,0,1,2,-->0,0,0,0,1,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R30) 0,0,0,0,4,0,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--  
R31) 0,0,0,0,4,1,-->0,1,0,--0,0,2,0,--0,0,2,0,--  
R32) 0,0,0,0,4,2,-->0,0,2,0,--0,0,2,0,--0,1,0,--  
R33)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R34)  
0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,  
--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R35)  
0,0,0,0,0,0,2,-->0,0,2,0,--0,0,2,0,--0,0,0,0,0,1,2,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,  
0,3,--0,0,0,0,4,--  
R36)  
0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,0,1,2,--0,0,0,1,--0,0,0,  
2,--0,0,0,3,--  
R37)  
0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--0,0,0,1,2,  
--0,0,1,--0,0,2,--  
R38)

0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,0,--0,0,1,2,--0,1,--

R39)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,0,--0,1,2,--

R40)

0,0,0,0,0,1,2,-->0,0,0,0,0,1,2,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R41) 0,0,0,0,0,5,0,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--

R42) 0,0,0,0,0,5,1,-->0,1,0,--0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--

R43) 0,0,0,0,0,5,2,-->0,0,2,0,--0,0,2,0,--0,0,2,0,--0,0,2,0,--

R44) 0,0,0,0,0,5,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,1,0,--

R45)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R46)

0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R47)

0,0,0,0,0,0,0,2,-->0,0,2,0,--0,0,2,0,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R48)

0,0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,0,0,1,2,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R49)

0,0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--0,0,0,0,1,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R50)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,0,--0,0,0,1,2,--0,0,1,--0,0,2,--

R51)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,0,--0,0,1,2,--0,1,--

R52)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,7,2,--0,0,0,0,0,0,0,7,3,--0,0,0,0,0,0,0,7,4,--0,0,0,0,0,0,0,7,5,--0,0,0,0,0,0,0,7,0,--0,1,2,--

R53)

0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--

R54)

0,0,0,0,0,0,6,0,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,0,--

R55)

0,0,0,0,0,0,6,1,-->0,1,0,--0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--

R56) 0,0,0,0,0,0,6,2,-->0,0,2,0,--0,0,2,0,--0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--

R57) 0,0,0,0,0,0,6,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,2,0,--0,0,2,0,--

R58)

0,0,0,0,0,0,6,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--0,1,0,--

R59)

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,9,--

R60)

0,0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R61)

0,0,0,0,0,0,0,0,2,-->0,0,2,0,--0,0,2,0,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R62)

0,0,0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R63)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--0,0,0,0,0,1,2,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R64)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,0,--0,0,0,0,1,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R65)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,0,--0,0,0,1,2,--0,0,1,--0,0,2,--

R66)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,7,2,--0,0,0,0,0,0,7,3,--0,0,0,0,0,0,7,4,--0,0,0,0,0,0,7,5,--0,0,0,0,0,0,7,0,--0,0,1,2,--0,1,--

R67)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,8,0,--0,0,0,0,0,0,0,8,1,--0,0,0,0,0,0,0,8,2,--0,0,0,0,0,0,0,8,3,--0,0,0,0,0,0,0,8,4,--0,0,0,0,0,0,0,8,5,--0,0,0,0,0,0,0,8,6,--0,0,0,0,0,0,0,8,0,--0,1,2,--

R68)

0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--

R69)

0,0,0,0,0,0,0,7,0,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,0,--

R70)

0,0,0,0,0,0,0,7,1,-->0,1,0,--0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,5,3,--0,0,0,0,5,0,--

R71)

0,0,0,0,0,0,0,7,2,-->0,0,2,0,--0,0,2,0,--0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--

R72)

0,0,0,0,0,0,0,7,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,3,0,--0,0,0,3,1,--0,0,3,0,--

R73)

0,0,0,0,0,0,0,7,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--0,0,2,0,--0,0,2,0,--

R74)

0,0,0,0,0,0,0,7,5,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--

--0,0,0,0,0,5,0,--0,1,0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,: 0,1,0,: 0,1,2,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,: 0,0,1,2,: 0,0,2,0,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,: 0,0,0,1,2,:  
0,0,0,3,0,: 0,0,0,3,1,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,:  
0,0,0,0,0,5,: 0,0,0,0,1,2,: 0,0,0,0,4,0,: 0,0,0,0,4,1,: 0,0,0,0,4,2,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,:

0,0,0,0,0,0,4,: 0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,: 0,0,0,0,0,1,2,: 0,0,0,0,0,5,0,:  
0,0,0,0,0,5,1,: 0,0,0,0,0,5,2,: 0,0,0,0,0,5,3,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,:  
0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:

0,0,0,0,0,0,1,2,: 0,0,0,0,0,0,6,0,: 0,0,0,0,0,0,6,1,: 0,0,0,0,0,0,6,2,:

0,0,0,0,0,0,6,3,: 0,0,0,0,0,0,6,4,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,:  
0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,1,2,: 0,0,0,0,0,0,0,7,0,:

0,0,0,0,0,0,0,7,1,: 0,0,0,0,0,0,0,7,2,: 0,0,0,0,0,0,0,7,3,: 0,0,0,0,0,0,0,7,4,:  
0,0,0,0,0,0,0,7,5,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,:

0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,:

0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,0,1,2,: 0,0,0,0,0,0,0,0,8,0,:

0,0,0,0,0,0,0,0,8,1,: 0,0,0,0,0,0,0,0,8,2,: 0,0,0,0,0,0,0,0,8,3,:

0,0,0,0,0,0,0,0,8,4,: 0,0,0,0,0,0,0,0,8,5,: 0,0,0,0,0,0,0,0,8,6,:

Number new nodes in level n is given by : 1,2,5,6,8,10,12,14,16,18,

-----Class

1129-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][100][101][102][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--

R3) 0,1,-->0,1,0,--0,1,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R5) 0,0,1,-->0,1,0,--0,0,1,--0,0,2,--

R6) 0,0,2,-->0,1,0,--0,0,2,1,--0,0,2,--

R7) 0,1,0,-->

R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R9) 0,0,0,1,-->0,1,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R10) 0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,2,--0,0,0,3,--

R11) 0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,3,--

R12) 0,0,2,1,-->0,1,0,--

R13)

0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--

0,0,0,0,0,5,--

R14) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R15) 0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R16) 0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,3,--0,0,0,0,4,--

R17) 0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,4,--

R18) 0,0,0,3,2,-->0,1,0,--0,0,2,1,--

R19)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R20)

0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,5,--

R21)

0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,5,--

R22)

0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,5,--

R23)

0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,4,--0,0,0,0,5,--

R24)

0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,5,--

R25) 0,0,0,0,4,3,-->0,1,0,--0,0,2,1,--0,0,0,0,3,2,--

R26)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R27)

0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R28)

0,0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R29)

0,0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R30)

0,0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R31)

0,0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,5,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R32)

0,0,0,0,0,0,6,-->0,1,0,--0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--0,0,0,0,0,0,6,--

R33) 0,0,0,0,0,5,4,-->0,1,0,--0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,4,3,--

R34)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R35)

0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,  
0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R36)

0,0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,  
0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R37)

0,0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,  
--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R38)

0,0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,4,--0,  
0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R39)

0,0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,  
0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R40)

0,0,0,0,0,0,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,  
0,0,0,0,6,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R41)

0,0,0,0,0,0,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,  
0,0,0,0,6,5,--0,0,0,0,0,0,7,6,--0,0,0,0,0,0,7,--

R42)

0,0,0,0,0,0,6,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--

R43)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R44)

0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,  
,--0,0,0,0,0,0,0,8,--

R45)

0,0,0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,  
0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,  
,0,0,0,0,8,--

R46)

0,0,0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,  
0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,  
,8,--

R47)

0,0,0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,0,4,  
--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R48)

0,0,0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,  
0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R49)

0,0,0,0,0,0,0,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,  
0,0,0,0,0,6,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R50)



0,0,0,0,0,0,0,0,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,  
0,0,0,0,0,0,6,5,--0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--  
R51)

0,0,0,0,0,0,0,0,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,  
0,0,0,0,0,0,6,5,--0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,8,7,--0,0,0,0,0,0,0,8,--  
R52)

0,0,0,0,0,0,0,7,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,  
0,0,0,0,0,0,6,5,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,: 0,1,0,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,: 0,0,2,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,: 0,0,0,3,2,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,:

0,0,0,0,0,5,: 0,0,0,0,4,3,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,:

0,0,0,0,0,0,4,: 0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,: 0,0,0,0,0,5,4,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:

0,0,0,0,0,0,6,5,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,:

0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,7,6,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,:

0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,:

0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,0,8,7,:

Number new nodes in level n is given by : 1,2,4,5,6,7,8,9,10,11,

-----Class

1130-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][100][101][102][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--

R3) 0,1,-->0,1,0,--0,1,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R5) 0,0,1,-->0,1,0,--0,0,1,--0,0,1,3,--

R6) 0,0,2,-->0,0,2,0,--0,1,0,--0,0,2,--

R7) 0,1,0,-->

R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R9) 0,0,0,1,-->0,1,0,--0,0,0,1,--0,0,0,1,3,--0,0,0,1,4,--

R10) 0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,2,--0,0,0,2,4,--

R11) 0,0,0,3,-->0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,3,--

R12) 0,0,1,3,-->0,1,0,--0,1,0,--0,0,1,3,--

R13) 0,0,2,0,-->0,1,0,--

R14)

0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--  
R15) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--  
R16) 0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,2,--0,0,0,0,2,4,--0,0,0,0,2,5,--  
R17) 0,0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,3,--0,0,0,0,3,5,--  
R18) 0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,4,--  
R19) 0,0,0,1,3,-->0,1,0,--0,1,0,--0,0,0,1,3,--0,0,0,1,3,5,--  
R20) 0,0,0,1,4,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,0,1,4,--  
R21) 0,0,0,2,4,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,0,2,4,--  
R22) 0,0,0,3,0,-->0,0,2,0,--0,1,0,--  
R23)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R24)  
0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,  
--0,0,0,0,0,1,6,--  
R25)  
0,0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,0,2,--0,0,0,0,0,2,4,--0,0,0,0,0,2,5,--0,0,  
0,0,0,2,6,--  
R26)  
0,0,0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,3,--0,0,0,0,0,3,5,--0,0,0,0,  
0,3,6,--  
R27)  
0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,4,--0,0,0,0,0,  
4,6,--  
R28)  
0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,  
0,5,--  
R29) 0,0,0,0,1,3,-->0,1,0,--0,1,0,--0,0,0,0,1,3,--0,0,0,0,1,3,5,--0,0,0,0,1,3,6,--  
R30) 0,0,0,0,1,4,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,1,4,--0,0,0,0,1,4,6,--  
R31) 0,0,0,0,1,5,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,1,5,--  
R32) 0,0,0,0,2,4,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,2,4,--0,0,0,0,2,4,6,--  
R33) 0,0,0,0,2,5,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,2,5,--  
R34) 0,0,0,0,3,5,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,3,5,--  
R35) 0,0,0,0,4,0,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--  
R36) 0,0,0,1,3,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,1,3,5,--  
R37)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R38)  
0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,  
0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--  
R39)  
0,0,0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,2,4,--0,0,0,0,0,0,2,  
5,--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,2,7,--  
R40)  
0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,3,--0,0,0,0,0,0,3,5,--0,  
0,0,0,0,0,3,6,--0,0,0,0,0,0,3,7,--  
R41)  
0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,4,--0,0,0,

0,0,0,4,6,--0,0,0,0,0,4,7,--

R42)

0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,  
0,0,0,5,--0,0,0,0,0,5,7,--

R43)

0,0,0,0,0,6,-->0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,  
0,--0,1,0,--0,0,0,0,0,6,--

R44)

0,0,0,0,0,1,3,-->0,1,0,--0,1,0,--0,0,0,0,0,1,3,--0,0,0,0,0,1,3,5,--0,0,0,0,0,1,3,6,  
--0,0,0,0,0,1,3,7,--

R45)

0,0,0,0,0,1,4,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,1,4,--0,0,0,0,0,1,4,6,--0,0,0,  
0,0,1,4,7,--

R46)

0,0,0,0,0,1,5,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,1,5,--0,0,0,0,0,1,  
5,7,--

R47)

0,0,0,0,0,1,6,-->0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,1,6,  
--

R48)

0,0,0,0,0,2,4,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,2,4,--0,0,0,0,0,2,4,6,--0,0,0,  
0,0,2,4,7,--

R49)

0,0,0,0,0,2,5,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,2,5,--0,0,0,0,0,2,5,  
7,--

R50)

0,0,0,0,0,2,6,-->0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,2,6,--

R51)

0,0,0,0,0,3,5,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,3,5,--0,0,0,0,0,3,  
5,7,--

R52)

0,0,0,0,0,3,6,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,3,6,--

R53)

0,0,0,0,0,4,6,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,4,6,  
--

R54) 0,0,0,0,0,5,0,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--

R55) 0,0,0,0,1,3,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,1,3,5,--0,0,0,0,1,3,5,7,--

R56) 0,0,0,0,1,3,6,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,1,3,6,--

R57) 0,0,0,0,1,4,6,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,1,4,6,--

R58) 0,0,0,0,2,4,6,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,2,4,6,--

R59)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,  
,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R60)

0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,1,4,  
--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--0,0,0,0,0,0,1,8,--

R61)

0,0,0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,2,4,--0,0,0,0,  
0,0,0,2,5,--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,2,7,--0,0,0,0,0,0,2,8,--

R62)

0,0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,3,  
5,--0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,3,8,--

R63)

0,0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,4,--0,  
0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,4,8,--

R64)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,  
0,0,0,0,0,5,--0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,5,8,--

R65)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,  
2,0,--0,1,0,--0,0,0,0,0,0,6,--0,0,0,0,0,0,6,8,--

R66)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,  
0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,7,--

R67)

0,0,0,0,0,0,1,3,-->0,1,0,--0,1,0,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,3,5,--0,0,0,0,0,  
0,1,3,6,--0,0,0,0,0,0,1,3,7,--0,0,0,0,0,0,1,3,8,--

R68)

0,0,0,0,0,0,1,4,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,4,6,--  
0,0,0,0,0,0,1,4,7,--0,0,0,0,0,0,1,4,8,--

R69)

0,0,0,0,0,0,1,5,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,1,5,--0,0,0,0,  
0,0,1,5,7,--0,0,0,0,0,0,1,5,8,--

R70)

0,0,0,0,0,0,1,6,-->0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,  
1,6,--0,0,0,0,0,0,1,6,8,--

R71)

0,0,0,0,0,0,1,7,-->0,1,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,  
0,--0,0,0,0,0,0,1,7,--

R72)

0,0,0,0,0,0,2,4,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,2,4,--0,0,0,0,0,0,2,4,6,--  
0,0,0,0,0,0,2,4,7,--0,0,0,0,0,0,2,4,8,--

R73)

0,0,0,0,0,0,2,5,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,2,5,--0,0,0,0,0,  
0,2,5,7,--0,0,0,0,0,0,2,5,8,--

R74)

0,0,0,0,0,0,2,6,-->0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,2,6,  
--0,0,0,0,0,0,2,6,8,--

R75)

0,0,0,0,0,0,2,7,-->0,0,2,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,  
0,0,0,0,0,2,7,--

R76)

0,0,0,0,0,0,3,5,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,3,5,--0,0,0,0,  
0,0,3,5,7,--0,0,0,0,0,0,3,5,8,--

R77)

0,0,0,0,0,0,3,6,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,3,6,  
--0,0,0,0,0,0,3,6,8,--

R78)

0,0,0,0,0,0,3,7,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,

0,0,0,0,3,7,--  
R79)  
0,0,0,0,0,0,4,6,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,  
4,6,--0,0,0,0,0,0,4,6,8,--  
R80)  
0,0,0,0,0,0,4,7,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,  
0,0,0,0,0,4,7,--  
R81)  
0,0,0,0,0,0,5,7,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,  
0,--0,0,0,0,0,0,5,7,--  
R82)  
0,0,0,0,0,0,6,0,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--  
R83)  
0,0,0,0,0,1,3,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,1,3,5,--0,0,0,0,0,1,3,5,7,--0,  
0,0,0,0,1,3,5,8,--  
R84)  
0,0,0,0,0,1,3,6,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,1,3,6,--0,0,0,0,0,1,  
3,6,8,--  
R85)  
0,0,0,0,0,1,3,7,-->0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,1,3,7,--  
R86)  
0,0,0,0,0,1,4,6,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,1,4,6,--0,0,0,0,0,1,  
4,6,8,--  
R87)  
0,0,0,0,0,1,4,7,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,1,4,7,--  
R88)  
0,0,0,0,0,1,5,7,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,1,5,7,--  
R89)  
0,0,0,0,0,2,4,6,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,2,4,6,--0,0,0,0,0,2,  
4,6,8,--  
R90)  
0,0,0,0,0,2,4,7,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,2,4,7,--  
R91)  
0,0,0,0,0,2,5,7,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,2,5,7,--  
R92)  
0,0,0,0,0,3,5,7,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,3,5,7,--  
R93) 0,0,0,0,1,3,5,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,1,3,5,7,--  
R94)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
0,0,6,--0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--  
R95)  
0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,  
0,0,1,4,--0,0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,0,1,7,--0,0,0,0,  
0,0,0,0,1,8,--0,0,0,0,0,0,0,0,1,9,--  
R96)  
0,0,0,0,0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,2,4,--0,  
0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,0,2,8,  
,--0,0,0,0,0,0,0,0,2,9,--  
R97)

0,0,0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,3,5,--0,0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,0,3,8,--0,0,0,0,0,0,0,0,3,9,--

R98)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,0,4,8,--0,0,0,0,0,0,0,0,4,9,--

R99)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,0,5,8,--0,0,0,0,0,0,0,0,5,9,--

R100)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,0,6,9,--

R101)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,7,9,--

R102)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,0,--0,0,0,0,0,0,7,0,--0,0,0,0,0,6,0,--0,0,0,0,5,0,--0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,0,8,--

R103)

0,0,0,0,0,0,0,1,3,-->0,1,0,--0,1,0,--0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,1,3,5,--0,0,0,0,0,0,1,3,6,--0,0,0,0,0,0,0,1,3,7,--0,0,0,0,0,0,0,1,3,8,--0,0,0,0,0,0,0,1,3,9,--

R104)

0,0,0,0,0,0,0,1,4,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,1,4,--0,0,0,0,0,0,0,1,4,6,--0,0,0,0,0,0,0,1,4,7,--0,0,0,0,0,0,0,1,4,8,--0,0,0,0,0,0,0,1,4,9,--

R105)

0,0,0,0,0,0,0,1,5,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,5,7,--0,0,0,0,0,0,0,1,5,8,--0,0,0,0,0,0,0,1,5,9,--

R106)

0,0,0,0,0,0,0,1,6,-->0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,6,8,--0,0,0,0,0,0,0,1,6,9,--

R107)

0,0,0,0,0,0,0,1,7,-->0,1,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,1,7,--0,0,0,0,0,0,0,1,7,9,--

R108)

0,0,0,0,0,0,0,1,8,-->0,1,0,--0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,1,8,--

R109)

0,0,0,0,0,0,0,2,4,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,2,4,--0,0,0,0,0,0,0,2,4,6,--0,0,0,0,0,0,0,2,4,7,--0,0,0,0,0,0,0,2,4,8,--0,0,0,0,0,0,0,2,4,9,--

R110)

0,0,0,0,0,0,0,2,5,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,2,5,7,--0,0,0,0,0,0,0,2,5,8,--0,0,0,0,0,0,0,2,5,9,--

R111)

0,0,0,0,0,0,0,2,6,-->0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,2,6,8,--0,0,0,0,0,0,0,2,6,9,--

R112)

0,0,0,0,0,0,0,2,7,-->0,0,2,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--

0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,2,7,9,--  
R113)  
0,0,0,0,0,0,0,2,8,-->0,0,2,0,--0,1,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,  
0,2,0,--0,1,0,--0,0,0,0,0,0,2,8,--  
R114)  
0,0,0,0,0,0,0,3,5,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,3,5,--0,0,  
0,0,0,0,0,3,5,7,--0,0,0,0,0,0,3,5,8,--0,0,0,0,0,0,3,5,9,--  
R115)  
0,0,0,0,0,0,0,3,6,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,  
3,6,--0,0,0,0,0,0,3,6,8,--0,0,0,0,0,0,3,6,9,--  
R116)  
0,0,0,0,0,0,0,3,7,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,  
0,0,0,0,0,0,3,7,--0,0,0,0,0,0,3,7,9,--  
R117)  
0,0,0,0,0,0,0,3,8,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,  
0,--0,1,0,--0,0,0,0,0,0,3,8,--  
R118)  
0,0,0,0,0,0,0,4,6,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,  
0,0,4,6,--0,0,0,0,0,0,4,6,8,--0,0,0,0,0,0,4,6,9,--  
R119)  
0,0,0,0,0,0,0,4,7,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--  
0,0,0,0,0,0,4,7,--0,0,0,0,0,0,4,7,9,--  
R120)  
0,0,0,0,0,0,0,4,8,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,  
0,--0,1,0,--0,0,0,0,0,0,4,8,--  
R121)  
0,0,0,0,0,0,0,5,7,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,  
1,0,--0,0,0,0,0,0,5,7,--0,0,0,0,0,0,5,7,9,--  
R122)  
0,0,0,0,0,0,0,5,8,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,  
0,2,0,--0,1,0,--0,0,0,0,0,0,5,8,--  
R123)  
0,0,0,0,0,0,0,6,8,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,  
0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,6,8,--  
R124)  
0,0,0,0,0,0,0,7,0,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,  
0,2,0,--0,1,0,--  
R125)  
0,0,0,0,0,0,1,3,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,1,3,5,--0,0,0,0,0,0,1,3,5,  
7,--0,0,0,0,0,0,1,3,5,8,--0,0,0,0,0,0,1,3,5,9,--  
R126)  
0,0,0,0,0,0,1,3,6,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,1,3,6,--0,0,0,0,  
0,0,1,3,6,8,--0,0,0,0,0,0,1,3,6,9,--  
R127)  
0,0,0,0,0,0,1,3,7,-->0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,1,3,  
7,--0,0,0,0,0,0,1,3,7,9,--  
R128)  
0,0,0,0,0,0,1,3,8,-->0,1,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,  
0,0,0,0,0,1,3,8,--  
R129)

0,0,0,0,0,0,1,4,6,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,1,4,6,--0,0,0,0,  
0,0,1,4,6,8,--0,0,0,0,0,0,1,4,6,9,--

R130)

0,0,0,0,0,0,1,4,7,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,1,4,7,  
--0,0,0,0,0,0,1,4,7,9,--

R131)

0,0,0,0,0,0,1,4,8,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,  
0,0,0,1,4,8,--

R132)

0,0,0,0,0,0,1,5,7,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,1,5,  
7,--0,0,0,0,0,0,1,5,7,9,--

R133)

0,0,0,0,0,0,1,5,8,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,  
0,0,0,1,5,8,--

R134)

0,0,0,0,0,0,1,6,8,-->0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,  
0,0,0,0,0,1,6,8,--

R135)

0,0,0,0,0,0,2,4,6,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,2,4,6,--0,0,0,0,  
0,0,2,4,6,8,--0,0,0,0,0,0,2,4,6,9,--

R136)

0,0,0,0,0,0,2,4,7,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,2,4,7,  
--0,0,0,0,0,0,2,4,7,9,--

R137)

0,0,0,0,0,0,2,4,8,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,  
0,0,0,2,4,8,--

R138)

0,0,0,0,0,0,2,5,7,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,2,5,7,  
--0,0,0,0,0,0,2,5,7,9,--

R139)

0,0,0,0,0,0,2,5,8,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,  
0,0,2,5,8,--

R140)

0,0,0,0,0,0,2,6,8,-->0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,  
0,0,0,2,6,8,--

R141)

0,0,0,0,0,0,3,5,7,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,3,5,  
7,--0,0,0,0,0,0,3,5,7,9,--

R142)

0,0,0,0,0,0,3,5,8,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,  
0,0,0,3,5,8,--

R143)

0,0,0,0,0,0,3,6,8,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,  
0,0,0,3,6,8,--

R144)

0,0,0,0,0,0,4,6,8,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,  
0,0,0,0,0,4,6,8,--

R145)

0,0,0,0,0,1,3,5,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,1,3,5,7,--0,0,0,0,0,  
1,3,5,7,9,--



R146)

0,0,0,0,0,1,3,5,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,1,3,5,8,--

R147)

0,0,0,0,0,1,3,6,8,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,1,3,6,8,--

R148)

0,0,0,0,0,1,4,6,8,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,1,4,6,8,--

R149)

0,0,0,0,0,2,4,6,8,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,2,4,6,8,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,: 0,1,0,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,: 0,0,1,3,: 0,0,2,0,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,: 0,0,0,1,3,:

0,0,0,1,4,: 0,0,0,2,4,: 0,0,0,3,0,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,:

0,0,0,0,0,5,: 0,0,0,0,1,3,: 0,0,0,0,1,4,: 0,0,0,0,1,5,: 0,0,0,0,2,4,: 0,0,0,0,2,5,:

0,0,0,0,3,5,: 0,0,0,0,4,0,: 0,0,0,1,3,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,:

0,0,0,0,0,0,4,: 0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,: 0,0,0,0,0,1,3,: 0,0,0,0,0,1,4,:

0,0,0,0,0,1,5,: 0,0,0,0,0,1,6,: 0,0,0,0,0,2,4,: 0,0,0,0,0,2,5,: 0,0,0,0,0,2,6,:

0,0,0,0,0,3,5,: 0,0,0,0,0,3,6,: 0,0,0,0,0,4,6,: 0,0,0,0,0,5,0,: 0,0,0,0,1,3,5,:

0,0,0,0,1,3,6,: 0,0,0,0,1,4,6,: 0,0,0,0,2,4,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:

0,0,0,0,0,0,1,3,: 0,0,0,0,0,0,1,4,: 0,0,0,0,0,0,1,5,: 0,0,0,0,0,0,1,6,:

0,0,0,0,0,0,1,7,: 0,0,0,0,0,0,2,4,: 0,0,0,0,0,0,2,5,: 0,0,0,0,0,0,2,6,:

0,0,0,0,0,0,2,7,: 0,0,0,0,0,0,3,5,: 0,0,0,0,0,0,3,6,: 0,0,0,0,0,0,3,7,:

0,0,0,0,0,0,4,6,: 0,0,0,0,0,0,4,7,: 0,0,0,0,0,0,5,7,: 0,0,0,0,0,0,6,0,:

0,0,0,0,0,1,3,5,: 0,0,0,0,0,1,3,6,: 0,0,0,0,0,1,3,7,: 0,0,0,0,0,1,4,6,:

0,0,0,0,0,1,4,7,: 0,0,0,0,0,1,5,7,: 0,0,0,0,0,2,4,6,: 0,0,0,0,0,2,4,7,:

0,0,0,0,0,2,5,7,: 0,0,0,0,0,3,5,7,: 0,0,0,0,1,3,5,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,:

0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,1,3,: 0,0,0,0,0,0,0,1,4,:

0,0,0,0,0,0,0,1,5,: 0,0,0,0,0,0,0,1,6,: 0,0,0,0,0,0,0,1,7,: 0,0,0,0,0,0,0,1,8,:

0,0,0,0,0,0,0,2,4,: 0,0,0,0,0,0,0,2,5,: 0,0,0,0,0,0,0,2,6,: 0,0,0,0,0,0,0,2,7,:

0,0,0,0,0,0,0,2,8,: 0,0,0,0,0,0,0,3,5,: 0,0,0,0,0,0,0,3,6,: 0,0,0,0,0,0,0,3,7,:

0,0,0,0,0,0,0,3,8,: 0,0,0,0,0,0,0,4,6,: 0,0,0,0,0,0,0,4,7,: 0,0,0,0,0,0,0,4,8,:

0,0,0,0,0,0,0,5,7,: 0,0,0,0,0,0,0,5,8,: 0,0,0,0,0,0,0,6,8,: 0,0,0,0,0,0,0,7,0,:

0,0,0,0,0,0,1,3,5,: 0,0,0,0,0,0,1,3,6,: 0,0,0,0,0,0,1,3,7,: 0,0,0,0,0,0,1,3,8,:

0,0,0,0,0,0,1,4,6,: 0,0,0,0,0,0,1,4,7,: 0,0,0,0,0,0,1,4,8,: 0,0,0,0,0,0,1,5,7,:

0,0,0,0,0,0,1,5,8,: 0,0,0,0,0,0,1,6,8,: 0,0,0,0,0,0,2,4,6,: 0,0,0,0,0,0,2,4,7,:

0,0,0,0,0,0,2,4,8,: 0,0,0,0,0,0,2,5,7,: 0,0,0,0,0,0,2,5,8,: 0,0,0,0,0,0,2,6,8,:

0,0,0,0,0,0,3,5,7,: 0,0,0,0,0,0,3,5,8,: 0,0,0,0,0,0,3,6,8,: 0,0,0,0,0,0,4,6,8,:

0,0,0,0,0,1,3,5,7,: 0,0,0,0,0,1,3,5,8,: 0,0,0,0,0,1,3,6,8,: 0,0,0,0,0,1,4,6,8,:

0,0,0,0,0,2,4,6,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,0,5,:

0,0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,0,8,:

0,0,0,0,0,0,0,0,0,9 : 0,0,0,0,0,0,0,0,1,3 : 0,0,0,0,0,0,0,0,1,4 :  
 0,0,0,0,0,0,0,0,1,5 : 0,0,0,0,0,0,0,0,1,6 : 0,0,0,0,0,0,0,0,1,7 :  
 0,0,0,0,0,0,0,0,1,8 : 0,0,0,0,0,0,0,0,1,9 : 0,0,0,0,0,0,0,0,2,4 :  
 0,0,0,0,0,0,0,0,2,5 : 0,0,0,0,0,0,0,0,2,6 : 0,0,0,0,0,0,0,0,2,7 :  
 0,0,0,0,0,0,0,0,2,8 : 0,0,0,0,0,0,0,0,2,9 : 0,0,0,0,0,0,0,0,3,5 :  
 0,0,0,0,0,0,0,0,3,6 : 0,0,0,0,0,0,0,0,3,7 : 0,0,0,0,0,0,0,0,3,8 :  
 0,0,0,0,0,0,0,0,3,9 : 0,0,0,0,0,0,0,0,4,6 : 0,0,0,0,0,0,0,0,4,7 :  
 0,0,0,0,0,0,0,0,4,8 : 0,0,0,0,0,0,0,0,4,9 : 0,0,0,0,0,0,0,0,5,7 :  
 0,0,0,0,0,0,0,0,5,8 : 0,0,0,0,0,0,0,0,5,9 : 0,0,0,0,0,0,0,0,6,8 :  
 0,0,0,0,0,0,0,0,6,9 : 0,0,0,0,0,0,0,0,7,9 : 0,0,0,0,0,0,0,0,8,0 :  
 0,0,0,0,0,0,0,1,3,5 : 0,0,0,0,0,0,0,1,3,6 : 0,0,0,0,0,0,0,1,3,7 :  
 0,0,0,0,0,0,0,1,3,8 : 0,0,0,0,0,0,0,1,3,9 : 0,0,0,0,0,0,0,1,4,6 :  
 0,0,0,0,0,0,0,1,4,7 : 0,0,0,0,0,0,0,1,4,8 : 0,0,0,0,0,0,0,1,4,9 :  
 0,0,0,0,0,0,0,1,5,7 : 0,0,0,0,0,0,0,1,5,8 : 0,0,0,0,0,0,0,1,5,9 :  
 0,0,0,0,0,0,0,1,6,8 : 0,0,0,0,0,0,0,1,6,9 : 0,0,0,0,0,0,0,1,7,9 :  
 0,0,0,0,0,0,0,2,4,6 : 0,0,0,0,0,0,0,2,4,7 : 0,0,0,0,0,0,0,2,4,8 :  
 0,0,0,0,0,0,0,2,4,9 : 0,0,0,0,0,0,0,2,5,7 : 0,0,0,0,0,0,0,2,5,8 :  
 0,0,0,0,0,0,0,2,5,9 : 0,0,0,0,0,0,0,2,6,8 : 0,0,0,0,0,0,0,2,6,9 :  
 0,0,0,0,0,0,0,2,7,9 : 0,0,0,0,0,0,0,3,5,7 : 0,0,0,0,0,0,0,3,5,8 :  
 0,0,0,0,0,0,0,3,5,9 : 0,0,0,0,0,0,0,3,6,8 : 0,0,0,0,0,0,0,3,6,9 :  
 0,0,0,0,0,0,0,3,7,9 : 0,0,0,0,0,0,0,4,6,8 : 0,0,0,0,0,0,0,4,6,9 :  
 0,0,0,0,0,0,0,4,7,9 : 0,0,0,0,0,0,0,5,7,9 : 0,0,0,0,0,0,1,3,5,7 :  
 0,0,0,0,0,0,1,3,5,8 : 0,0,0,0,0,0,1,3,5,9 : 0,0,0,0,0,0,1,3,6,8 :  
 0,0,0,0,0,0,1,3,6,9 : 0,0,0,0,0,0,1,3,7,9 : 0,0,0,0,0,0,1,4,6,8 :  
 0,0,0,0,0,0,1,4,6,9 : 0,0,0,0,0,0,1,4,7,9 : 0,0,0,0,0,0,1,5,7,9 :  
 0,0,0,0,0,0,2,4,6,8 : 0,0,0,0,0,0,2,4,6,9 : 0,0,0,0,0,0,2,4,7,9 :  
 0,0,0,0,0,0,2,5,7,9 : 0,0,0,0,0,0,3,5,7,9 : 0,0,0,0,0,1,3,5,7,9 :  
 Number new nodes in level n is given by : 1,2,4,6,9,14,22,35,56,90,

-----Class  
 1131-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][100][101][110][120]]$   
 -----  
 --  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--  
 R3) 0,1,-->0,1,0,--0,1,2,--  
 R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
 R5) 0,0,1,-->0,0,1,0,--0,1,0,--0,1,--  
 R6) 0,0,2,-->0,0,1,--0,0,1,--0,1,2,--  
 R7) 0,1,0,-->0,1,0,--0,1,--  
 R8) 0,1,2,-->0,1,2,--  
 R9) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
 R10) 0,0,0,1,-->0,0,0,1,0,--0,0,1,0,--0,0,1,--0,0,2,--  
 R11) 0,0,0,2,-->0,0,0,1,--0,0,0,1,--0,1,0,--0,1,--  
 R12) 0,0,0,3,-->0,0,0,2,--0,0,0,3,1,--0,0,0,2,--0,1,2,--  
 R13) 0,0,1,0,-->0,0,1,0,--0,0,1,--0,0,2,--  
 R14)  
 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--

0,0,0,0,0,5,--  
R15) 0,0,0,0,1,-->0,0,0,0,1,0,--0,0,0,1,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R16) 0,0,0,0,2,-->0,0,0,0,1,--0,0,0,0,1,--0,0,1,0,--0,0,1,--0,0,2,--  
R17) 0,0,0,0,3,-->0,0,0,0,2,--0,0,0,0,3,1,--0,0,0,0,2,--0,1,0,--0,1,--  
R18) 0,0,0,0,4,-->0,0,0,0,3,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,3,--0,1,2,--  
R19) 0,0,0,1,0,-->0,0,0,1,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R20) 0,0,0,3,1,-->0,0,0,1,--0,0,1,0,--0,1,0,--0,1,--  
R21)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R22)  
0,0,0,0,0,1,-->0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,  
0,0,0,4,--  
R23)  
0,0,0,0,0,2,-->0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,1,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,  
--  
R24)  
0,0,0,0,0,3,-->0,0,0,0,0,2,--0,0,0,0,0,3,1,--0,0,0,0,0,2,--0,0,1,0,--0,0,1,--0,0,2,  
--  
R25)  
0,0,0,0,0,4,-->0,0,0,0,0,3,--0,0,0,0,0,4,1,--0,0,0,0,0,4,2,--0,0,0,0,0,3,--0,1,0,--  
0,1,--  
R26)  
0,0,0,0,0,5,-->0,0,0,0,0,4,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,  
0,0,4,--0,1,2,--  
R27) 0,0,0,0,1,0,-->0,0,0,0,1,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R28) 0,0,0,0,3,1,-->0,0,0,0,1,--0,0,0,1,0,--0,0,1,0,--0,0,1,--0,0,2,--  
R29) 0,0,0,0,4,1,-->0,0,0,0,2,--0,0,0,1,--0,0,0,1,--0,1,0,--0,1,--  
R30) 0,0,0,0,4,2,-->0,0,0,0,3,1,--0,0,0,0,3,1,--0,0,1,0,--0,1,0,--0,1,--  
R31)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R32)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,  
0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R33)  
0,0,0,0,0,0,2,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,1,0,--0,0,0,0,1,--0,0,0,0,  
2,--0,0,0,0,3,--0,0,0,0,4,--  
R34)  
0,0,0,0,0,0,3,-->0,0,0,0,0,0,2,--0,0,0,0,0,0,3,1,--0,0,0,0,0,0,2,--0,0,0,1,0,--0,0,  
0,1,--0,0,0,2,--0,0,0,3,--  
R35)  
0,0,0,0,0,0,4,-->0,0,0,0,0,0,3,--0,0,0,0,0,0,4,1,--0,0,0,0,0,0,4,2,--0,0,0,0,0,0,3,  
--0,0,1,0,--0,0,1,--0,0,2,--  
R36)  
0,0,0,0,0,0,5,-->0,0,0,0,0,0,4,--0,0,0,0,0,0,5,1,--0,0,0,0,0,0,5,2,--0,0,0,0,0,0,5,  
3,--0,0,0,0,0,4,--0,1,0,--0,1,--  
R37)  
0,0,0,0,0,0,6,-->0,0,0,0,0,0,5,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,  
3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,5,--0,1,2,--

R38)

0,0,0,0,0,1,0,-->0,0,0,0,0,1,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R39)

0,0,0,0,0,3,1,-->0,0,0,0,0,1,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R40)

0,0,0,0,0,4,1,-->0,0,0,0,0,2,--0,0,0,0,1,--0,0,0,0,1,--0,0,1,0,--0,0,1,--0,0,2,--

R41)

0,0,0,0,0,4,2,-->0,0,0,0,0,3,1,--0,0,0,0,0,3,1,--0,0,0,1,0,--0,0,1,0,--0,0,1,--0,0,2,--

R42)

0,0,0,0,0,5,1,-->0,0,0,0,0,3,--0,0,0,0,2,--0,0,0,0,3,1,--0,0,0,0,2,--0,1,0,--0,1,--

R43)

0,0,0,0,0,5,2,-->0,0,0,0,0,4,1,--0,0,0,0,0,4,1,--0,0,0,1,--0,0,0,1,--0,1,0,--0,1,--

R44)

0,0,0,0,0,5,3,-->0,0,0,0,0,4,2,--0,0,0,0,0,5,3,1,--0,0,0,0,0,4,2,--0,0,1,0,--0,1,0,--0,1,--

R45)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R46)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R47)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R48)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,0,2,--0,0,0,0,1,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R49)

0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,1,--0,0,0,0,0,0,0,4,2,--0,0,0,0,0,0,0,3,--0,0,0,1,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R50)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,1,--0,0,0,0,0,0,0,5,2,--0,0,0,0,0,0,0,5,3,--0,0,0,0,0,0,0,4,--0,0,1,0,--0,0,1,--0,0,2,--

R51)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,1,--0,0,0,0,0,0,0,6,2,--0,0,0,0,0,0,0,6,3,--0,0,0,0,0,0,0,6,4,--0,0,0,0,0,0,0,5,--0,1,0,--0,1,--

R52)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,7,2,--0,0,0,0,0,0,0,7,3,--0,0,0,0,0,0,0,7,4,--0,0,0,0,0,0,0,7,5,--0,0,0,0,0,0,0,6,--0,1,2,--

R53)

0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R54)

0,0,0,0,0,0,3,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R55)

0,0,0,0,0,0,4,1,-->0,0,0,0,0,0,2,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,1,0,--0,0,0,1,  
--0,0,0,2,--0,0,0,3,--

R56)

0,0,0,0,0,0,4,2,-->0,0,0,0,0,0,3,1,--0,0,0,0,0,0,3,1,--0,0,0,0,1,0,--0,0,0,1,0,--0,  
0,0,1,--0,0,0,2,--0,0,0,3,--

R57)

0,0,0,0,0,0,5,1,-->0,0,0,0,0,0,3,--0,0,0,0,0,2,--0,0,0,0,0,3,1,--0,0,0,0,0,2,--0,0,  
1,0,--0,0,1,--0,0,2,--

R58)

0,0,0,0,0,0,5,2,-->0,0,0,0,0,0,4,1,--0,0,0,0,0,0,4,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,  
1,0,--0,0,1,--0,0,2,--

R59)

0,0,0,0,0,0,5,3,-->0,0,0,0,0,0,4,2,--0,0,0,0,0,0,5,3,1,--0,0,0,0,0,0,4,2,--0,0,0,1,  
0,--0,0,1,0,--0,0,1,--0,0,2,--

R60)

0,0,0,0,0,0,6,1,-->0,0,0,0,0,0,4,--0,0,0,0,0,3,--0,0,0,0,0,4,1,--0,0,0,0,0,4,2,--0,  
0,0,0,0,3,--0,1,0,--0,1,--

R61)

0,0,0,0,0,0,6,2,-->0,0,0,0,0,0,5,1,--0,0,0,0,0,0,5,1,--0,0,0,0,2,--0,0,0,0,3,1,--0,  
0,0,0,2,--0,1,0,--0,1,--

R62)

0,0,0,0,0,0,6,3,-->0,0,0,0,0,0,5,2,--0,0,0,0,0,0,6,3,1,--0,0,0,0,0,0,5,2,--0,0,0,1,  
--0,0,0,1,--0,1,0,--0,1,--

R63)

0,0,0,0,0,0,6,4,-->0,0,0,0,0,0,5,3,--0,0,0,0,0,0,6,4,1,--0,0,0,0,0,0,6,4,2,--0,0,0,  
0,0,0,5,3,--0,0,1,0,--0,1,0,--0,1,--

R64)

0,0,0,0,0,5,3,1,-->0,0,0,0,0,3,1,--0,0,0,0,1,--0,0,0,1,0,--0,0,1,0,--0,0,1,--0,0,2,  
--

R65)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R66)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,--0,  
0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
,6,--0,0,0,0,0,0,0,7,--

R67)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,0,--0,0,  
0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,  
,0,0,6,--

R68)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,0,0,2,--  
0,0,0,0,0,1,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,  
,--

R69)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,1,--0,0,0,0,0,0,0,0,4,2,  
--0,0,0,0,0,0,0,0,3,--0,0,0,0,1,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,-  
-

R70)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,1,--0,0,0,0,0,0,0,0,5,2,  
--0,0,0,0,0,0,0,0,5,3,--0,0,0,0,0,0,0,0,4,--0,0,0,1,0,--0,0,0,1,--0,0,0,2,--0,0,0,3  
,--

R71)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,1,--0,0,0,0,0,0,0,0,6,2,  
--0,0,0,0,0,0,0,0,6,3,--0,0,0,0,0,0,0,0,6,4,--0,0,0,0,0,0,0,0,5,--0,0,1,0,--0,0,1,-  
-0,0,2,--

R72)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,0,7,2,  
--0,0,0,0,0,0,0,0,7,3,--0,0,0,0,0,0,0,0,7,4,--0,0,0,0,0,0,0,0,7,5,--0,0,0,0,0,0,0,0,  
,6,--0,1,0,--0,1,--

R73)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,1,--0,0,0,0,0,0,0,0,8,2,  
--0,0,0,0,0,0,0,0,8,3,--0,0,0,0,0,0,0,0,8,4,--0,0,0,0,0,0,0,0,8,5,--0,0,0,0,0,0,0,0,  
,8,6,--0,0,0,0,0,0,0,0,7,--0,1,2,--

R74)

0,0,0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,-  
-

R75)

0,0,0,0,0,0,0,0,3,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,  
1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--

R76)

0,0,0,0,0,0,0,0,4,1,-->0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,1,0,  
--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R77)

0,0,0,0,0,0,0,0,4,2,-->0,0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,1,0,--0,0,0,  
0,1,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R78)

0,0,0,0,0,0,0,0,5,1,-->0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,1,--0,0,0,0,0,  
0,2,--0,0,0,0,1,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--

R79)

0,0,0,0,0,0,0,0,5,2,-->0,0,0,0,0,0,0,0,4,1,--0,0,0,0,0,0,0,0,4,1,--0,0,0,0,0,0,1,--0,0,0,0,  
0,1,--0,0,0,0,1,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--

R80)

0,0,0,0,0,0,0,0,5,3,-->0,0,0,0,0,0,0,0,4,2,--0,0,0,0,0,0,0,0,5,3,1,--0,0,0,0,0,0,0,0,4,2,--  
0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--

R81)

0,0,0,0,0,0,0,0,6,1,-->0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,1,--0,0,0,0,0,  
0,4,2,--0,0,0,0,0,0,3,--0,0,1,0,--0,0,1,--0,0,2,--

R82)

0,0,0,0,0,0,0,0,6,2,-->0,0,0,0,0,0,0,0,5,1,--0,0,0,0,0,0,0,0,5,1,--0,0,0,0,0,0,2,--0,0,0,0,  
0,3,1,--0,0,0,0,0,0,2,--0,0,1,0,--0,0,1,--0,0,2,--

R83)

0,0,0,0,0,0,0,0,6,3,-->0,0,0,0,0,0,0,0,5,2,--0,0,0,0,0,0,0,0,6,3,1,--0,0,0,0,0,0,0,0,5,2,--  
0,0,0,0,1,--0,0,0,0,1,--0,0,1,0,--0,0,1,--0,0,2,--

R84)

0,0,0,0,0,0,0,0,6,4,-->0,0,0,0,0,0,0,0,5,3,--0,0,0,0,0,0,0,0,6,4,1,--0,0,0,0,0,0,0,0,6,4,2,  
--0,0,0,0,0,0,0,0,5,3,--0,0,0,0,1,0,--0,0,1,0,--0,0,1,--0,0,2,--

R85)

0,0,0,0,0,0,0,7,1,-->0,0,0,0,0,0,0,5,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,1,--0,0,0,0,0,0,5,2,--0,0,0,0,0,0,5,3,--0,0,0,0,0,0,4,--0,1,0,--0,1,--

R86)

0,0,0,0,0,0,0,7,2,-->0,0,0,0,0,0,0,6,1,--0,0,0,0,0,0,0,6,1,--0,0,0,0,0,3,--0,0,0,0,0,4,1,--0,0,0,0,0,4,2,--0,0,0,0,0,3,--0,1,0,--0,1,--

R87)

0,0,0,0,0,0,0,7,3,-->0,0,0,0,0,0,0,6,2,--0,0,0,0,0,0,0,7,3,1,--0,0,0,0,0,0,0,6,2,--0,0,0,0,2,--0,0,0,0,3,1,--0,0,0,0,2,--0,1,0,--0,1,--

R88)

0,0,0,0,0,0,0,7,4,-->0,0,0,0,0,0,0,6,3,--0,0,0,0,0,0,0,7,4,1,--0,0,0,0,0,0,0,7,4,2,--0,0,0,0,0,0,6,3,--0,0,0,1,--0,0,0,1,--0,1,0,--0,1,--

R89)

0,0,0,0,0,0,0,7,5,-->0,0,0,0,0,0,0,6,4,--0,0,0,0,0,0,0,7,5,1,--0,0,0,0,0,0,0,7,5,2,--0,0,0,0,0,0,7,5,3,--0,0,0,0,0,0,6,4,--0,0,1,0,--0,1,0,--0,1,--

R90)

0,0,0,0,0,0,5,3,1,-->0,0,0,0,0,0,3,1,--0,0,0,0,0,1,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R91)

0,0,0,0,0,0,6,3,1,-->0,0,0,0,0,0,4,1,--0,0,0,0,0,2,--0,0,0,0,1,--0,0,0,0,1,--0,0,1,0,--0,0,1,--0,0,2,--

R92)

0,0,0,0,0,0,6,4,1,-->0,0,0,0,0,0,4,2,--0,0,0,0,0,3,1,--0,0,0,0,0,3,1,--0,0,0,1,0,--0,0,1,0,--0,0,1,--0,0,2,--

R93)

0,0,0,0,0,0,6,4,2,-->0,0,0,0,0,0,5,3,1,--0,0,0,0,0,0,5,3,1,--0,0,0,0,1,--0,0,0,1,0,--0,0,1,0,--0,0,1,--0,0,2,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,: 0,1,0,: 0,1,2,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,: 0,0,1,0,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,: 0,0,0,1,0,:  
0,0,0,3,1,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,:

0,0,0,0,0,5,: 0,0,0,0,1,0,: 0,0,0,0,3,1,: 0,0,0,0,4,1,: 0,0,0,0,4,2,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,:

0,0,0,0,0,0,4,: 0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,: 0,0,0,0,0,1,0,: 0,0,0,0,0,3,1,:

0,0,0,0,0,4,1,: 0,0,0,0,0,4,2,: 0,0,0,0,0,5,1,: 0,0,0,0,0,5,2,: 0,0,0,0,0,5,3,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:

0,0,0,0,0,0,1,0,: 0,0,0,0,0,0,3,1,: 0,0,0,0,0,0,4,1,: 0,0,0,0,0,0,4,2,:

0,0,0,0,0,0,5,1,: 0,0,0,0,0,0,5,2,: 0,0,0,0,0,0,5,3,: 0,0,0,0,0,0,6,1,:

0,0,0,0,0,0,6,2,: 0,0,0,0,0,0,6,3,: 0,0,0,0,0,0,6,4,: 0,0,0,0,0,5,3,1,:

LEN=9) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,0,6,:

0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,1,0,0,0,3,1,:

0,0,0,0,0,0,0,4,1,0,0,4,2,0,5,1,0,5,2,0,5,3,0,6,1,0,6,2,0,6,3,0,6,4,0,7,1,0,7,2,0,7,3,0,7,4,0,7,5,0,5,3,1,0,6,3,1,:

0,0,0,0,0,0,0,6,4,0,7,1,0,7,2,0,7,3,0,7,4,0,7,5,0,5,3,1,0,6,3,1,:

0,0,0,0,0,0,0,7,4,0,7,5,0,5,3,1,0,6,3,1,:

0,0,0,0,0,0,6,4,1, : 0,0,0,0,0,0,6,4,2, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, :  
 0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :  
 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,1,0, : 0,0,0,0,0,0,0,0,3,1, :  
 0,0,0,0,0,0,0,0,4,1, : 0,0,0,0,0,0,0,0,4,2, : 0,0,0,0,0,0,0,0,5,1, :  
 0,0,0,0,0,0,0,0,5,2, : 0,0,0,0,0,0,0,0,5,3, : 0,0,0,0,0,0,0,0,6,1, :  
 0,0,0,0,0,0,0,0,6,2, : 0,0,0,0,0,0,0,0,6,3, : 0,0,0,0,0,0,0,0,6,4, :  
 0,0,0,0,0,0,0,0,7,1, : 0,0,0,0,0,0,0,0,7,2, : 0,0,0,0,0,0,0,0,7,3, :  
 0,0,0,0,0,0,0,0,7,4, : 0,0,0,0,0,0,0,0,7,5, : 0,0,0,0,0,0,0,0,8,1, :  
 0,0,0,0,0,0,0,0,8,2, : 0,0,0,0,0,0,0,0,8,3, : 0,0,0,0,0,0,0,0,8,4, :  
 0,0,0,0,0,0,0,0,8,5, : 0,0,0,0,0,0,0,0,8,6, : 0,0,0,0,0,0,0,5,3,1, :  
 0,0,0,0,0,0,0,6,3,1, : 0,0,0,0,0,0,0,6,4,1, : 0,0,0,0,0,0,0,6,4,2, :  
 0,0,0,0,0,0,0,7,3,1, : 0,0,0,0,0,0,0,7,4,1, : 0,0,0,0,0,0,0,7,4,2, :  
 0,0,0,0,0,0,0,7,5,1, : 0,0,0,0,0,0,0,7,5,2, : 0,0,0,0,0,0,0,7,5,3, :  
 Number new nodes in level n is given by : 1,2,5,5,7,10,14,20,29,42,

-----Class

1132-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][100][101][110][201]]$

-----

--

Rules of  $T[L]$ :

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,0, --0,0,1, --0,0,2, --
- R3) 0,1, -->0,1, --0,1, --
- R4) 0,0,0, -->0,0,0,0, --0,0,0,1, --0,0,0,2, --0,0,0,3, --
- R5) 0,0,1, -->0,0,1, --0,0,1, --0,0,2, --
- R6) 0,0,2, -->0,1, --0,0,1, --0,0,2, --
- R7) 0,0,0,0, -->0,0,0,0,0, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --
- R8) 0,0,0,1, -->0,0,0,1, --0,0,0,1, --0,0,0,2, --0,0,0,3, --
- R9) 0,0,0,2, -->0,0,1, --0,0,0,1, --0,0,0,2, --0,0,0,3, --
- R10) 0,0,0,3, -->0,1, --0,0,1, --0,0,0,2, --0,0,0,3, --
- R11) 0,0,0,0,0, -->0,0,0,0,0,0, --0,0,0,0,0,1, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5, --
- R12) 0,0,0,0,1, -->0,0,0,0,1, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --
- R13) 0,0,0,0,2, -->0,0,0,1, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --
- R14) 0,0,0,0,3, -->0,0,1, --0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --
- R15) 0,0,0,0,4, -->0,1, --0,0,1, --0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --
- R16) 0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,0,0,0,0,0,1, --0,0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --
- R17) 0,0,0,0,0,1, -->0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5, --
- R18) 0,0,0,0,0,2, -->0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5, --
- R19)



0,0,0,0,0,3,-->0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R20)

0,0,0,0,0,4,-->0,0,1,--0,0,0,1,--0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R21)

0,0,0,0,0,5,-->0,1,--0,0,1,--0,0,0,2,--0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R22)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R23)

0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R24)

0,0,0,0,0,0,2,-->0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R25)

0,0,0,0,0,0,3,-->0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R26)

0,0,0,0,0,0,4,-->0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R27)

0,0,0,0,0,0,5,-->0,0,1,--0,0,0,1,--0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R28)

0,0,0,0,0,0,6,-->0,1,--0,0,1,--0,0,0,2,--0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R29)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R30)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R31)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R32)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R33)

0,0,0,0,0,0,0,4,-->0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R34)

0,0,0,0,0,0,0,5,-->0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R35)

0,0,0,0,0,0,0,6,-->0,0,1,--0,0,0,1,--0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R36)

0,0,0,0,0,0,0,7,-->0,1,--0,0,1,--0,0,0,2,--0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,0,5,  
--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R37)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R38)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,  
0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,  
,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R39)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R40)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,  
0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,  
,0,0,7,--0,0,0,0,0,0,0,0,8,--

R41)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,  
,--0,0,0,0,0,0,0,0,8,--

R42)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,  
0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,  
,0,0,0,0,8,--

R43)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,  
,8,--

R44)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,  
0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R45)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,  
5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1, : 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,1, : 0,0,0,2, : 0,0,0,3,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, :  
0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :  
0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, :

LEN=8) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,3, :  
0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :

LEN=9) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :

0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,:  
 0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,2,:  
 0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,:  
 0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,:  
 0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,3,4,5,6,7,8,9,10,

-----Class

1133-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][100][101][110][210]]$

-----

--

Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,0, --0,0,1, --0,0,2, --
- R3) 0,1, -->0,1, --0,1, --
- R4) 0,0,0, -->0,0,0,0, --0,0,0,1, --0,0,0,2, --0,0,0,3, --
- R5) 0,0,1, -->0,0,1, --0,0,1, --0,0,2, --
- R6) 0,0,2, -->0,0,1, --0,1, --0,0,2, --
- R7) 0,0,0,0, -->0,0,0,0,0, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --
- R8) 0,0,0,1, -->0,0,0,1, --0,0,0,1, --0,0,0,2, --0,0,0,3, --
- R9) 0,0,0,2, -->0,0,0,1, --0,0,1, --0,0,0,2, --0,0,0,3, --
- R10) 0,0,0,3, -->0,0,0,2, --0,0,1, --0,1, --0,0,0,3, --
- R11)  
 0,0,0,0,0, -->0,0,0,0,0,0, --0,0,0,0,0,1, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --  
 0,0,0,0,0,5, --
- R12) 0,0,0,0,1, -->0,0,0,0,1, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --
- R13) 0,0,0,0,2, -->0,0,0,0,1, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --
- R14) 0,0,0,0,3, -->0,0,0,0,2, --0,0,0,0,1, --0,0,1, --0,0,0,0,3, --0,0,0,0,4, --
- R15) 0,0,0,0,4, -->0,0,0,0,3, --0,0,0,0,2, --0,0,1, --0,1, --0,0,0,0,4, --
- R16)  
 0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,0,0,0,0,0,1, --0,0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,  
 0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --
- R17)  
 0,0,0,0,0,1, -->0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4,  
 --0,0,0,0,0,5, --
- R18)  
 0,0,0,0,0,2, -->0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --  
 0,0,0,0,0,5, --
- R19)  
 0,0,0,0,0,3, -->0,0,0,0,0,2, --0,0,0,0,0,1, --0,0,0,0,1, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,  
 0,0,0,0,5, --
- R20)  
 0,0,0,0,0,4, -->0,0,0,0,0,3, --0,0,0,0,0,2, --0,0,0,0,1, --0,0,1, --0,0,0,0,0,4, --0,0,0,0,0,  
 5, --
- R21)  
 0,0,0,0,0,5, -->0,0,0,0,0,4, --0,0,0,0,0,3, --0,0,0,0,2, --0,0,1, --0,1, --0,0,0,0,0,5, --
- R22)  
 0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,1, --0,0,0,0,0,0,0,2, --0,0,0,0,0,0,0,

0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R23)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,  
0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R24)  
0,0,0,0,0,0,2,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R25)  
0,0,0,0,0,0,3,-->0,0,0,0,0,0,2,--0,0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,0,3,--0,0,0,0,  
0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R26)  
0,0,0,0,0,0,4,-->0,0,0,0,0,0,3,--0,0,0,0,0,0,2,--0,0,0,0,1,--0,0,0,1,--0,0,0,0,0,0,4,  
--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R27)  
0,0,0,0,0,0,5,-->0,0,0,0,0,0,4,--0,0,0,0,0,0,3,--0,0,0,0,2,--0,0,0,1,--0,0,1,--0,0,0,  
0,0,0,5,--0,0,0,0,0,0,6,--  
R28)  
0,0,0,0,0,0,6,-->0,0,0,0,0,0,5,--0,0,0,0,0,0,4,--0,0,0,0,3,--0,0,0,2,--0,0,1,--0,1,--  
0,0,0,0,0,0,6,--  
R29)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--  
R30)  
0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,  
0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R31)  
0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R32)  
0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,0,3,  
--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R33)  
0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,  
0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R34)  
0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,3,--0,0,0,0,0,2,--0,0,0,0,0,1,--0,0,  
0,1,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R35)  
0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,4,--0,0,0,0,0,3,--0,0,0,0,2,--0,0,  
0,1,--0,0,1,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R36)  
0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,5,--0,0,0,0,0,4,--0,0,0,0,3,--0,0,  
0,2,--0,0,1,--0,1,--0,0,0,0,0,0,0,7,--  
R37)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--  
R38)  
0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,

0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R39)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R40)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R41)

0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R42)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,2,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R43)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,3,--0,0,0,0,0,2,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R44)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,4,--0,0,0,0,0,3,--0,0,0,0,0,2,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R45)

0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,5,--0,0,0,0,0,4,--0,0,0,0,0,3,--0,0,0,0,2,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,0,0,8,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,: 0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,:

0,0,0,0,0,0,4,: 0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,:

0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,:

0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,:

0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,3,4,5,6,7,8,9,10,

-----Class

1134-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][100][101][120][201]]$

- 
- 
- Rules of  $T[L]$ :
- R1)  $0, -- \rightarrow 0, 0, -- 0, 1, --$
  - R2)  $0, 0, -- \rightarrow 0, 0, 0, -- 0, 0, 1, -- 0, 0, 2, --$
  - R3)  $0, 1, -- \rightarrow 0, 1, 0, -- 0, 1, 2, --$
  - R4)  $0, 0, 0, -- \rightarrow 0, 0, 0, 0, -- 0, 0, 0, 1, -- 0, 0, 0, 2, -- 0, 0, 0, 3, --$
  - R5)  $0, 0, 1, -- \rightarrow 0, 0, 1, 0, -- 0, 1, 0, -- 0, 1, --$
  - R6)  $0, 0, 2, -- \rightarrow 0, 1, 0, -- 0, 0, 1, -- 0, 1, 2, --$
  - R7)  $0, 1, 0, -- \rightarrow 0, 1, 0, -- 0, 1, --$
  - R8)  $0, 1, 2, -- \rightarrow 0, 1, 2, --$
  - R9)  $0, 0, 0, 0, -- \rightarrow 0, 0, 0, 0, 0, -- 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 2, -- 0, 0, 0, 0, 3, -- 0, 0, 0, 0, 4, --$
  - R10)  $0, 0, 0, 1, -- \rightarrow 0, 0, 0, 1, 0, -- 0, 0, 1, 0, -- 0, 0, 1, -- 0, 0, 2, --$
  - R11)  $0, 0, 0, 2, -- \rightarrow 0, 0, 1, 0, -- 0, 0, 0, 1, -- 0, 1, 0, -- 0, 1, --$
  - R12)  $0, 0, 0, 3, -- \rightarrow 0, 1, 0, -- 0, 0, 1, -- 0, 0, 0, 2, -- 0, 1, 2, --$
  - R13)  $0, 0, 1, 0, -- \rightarrow 0, 0, 1, 0, -- 0, 0, 1, -- 0, 0, 2, --$
  - R14)
  - $0, 0, 0, 0, 0, -- \rightarrow 0, 0, 0, 0, 0, 0, -- 0, 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 0, 2, -- 0, 0, 0, 0, 0, 3, -- 0, 0, 0, 0, 0, 4, --$
  - $0, 0, 0, 0, 0, 5, --$
  - R15)  $0, 0, 0, 0, 1, -- \rightarrow 0, 0, 0, 0, 1, 0, -- 0, 0, 0, 1, 0, -- 0, 0, 0, 1, -- 0, 0, 0, 2, -- 0, 0, 0, 3, --$
  - R16)  $0, 0, 0, 0, 2, -- \rightarrow 0, 0, 0, 1, 0, -- 0, 0, 0, 0, 1, -- 0, 0, 1, 0, -- 0, 0, 1, -- 0, 0, 2, --$
  - R17)  $0, 0, 0, 0, 3, -- \rightarrow 0, 0, 1, 0, -- 0, 0, 0, 1, -- 0, 0, 0, 0, 2, -- 0, 1, 0, -- 0, 1, --$
  - R18)  $0, 0, 0, 0, 4, -- \rightarrow 0, 1, 0, -- 0, 0, 1, -- 0, 0, 0, 2, -- 0, 0, 0, 0, 3, -- 0, 1, 2, --$
  - R19)  $0, 0, 0, 1, 0, -- \rightarrow 0, 0, 0, 1, 0, -- 0, 0, 0, 1, -- 0, 0, 0, 2, -- 0, 0, 0, 3, --$
  - R20)
  - $0, 0, 0, 0, 0, 0, -- \rightarrow 0, 0, 0, 0, 0, 0, 0, -- 0, 0, 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 0, 0, 2, -- 0, 0, 0, 0, 0, 0, 3, -- 0, 0,$
  - $0, 0, 0, 0, 0, 4, -- 0, 0, 0, 0, 0, 0, 5, -- 0, 0, 0, 0, 0, 0, 6, --$
  - R21)
  - $0, 0, 0, 0, 0, 1, -- \rightarrow 0, 0, 0, 0, 0, 1, 0, -- 0, 0, 0, 0, 1, 0, -- 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 2, -- 0, 0, 0, 0, 3, -- 0,$
  - $0, 0, 0, 4, --$
  - R22)
  - $0, 0, 0, 0, 0, 2, -- \rightarrow 0, 0, 0, 0, 1, 0, -- 0, 0, 0, 0, 0, 1, -- 0, 0, 0, 1, 0, -- 0, 0, 0, 1, -- 0, 0, 0, 2, -- 0, 0, 0, 3,$
  - 
  - R23)
  - $0, 0, 0, 0, 0, 3, -- \rightarrow 0, 0, 0, 1, 0, -- 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 0, 2, -- 0, 0, 1, 0, -- 0, 0, 1, -- 0, 0, 2, --$
  - R24)  $0, 0, 0, 0, 0, 4, -- \rightarrow 0, 0, 1, 0, -- 0, 0, 0, 1, -- 0, 0, 0, 0, 2, -- 0, 0, 0, 0, 0, 3, -- 0, 1, 0, -- 0, 1, --$
  - R25)  $0, 0, 0, 0, 0, 5, -- \rightarrow 0, 1, 0, -- 0, 0, 1, -- 0, 0, 0, 2, -- 0, 0, 0, 0, 3, -- 0, 0, 0, 0, 0, 4, -- 0, 1, 2, --$
  - R26)  $0, 0, 0, 0, 1, 0, -- \rightarrow 0, 0, 0, 0, 1, 0, -- 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 2, -- 0, 0, 0, 0, 3, -- 0, 0, 0, 0, 4, --$
  - R27)
  - $0, 0, 0, 0, 0, 0, 0, -- \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, -- 0, 0, 0, 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 0, 0, 0, 2, -- 0, 0, 0, 0, 0, 0,$
  - $0, 3, -- 0, 0, 0, 0, 0, 0, 4, -- 0, 0, 0, 0, 0, 0, 5, -- 0, 0, 0, 0, 0, 0, 6, -- 0, 0, 0, 0, 0, 0, 7, --$
  - R28)
  - $0, 0, 0, 0, 0, 0, 1, -- \rightarrow 0, 0, 0, 0, 0, 0, 1, 0, -- 0, 0, 0, 0, 0, 1, 0, -- 0, 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 0, 2, -- 0, 0,$
  - $0, 0, 0, 3, -- 0, 0, 0, 0, 0, 4, -- 0, 0, 0, 0, 0, 5, --$
  - R29)
  - $0, 0, 0, 0, 0, 0, 2, -- \rightarrow 0, 0, 0, 0, 0, 1, 0, -- 0, 0, 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 1, 0, -- 0, 0, 0, 0, 1, -- 0, 0, 0, 0,$
  - $2, -- 0, 0, 0, 0, 3, -- 0, 0, 0, 0, 4, --$
  - R30)

0,0,0,0,0,0,3,-->0,0,0,0,1,0,--0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,1,0,--0,0,0,1,--  
0,0,0,2,--0,0,0,3,--

R31)

0,0,0,0,0,0,4,-->0,0,0,1,0,--0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,1,0,--0,  
0,1,--0,0,2,--

R32)

0,0,0,0,0,0,5,-->0,0,1,0,--0,0,0,1,--0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,1,  
0,--0,1,--

R33)

0,0,0,0,0,0,6,-->0,1,0,--0,0,1,--0,0,0,2,--0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,0,5,  
--0,1,2,--

R34)

0,0,0,0,0,1,0,-->0,0,0,0,0,1,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,  
0,4,--0,0,0,0,0,5,--

R35)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R36)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,  
0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R37)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,0,--0,0,0,0,0,1,  
--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R38)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,1,0,--  
0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R39)

0,0,0,0,0,0,0,4,-->0,0,0,0,1,0,--0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,  
0,0,1,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R40)

0,0,0,0,0,0,0,5,-->0,0,0,1,0,--0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,  
0,0,4,--0,0,1,0,--0,0,1,--0,0,2,--

R41)

0,0,0,0,0,0,0,6,-->0,0,1,0,--0,0,0,1,--0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,  
0,0,0,0,0,0,5,--0,1,0,--0,1,--

R42)

0,0,0,0,0,0,0,7,-->0,1,0,--0,0,1,--0,0,0,2,--0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,0,  
5,--0,0,0,0,0,0,6,--0,1,2,--

R43)

0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,  
--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R44)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R45)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,--0,  
0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
,6,--0,0,0,0,0,0,0,7,--

R46)  
0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,0,--0,0,  
0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,  
,0,0,6,--

R47)  
0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,  
0,0,1,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R48)  
0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,0,3,--0,0,0,0,1,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R49)  
0,0,0,0,0,0,0,0,5,-->0,0,0,0,1,0,--0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--  
0,0,0,0,0,0,0,0,4,--0,0,0,1,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R50)  
0,0,0,0,0,0,0,0,6,-->0,0,0,1,0,--0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,  
0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,1,0,--0,0,1,--0,0,2,--

R51)  
0,0,0,0,0,0,0,0,7,-->0,0,1,0,--0,0,0,1,--0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,0,4,--  
0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,1,0,--0,1,--

R52)  
0,0,0,0,0,0,0,0,8,-->0,1,0,--0,0,1,--0,0,0,2,--0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,  
0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,1,2,--

R53)  
0,0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,-  
-

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, : 0,0,2, : 0,1,0, : 0,1,2, :  
LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,2, : 0,0,0,3, : 0,0,1,0, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,1,0, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, :  
0,0,0,0,0,5, : 0,0,0,0,1,0, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :  
0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,1,0, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :  
0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :  
0,0,0,0,0,0,1,0, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, :  
0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, :  
0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,1,0, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :  
0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, :  
0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :  
0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,1,0, :

Number new nodes in level n is given by : 1,2,5,5,6,7,8,9,10,11,



Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][100][101][120][210]]$

--

Rules of  $T[L]$ :

- R1)  $0, -- \rightarrow 0, 0, -- 0, 1, --$
- R2)  $0, 0, -- \rightarrow 0, 0, 0, -- 0, 0, 1, -- 0, 0, 2, --$
- R3)  $0, 1, -- \rightarrow 0, 1, 0, -- 0, 1, 2, --$
- R4)  $0, 0, 0, -- \rightarrow 0, 0, 0, 0, -- 0, 0, 0, 1, -- 0, 0, 0, 2, -- 0, 0, 0, 3, --$
- R5)  $0, 0, 1, -- \rightarrow 0, 0, 1, 0, -- 0, 1, 0, -- 0, 1, --$
- R6)  $0, 0, 2, -- \rightarrow 0, 0, 1, -- 0, 1, 0, -- 0, 1, 2, --$
- R7)  $0, 1, 0, -- \rightarrow 0, 1, 0, -- 0, 1, --$
- R8)  $0, 1, 2, -- \rightarrow 0, 1, 2, --$
- R9)  $0, 0, 0, 0, -- \rightarrow 0, 0, 0, 0, 0, -- 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 2, -- 0, 0, 0, 0, 3, -- 0, 0, 0, 0, 4, --$
- R10)  $0, 0, 0, 1, -- \rightarrow 0, 0, 0, 1, 0, -- 0, 0, 1, 0, -- 0, 0, 1, -- 0, 0, 2, --$
- R11)  $0, 0, 0, 2, -- \rightarrow 0, 0, 0, 1, -- 0, 0, 1, 0, -- 0, 1, 0, -- 0, 1, --$
- R12)  $0, 0, 0, 3, -- \rightarrow 0, 0, 0, 2, -- 0, 0, 1, -- 0, 1, 0, -- 0, 1, 2, --$
- R13)  $0, 0, 1, 0, -- \rightarrow 0, 0, 1, 0, -- 0, 0, 1, -- 0, 0, 2, --$
- R14)  
 $0, 0, 0, 0, 0, -- \rightarrow 0, 0, 0, 0, 0, 0, -- 0, 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 0, 2, -- 0, 0, 0, 0, 0, 3, -- 0, 0, 0, 0, 0, 4, --$   
 $0, 0, 0, 0, 0, 5, --$
- R15)  $0, 0, 0, 0, 1, -- \rightarrow 0, 0, 0, 0, 1, 0, -- 0, 0, 0, 1, 0, -- 0, 0, 0, 1, -- 0, 0, 0, 2, -- 0, 0, 0, 3, --$
- R16)  $0, 0, 0, 0, 2, -- \rightarrow 0, 0, 0, 0, 1, -- 0, 0, 0, 1, 0, -- 0, 0, 1, 0, -- 0, 0, 1, -- 0, 0, 2, --$
- R17)  $0, 0, 0, 0, 3, -- \rightarrow 0, 0, 0, 0, 2, -- 0, 0, 0, 1, -- 0, 0, 1, 0, -- 0, 1, 0, -- 0, 1, --$
- R18)  $0, 0, 0, 0, 4, -- \rightarrow 0, 0, 0, 0, 3, -- 0, 0, 0, 2, -- 0, 0, 1, -- 0, 1, 0, -- 0, 1, 2, --$
- R19)  $0, 0, 0, 1, 0, -- \rightarrow 0, 0, 0, 1, 0, -- 0, 0, 0, 1, -- 0, 0, 0, 2, -- 0, 0, 0, 3, --$
- R20)  
 $0, 0, 0, 0, 0, 0, -- \rightarrow 0, 0, 0, 0, 0, 0, 0, -- 0, 0, 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 0, 0, 2, -- 0, 0, 0, 0, 0, 0, 3, -- 0, 0,$   
 $0, 0, 0, 0, 4, -- 0, 0, 0, 0, 0, 0, 5, -- 0, 0, 0, 0, 0, 0, 6, --$
- R21)  
 $0, 0, 0, 0, 0, 1, -- \rightarrow 0, 0, 0, 0, 0, 1, 0, -- 0, 0, 0, 0, 1, 0, -- 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 2, -- 0, 0, 0, 0, 3, -- 0,$   
 $0, 0, 0, 4, --$
- R22)  
 $0, 0, 0, 0, 0, 2, -- \rightarrow 0, 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 1, 0, -- 0, 0, 0, 1, 0, -- 0, 0, 0, 1, -- 0, 0, 0, 2, -- 0, 0, 0, 3,$   
 $--$
- R23)  
 $0, 0, 0, 0, 0, 3, -- \rightarrow 0, 0, 0, 0, 0, 2, -- 0, 0, 0, 0, 1, -- 0, 0, 0, 1, 0, -- 0, 0, 1, 0, -- 0, 0, 1, -- 0, 0, 2, --$
- R24)  $0, 0, 0, 0, 0, 4, -- \rightarrow 0, 0, 0, 0, 0, 3, -- 0, 0, 0, 0, 2, -- 0, 0, 0, 1, -- 0, 0, 1, 0, -- 0, 1, 0, -- 0, 1, --$
- R25)  $0, 0, 0, 0, 0, 5, -- \rightarrow 0, 0, 0, 0, 0, 4, -- 0, 0, 0, 0, 3, -- 0, 0, 0, 2, -- 0, 0, 1, -- 0, 1, 0, -- 0, 1, 2, --$
- R26)  $0, 0, 0, 0, 1, 0, -- \rightarrow 0, 0, 0, 0, 1, 0, -- 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 2, -- 0, 0, 0, 0, 3, -- 0, 0, 0, 0, 4, --$
- R27)  
 $0, 0, 0, 0, 0, 0, 0, -- \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, -- 0, 0, 0, 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 0, 0, 0, 2, -- 0, 0, 0, 0, 0, 0,$   
 $0, 3, -- 0, 0, 0, 0, 0, 0, 4, -- 0, 0, 0, 0, 0, 0, 5, -- 0, 0, 0, 0, 0, 0, 6, -- 0, 0, 0, 0, 0, 0, 7, --$
- R28)  
 $0, 0, 0, 0, 0, 0, 1, -- \rightarrow 0, 0, 0, 0, 0, 0, 1, 0, -- 0, 0, 0, 0, 0, 1, 0, -- 0, 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 0, 2, -- 0, 0,$   
 $0, 0, 0, 3, -- 0, 0, 0, 0, 0, 4, -- 0, 0, 0, 0, 0, 5, --$
- R29)  
 $0, 0, 0, 0, 0, 0, 2, -- \rightarrow 0, 0, 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 0, 1, 0, -- 0, 0, 0, 0, 1, 0, -- 0, 0, 0, 0, 1, -- 0, 0, 0, 0,$   
 $2, -- 0, 0, 0, 0, 3, -- 0, 0, 0, 0, 4, --$
- R30)  
 $0, 0, 0, 0, 0, 0, 3, -- \rightarrow 0, 0, 0, 0, 0, 0, 2, -- 0, 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 1, 0, -- 0, 0, 0, 1, 0, -- 0, 0, 0, 1, --$

0,0,0,2,--0,0,0,3,--

R31)

0,0,0,0,0,0,4,-->0,0,0,0,0,0,3,--0,0,0,0,0,2,--0,0,0,0,1,--0,0,0,1,0,--0,0,1,0,--0,0,1,0,--0,0,1,0,--0,0,2,--

R32)

0,0,0,0,0,0,5,-->0,0,0,0,0,0,4,--0,0,0,0,0,3,--0,0,0,0,2,--0,0,0,1,--0,0,1,0,--0,1,0,--0,1,--

R33)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,5,--0,0,0,0,0,4,--0,0,0,0,3,--0,0,0,2,--0,0,1,--0,1,0,--0,1,2,--

R34)

0,0,0,0,0,1,0,-->0,0,0,0,0,1,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R35)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R36)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--

R37)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--

R38)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--

R39)

0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--

R40)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,2,--

R41)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,2,--

R42)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,2,--

R43)

0,0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--

R44)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,9,--

R45)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

R46)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--

R47)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--

R48)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--

R49)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--

R50)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,0,2,--

R51)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,0,2,--

R52)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,0,2,--

R53)

0,0,0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,: 0,1,0,: 0,1,2,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,: 0,0,1,0,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,: 0,0,0,1,0,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,: 0,0,0,0,0,5,: 0,0,0,0,1,0,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,: 0,0,0,0,0,0,4,: 0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,: 0,0,0,0,0,1,0,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:

0,0,0,0,0,0,1,0,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,:

0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,1,0,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,:

0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,:

0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,0,1,0,:

Number new nodes in level n is given by : 1,2,5,5,6,7,8,9,10,11,

-----Class

1136-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][100][101][201][210]]



0,0,0,0,0,0,5,-->0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,0,0,0,0,5,--0,0,0,0,0,  
0,6,--

R28) 0,0,0,0,0,0,6,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,0,0,0,0,0,6,--

R29)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R30)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,  
0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R31)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R32)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R33)

0,0,0,0,0,0,0,4,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,0,4,  
--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R34)

0,0,0,0,0,0,0,5,-->0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,0,0,0,0,  
5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R35)

0,0,0,0,0,0,0,6,-->0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,0,0,0,0,6,  
--0,0,0,0,0,0,7,--

R36)

0,0,0,0,0,0,0,7,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,0,0,0,0,0,7,--

R37)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,  
,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R38)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,  
,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R39)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,  
,0,0,7,--0,0,0,0,0,0,0,8,--

R40)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,  
,--0,0,0,0,0,0,0,8,--

R41)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,  
,0,0,8,--

R42)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,  
0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--

R43)  
0,0,0,0,0,0,0,0,6,-->0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,  
0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R44)  
0,0,0,0,0,0,0,0,7,-->0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,0,  
0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R45)  
0,0,0,0,0,0,0,0,8,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,0,0,0,0,0,0,  
0,8,--

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,: 0,1,:
- LEN=3) 0,0,0,: 0,0,1, : 0,0,2, :
- LEN=4) 0,0,0,0,: 0,0,0,1, : 0,0,0,2, : 0,0,0,3, :
- LEN=5) 0,0,0,0,0,: 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, :
- LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, :  
0,0,0,0,0,5, :
- LEN=7) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :  
0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, :
- LEN=8) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,3, :  
0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7, :
- LEN=9) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :  
0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, :  
0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :
- LEN=10) 0,0,0,0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,0,2, :  
0,0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,0,5, :  
0,0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,0,8, :  
0,0,0,0,0,0,0,0,0,0,9, :

Number new nodes in level n is given by : 1,2,3,4,5,6,7,8,9,10,

-----Class

1137-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][100][102][110][120]]

-----

--  
Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--
- R3) 0,1,-->0,1,0,--0,1,2,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R5) 0,0,1,-->0,1,0,--0,0,1,2,--0,1,--
- R6) 0,0,2,-->0,0,2,0,--0,0,2,0,--0,1,2,--
- R7) 0,1,0,-->
- R8) 0,1,2,-->0,1,2,--
- R9) 0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R10) 0,0,0,1,-->0,1,0,--0,0,0,1,2,--0,0,1,--0,0,2,--
- R11) 0,0,0,2,-->0,0,2,0,--0,0,2,0,--0,0,1,2,--0,1,--
- R12) 0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,1,2,--
- R13) 0,0,1,2,-->0,0,1,2,--0,1,--
- R14) 0,0,2,0,-->0,1,0,--

R15)

0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R16) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R17) 0,0,0,0,2,-->0,0,2,0,--0,0,2,0,--0,0,0,1,2,--0,0,1,--0,0,2,--

R18) 0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,1,2,--0,1,--

R19) 0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--0,1,2,--

R20) 0,0,0,1,2,-->0,0,0,1,2,--0,0,1,--0,0,2,--

R21) 0,0,0,3,0,-->0,0,2,0,--0,0,2,0,--

R22) 0,0,0,3,1,-->0,1,0,--0,1,0,--

R23)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R24)

0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,2,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R25)

0,0,0,0,0,2,-->0,0,2,0,--0,0,2,0,--0,0,0,0,1,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R26)

0,0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,1,2,--0,0,1,--0,0,2,--

R27)

0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--0,0,1,2,--0,1,--

R28)

0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,0,--0,1,2,--

R29) 0,0,0,0,1,2,-->0,0,0,0,1,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R30) 0,0,0,0,4,0,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--

R31) 0,0,0,0,4,1,-->0,1,0,--0,0,2,0,--0,0,2,0,--

R32) 0,0,0,0,4,2,-->0,0,2,0,--0,0,2,0,--0,1,0,--

R33)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R34)

0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R35)

0,0,0,0,0,0,2,-->0,0,2,0,--0,0,2,0,--0,0,0,0,0,1,2,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R36)

0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,0,1,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R37)

0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--0,0,0,1,2,--0,0,1,--0,0,2,--

R38)

0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,0,--0,0,1,2,--0,1,--

R39)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,0,--

6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,0,--0,1,2,--  
R40)  
0,0,0,0,0,1,2,-->0,0,0,0,0,1,2,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R41) 0,0,0,0,0,5,0,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--  
R42) 0,0,0,0,0,5,1,-->0,1,0,--0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--  
R43) 0,0,0,0,0,5,2,-->0,0,2,0,--0,0,2,0,--0,0,2,0,--0,0,2,0,--  
R44) 0,0,0,0,0,5,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,1,0,--  
R45)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--  
R46)  
0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,  
0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R47)  
0,0,0,0,0,0,0,2,-->0,0,2,0,--0,0,2,0,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,--0,0,0,0,0,2,  
--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R48)  
0,0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,0,0,1,2,--0,0,0,0,1,--  
0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R49)  
0,0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--0,0,0,0,  
1,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R50)  
0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--  
0,0,0,0,0,5,0,--0,0,0,1,2,--0,0,1,--0,0,2,--  
R51)  
0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,  
0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,0,--0,0,1,2,--0,1,--  
R52)  
0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,7,2,--0,0,  
0,0,0,0,0,7,3,--0,0,0,0,0,0,0,7,4,--0,0,0,0,0,0,0,7,5,--0,0,0,0,0,0,0,7,0,--0,1,2,-  
-  
R53)  
0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,  
0,0,0,4,--0,0,0,0,0,5,--  
R54)  
0,0,0,0,0,0,6,0,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--  
0,0,0,0,0,5,0,--  
R55)  
0,0,0,0,0,0,6,1,-->0,1,0,--0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--  
R56) 0,0,0,0,0,0,6,2,-->0,0,2,0,--0,0,2,0,--0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--  
R57) 0,0,0,0,0,0,6,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,2,0,--0,0,2,0,--  
R58)  
0,0,0,0,0,0,6,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--0,1,0,--  
R59)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--  
R60)



0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R61)

0,0,0,0,0,0,0,0,2,-->0,0,2,0,--0,0,2,0,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R62)

0,0,0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R63)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--0,0,0,0,0,1,2,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R64)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,0,--0,0,0,0,1,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R65)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,0,--0,0,0,1,2,--0,0,1,--0,0,2,--

R66)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,7,2,--0,0,0,0,0,0,0,7,3,--0,0,0,0,0,0,0,7,4,--0,0,0,0,0,0,0,7,5,--0,0,0,0,0,0,0,7,0,--0,0,1,2,--0,1,--

R67)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,8,0,--0,0,0,0,0,0,0,0,8,1,--0,0,0,0,0,0,0,0,8,2,--0,0,0,0,0,0,0,0,8,3,--0,0,0,0,0,0,0,0,8,4,--0,0,0,0,0,0,0,0,8,5,--0,0,0,0,0,0,0,0,8,6,--0,0,0,0,0,0,0,0,8,0,--0,1,2,--

R68)

0,0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R69)

0,0,0,0,0,0,0,0,7,0,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,0,--

R70)

0,0,0,0,0,0,0,0,7,1,-->0,1,0,--0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,0,--

R71)

0,0,0,0,0,0,0,0,7,2,-->0,0,2,0,--0,0,2,0,--0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--

R72)

0,0,0,0,0,0,0,0,7,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--

R73)

0,0,0,0,0,0,0,0,7,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--0,0,2,0,--

R74)

0,0,0,0,0,0,0,0,7,5,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,0,5,0,--0,1,0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0: 0,0,1: 0,0,2: 0,1,0: 0,1,2:  
 LEN=4) 0,0,0,0: 0,0,0,1: 0,0,0,2: 0,0,0,3: 0,0,1,2: 0,0,2,0:  
 LEN=5) 0,0,0,0,0: 0,0,0,0,1: 0,0,0,0,2: 0,0,0,0,3: 0,0,0,0,4: 0,0,0,1,2:  
 0,0,0,3,0: 0,0,0,3,1:  
 LEN=6) 0,0,0,0,0,0: 0,0,0,0,0,1: 0,0,0,0,0,2: 0,0,0,0,0,3: 0,0,0,0,0,4:  
 0,0,0,0,0,5: 0,0,0,0,1,2: 0,0,0,0,4,0: 0,0,0,0,4,1: 0,0,0,0,4,2:  
 LEN=7) 0,0,0,0,0,0,0: 0,0,0,0,0,0,1: 0,0,0,0,0,0,2: 0,0,0,0,0,0,3:  
 0,0,0,0,0,0,4: 0,0,0,0,0,0,5: 0,0,0,0,0,0,6: 0,0,0,0,0,1,2: 0,0,0,0,0,5,0:  
 0,0,0,0,0,5,1: 0,0,0,0,0,5,2: 0,0,0,0,0,5,3:  
 LEN=8) 0,0,0,0,0,0,0,0: 0,0,0,0,0,0,0,1: 0,0,0,0,0,0,0,2: 0,0,0,0,0,0,0,3:  
 0,0,0,0,0,0,0,4: 0,0,0,0,0,0,0,5: 0,0,0,0,0,0,0,6: 0,0,0,0,0,0,0,7:  
 0,0,0,0,0,0,1,2: 0,0,0,0,0,0,6,0: 0,0,0,0,0,0,6,1: 0,0,0,0,0,0,6,2:  
 0,0,0,0,0,0,6,3: 0,0,0,0,0,0,6,4:  
 LEN=9) 0,0,0,0,0,0,0,0,0: 0,0,0,0,0,0,0,0,1: 0,0,0,0,0,0,0,0,2:  
 0,0,0,0,0,0,0,0,3: 0,0,0,0,0,0,0,0,4: 0,0,0,0,0,0,0,0,5: 0,0,0,0,0,0,0,0,6:  
 0,0,0,0,0,0,0,0,7: 0,0,0,0,0,0,0,0,8: 0,0,0,0,0,0,0,1,2: 0,0,0,0,0,0,0,7,0:  
 0,0,0,0,0,0,0,7,1: 0,0,0,0,0,0,0,7,2: 0,0,0,0,0,0,0,7,3: 0,0,0,0,0,0,0,7,4:  
 0,0,0,0,0,0,0,7,5:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0: 0,0,0,0,0,0,0,0,0,1: 0,0,0,0,0,0,0,0,0,2:  
 0,0,0,0,0,0,0,0,0,3: 0,0,0,0,0,0,0,0,0,4: 0,0,0,0,0,0,0,0,0,5:  
 0,0,0,0,0,0,0,0,0,6: 0,0,0,0,0,0,0,0,0,7: 0,0,0,0,0,0,0,0,0,8:  
 0,0,0,0,0,0,0,0,0,9: 0,0,0,0,0,0,0,0,1,2: 0,0,0,0,0,0,0,0,8,0:  
 0,0,0,0,0,0,0,0,8,1: 0,0,0,0,0,0,0,0,8,2: 0,0,0,0,0,0,0,0,8,3:  
 0,0,0,0,0,0,0,0,8,4: 0,0,0,0,0,0,0,0,8,5: 0,0,0,0,0,0,0,0,8,6:  
 Number new nodes in level n is given by : 1,2,5,6,8,10,12,14,16,18,

-----Class

1138-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][100][102][110][201]]$

-----

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--
- R3) 0,1,-->0,1,0,--0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R5) 0,0,1,-->0,1,0,--0,0,1,--0,0,2,--
- R6) 0,0,2,-->0,1,0,--0,0,2,1,--0,0,2,--
- R7) 0,1,0,-->
- R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R9) 0,0,0,1,-->0,1,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R10) 0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,2,--0,0,0,3,--
- R11) 0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,3,--
- R12) 0,0,2,1,-->0,1,0,--
- R13)
- 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--
- R14) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R15) 0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R16) 0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,3,--0,0,0,0,4,--

R17) 0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,4,--  
R18) 0,0,0,3,2,-->0,1,0,--0,0,2,1,--  
R19)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R20)  
0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,  
0,0,0,5,--  
R21)  
0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,  
0,5,--  
R22)  
0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,  
5,--  
R23)  
0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,4,--0,0,0,0,0,  
5,--  
R24)  
0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,  
0,5,--  
R25) 0,0,0,0,4,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--  
R26)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R27)  
0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,  
0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R28)  
0,0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--  
0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R29)  
0,0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,  
0,0,0,0,5,--0,0,0,0,0,0,6,--  
R30)  
0,0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,4,--0,0,0,  
0,0,0,5,--0,0,0,0,0,0,6,--  
R31)  
0,0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,  
0,0,0,5,--0,0,0,0,0,0,6,--  
R32)  
0,0,0,0,0,0,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,  
0,0,0,6,5,--0,0,0,0,0,0,6,--  
R33) 0,0,0,0,0,5,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--  
R34)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--  
R35)  
0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,  
0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R36)

0,0,0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R37)

0,0,0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R38)

0,0,0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R39)

0,0,0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R40)

0,0,0,0,0,0,0,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,6,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R41)

0,0,0,0,0,0,0,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,7,--

R42)

0,0,0,0,0,0,0,6,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--

R43)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,9,--

R44)

0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R45)

0,0,0,0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R46)

0,0,0,0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R47)

0,0,0,0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R48)

0,0,0,0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R49)

0,0,0,0,0,0,0,0,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R50)

0,0,0,0,0,0,0,0,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--0,0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R51)

0,0,0,0,0,0,0,0,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,

0,0,0,0,0,6,5,--0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,8,7,--0,0,0,0,0,0,0,8,--  
R52)  
0,0,0,0,0,0,7,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,  
0,0,0,0,0,6,5,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,: 0,1,0,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,: 0,0,2,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,: 0,0,0,3,2,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,:

0,0,0,0,0,5,: 0,0,0,0,4,3,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,:

0,0,0,0,0,0,4,: 0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,: 0,0,0,0,0,5,4,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:

0,0,0,0,0,0,6,5,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,:

0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,7,6,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,:

0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,:

0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,0,8,7,:

Number new nodes in level n is given by : 1,2,4,5,6,7,8,9,10,11,

-----Class

1139-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][100][102][110][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--

R3) 0,1,-->0,1,0,--0,1,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R5) 0,0,1,-->0,1,0,--0,0,1,--0,0,1,3,--

R6) 0,0,2,-->0,0,2,0,--0,1,0,--0,0,2,--

R7) 0,1,0,-->

R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R9) 0,0,0,1,-->0,1,0,--0,0,0,1,--0,0,0,1,3,--0,0,0,1,4,--

R10) 0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,2,--0,0,0,2,4,--

R11) 0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,3,--

R12) 0,0,1,3,-->0,1,0,--0,1,0,--0,0,1,3,--

R13) 0,0,2,0,-->0,1,0,--

R14)

0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--

0,0,0,0,0,5,--

R15) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R16) 0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,2,--0,0,0,0,2,4,--0,0,0,0,2,5,--

R17) 0,0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,3,--0,0,0,0,3,5,--  
R18) 0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,4,--  
R19) 0,0,0,1,3,-->0,1,0,--0,1,0,--0,0,0,1,3,--0,0,0,1,3,5,--  
R20) 0,0,0,1,4,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,0,1,4,--  
R21) 0,0,0,2,4,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,0,2,4,--  
R22) 0,0,0,3,0,-->0,0,2,0,--0,1,0,--  
R23)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R24)  
0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,  
--0,0,0,0,0,1,6,--  
R25)  
0,0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,0,2,--0,0,0,0,0,2,4,--0,0,0,0,0,2,5,--0,0,  
0,0,0,2,6,--  
R26)  
0,0,0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,3,--0,0,0,0,0,3,5,--0,0,0,0,  
0,3,6,--  
R27)  
0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,4,--0,0,0,0,0,  
4,6,--  
R28)  
0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,  
0,5,--  
R29) 0,0,0,0,1,3,-->0,1,0,--0,1,0,--0,0,0,0,1,3,--0,0,0,0,1,3,5,--0,0,0,0,1,3,6,--  
R30) 0,0,0,0,1,4,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,1,4,--0,0,0,0,1,4,6,--  
R31) 0,0,0,0,1,5,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,1,5,--  
R32) 0,0,0,0,2,4,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,2,4,--0,0,0,0,2,4,6,--  
R33) 0,0,0,0,2,5,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,2,5,--  
R34) 0,0,0,0,3,5,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,3,5,--  
R35) 0,0,0,0,4,0,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--  
R36) 0,0,0,1,3,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,1,3,5,--  
R37)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R38)  
0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,  
0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--  
R39)  
0,0,0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,2,4,--0,0,0,0,0,0,2,  
5,--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,2,7,--  
R40)  
0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,3,--0,0,0,0,0,0,3,5,--0,  
0,0,0,0,0,3,6,--0,0,0,0,0,0,3,7,--  
R41)  
0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,4,--0,0,0,  
0,0,0,4,6,--0,0,0,0,0,0,4,7,--  
R42)  
0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,  
0,0,0,5,--0,0,0,0,0,0,5,7,--

R43)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,5,0,--0,0,0,0,0,4,0,--0,0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,6,--

R44)

0,0,0,0,0,1,3,-->0,1,0,--0,1,0,--0,0,0,0,0,1,3,--0,0,0,0,0,1,3,5,--0,0,0,0,0,1,3,6,--0,0,0,0,0,1,3,7,--

R45)

0,0,0,0,0,1,4,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,1,4,--0,0,0,0,0,1,4,6,--0,0,0,0,0,1,4,7,--

R46)

0,0,0,0,0,1,5,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,1,5,--0,0,0,0,0,1,5,7,--

R47)

0,0,0,0,0,1,6,-->0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,1,6,--

R48)

0,0,0,0,0,2,4,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,2,4,--0,0,0,0,0,2,4,6,--0,0,0,0,0,2,4,7,--

R49)

0,0,0,0,0,2,5,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,2,5,--0,0,0,0,0,2,5,7,--

R50)

0,0,0,0,0,2,6,-->0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,2,6,--

R51)

0,0,0,0,0,3,5,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,3,5,--0,0,0,0,0,3,5,7,--

R52)

0,0,0,0,0,3,6,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,3,6,--

R53)

0,0,0,0,0,4,6,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,4,6,--

R54) 0,0,0,0,0,5,0,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--

R55) 0,0,0,0,1,3,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,1,3,5,--0,0,0,0,1,3,5,7,--

R56) 0,0,0,0,1,3,6,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,1,3,6,--

R57) 0,0,0,0,1,4,6,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,1,4,6,--

R58) 0,0,0,0,2,4,6,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,2,4,6,--

R59)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R60)

0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,1,4,--0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,1,7,--0,0,0,0,0,0,0,1,8,--

R61)

0,0,0,0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,2,4,--0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,2,8,--

R62)

0,0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,3,5,--0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,3,8,--

R63)

0,0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,4,--0,  
0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,7,--0,0,0,0,0,0,4,8,--

R64)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,  
0,0,0,0,0,5,--0,0,0,0,0,0,5,7,--0,0,0,0,0,0,5,8,--

R65)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,  
2,0,--0,1,0,--0,0,0,0,0,0,6,--0,0,0,0,0,0,6,8,--

R66)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,  
0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,7,--

R67)

0,0,0,0,0,0,1,3,-->0,1,0,--0,1,0,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,3,5,--0,0,0,0,0,  
0,1,3,6,--0,0,0,0,0,0,1,3,7,--0,0,0,0,0,0,1,3,8,--

R68)

0,0,0,0,0,0,1,4,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,4,6,--  
0,0,0,0,0,0,1,4,7,--0,0,0,0,0,0,1,4,8,--

R69)

0,0,0,0,0,0,1,5,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,1,5,--0,0,0,0,  
0,0,1,5,7,--0,0,0,0,0,0,1,5,8,--

R70)

0,0,0,0,0,0,1,6,-->0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,  
1,6,--0,0,0,0,0,0,1,6,8,--

R71)

0,0,0,0,0,0,1,7,-->0,1,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,  
0,--0,0,0,0,0,0,1,7,--

R72)

0,0,0,0,0,0,2,4,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,2,4,--0,0,0,0,0,0,2,4,6,--  
0,0,0,0,0,0,2,4,7,--0,0,0,0,0,0,2,4,8,--

R73)

0,0,0,0,0,0,2,5,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,2,5,--0,0,0,0,0,  
0,2,5,7,--0,0,0,0,0,0,2,5,8,--

R74)

0,0,0,0,0,0,2,6,-->0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,2,6,  
--0,0,0,0,0,0,2,6,8,--

R75)

0,0,0,0,0,0,2,7,-->0,0,2,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,  
0,0,0,0,0,2,7,--

R76)

0,0,0,0,0,0,3,5,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,3,5,--0,0,0,0,  
0,0,3,5,7,--0,0,0,0,0,0,3,5,8,--

R77)

0,0,0,0,0,0,3,6,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,3,6,  
--0,0,0,0,0,0,3,6,8,--

R78)

0,0,0,0,0,0,3,7,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,  
0,0,0,0,3,7,--

R79)

0,0,0,0,0,0,4,6,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,  
4,6,--0,0,0,0,0,0,4,6,8,--



R80)

0,0,0,0,0,0,4,7,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,  
0,0,0,0,0,4,7,--

R81)

0,0,0,0,0,0,5,7,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,  
0,--0,0,0,0,0,5,7,--

R82)

0,0,0,0,0,0,6,0,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--

R83)

0,0,0,0,0,1,3,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,1,3,5,--0,0,0,0,0,1,3,5,7,--0,  
0,0,0,0,1,3,5,8,--

R84)

0,0,0,0,0,1,3,6,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,1,3,6,--0,0,0,0,0,1,  
3,6,8,--

R85)

0,0,0,0,0,1,3,7,-->0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,1,3,7,--

R86)

0,0,0,0,0,1,4,6,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,1,4,6,--0,0,0,0,0,1,  
4,6,8,--

R87)

0,0,0,0,0,1,4,7,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,1,4,7,--

R88)

0,0,0,0,0,1,5,7,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,1,5,7,--

R89)

0,0,0,0,0,2,4,6,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,2,4,6,--0,0,0,0,0,2,  
4,6,8,--

R90)

0,0,0,0,0,2,4,7,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,2,4,7,--

R91)

0,0,0,0,0,2,5,7,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,2,5,7,--

R92)

0,0,0,0,0,3,5,7,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,3,5,7,--

R93) 0,0,0,0,1,3,5,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,1,3,5,7,--

R94)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R95)

0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,  
0,0,1,4,--0,0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,0,1,7,--0,0,0,0,  
0,0,0,0,1,8,--0,0,0,0,0,0,0,0,1,9,--

R96)

0,0,0,0,0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,2,4,--0,  
0,0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,0,2,8,  
--0,0,0,0,0,0,0,0,2,9,--

R97)

0,0,0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,  
0,0,3,5,--0,0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,0,3,8,--0,0,0,0,  
0,0,0,0,3,9,--

R98)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,0,4,  
--0,0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,0,4,8,--0,0,0,0,0,0,0,0,  
,4,9,--

R99)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,  
0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,0,5,8,--0,0,0,0,0,0,0,0,5,9,-

-

R100)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,  
0,2,0,--0,1,0,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,0,6,9,--

R101)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,7,0,--0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,  
4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,7,9,--

R102)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,0,--0,0,0,0,0,0,7,0,--0,0,0,0,0,6,0,--0,  
0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,8,--

R103)

0,0,0,0,0,0,0,1,3,-->0,1,0,--0,1,0,--0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,1,3,5,--0,0,  
0,0,0,0,0,1,3,6,--0,0,0,0,0,0,0,1,3,7,--0,0,0,0,0,0,0,1,3,8,--0,0,0,0,0,0,0,1,3,9,-

-

R104)

0,0,0,0,0,0,0,1,4,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,1,4,--0,0,0,0,0,0,0,1,  
4,6,--0,0,0,0,0,0,0,1,4,7,--0,0,0,0,0,0,0,1,4,8,--0,0,0,0,0,0,0,1,4,9,--

R105)

0,0,0,0,0,0,0,1,5,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,1,5,--0,0,  
0,0,0,0,0,1,5,7,--0,0,0,0,0,0,0,1,5,8,--0,0,0,0,0,0,0,1,5,9,--

R106)

0,0,0,0,0,0,0,1,6,-->0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,  
0,0,1,6,--0,0,0,0,0,0,0,1,6,8,--0,0,0,0,0,0,0,1,6,9,--

R107)

0,0,0,0,0,0,0,1,7,-->0,1,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,  
1,0,--0,0,0,0,0,0,0,1,7,--0,0,0,0,0,0,0,1,7,9,--

R108)

0,0,0,0,0,0,0,1,8,-->0,1,0,--0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,  
3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,1,8,--

R109)

0,0,0,0,0,0,0,2,4,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,2,4,--0,0,0,0,0,0,0,2,  
4,6,--0,0,0,0,0,0,0,2,4,7,--0,0,0,0,0,0,0,2,4,8,--0,0,0,0,0,0,0,2,4,9,--

R110)

0,0,0,0,0,0,0,2,5,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,2,5,--0,0,0,  
0,0,0,0,2,5,7,--0,0,0,0,0,0,0,2,5,8,--0,0,0,0,0,0,0,2,5,9,--

R111)

0,0,0,0,0,0,0,2,6,-->0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,  
2,6,--0,0,0,0,0,0,0,2,6,8,--0,0,0,0,0,0,0,2,6,9,--

R112)

0,0,0,0,0,0,0,2,7,-->0,0,2,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--  
0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,2,7,9,--

R113)

0,0,0,0,0,0,0,2,8,-->0,0,2,0,--0,1,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,  
0,2,0,--0,1,0,--0,0,0,0,0,0,0,2,8,--

R114)

0,0,0,0,0,0,0,3,5,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,3,5,--0,0,  
0,0,0,0,0,3,5,7,--0,0,0,0,0,0,0,3,5,8,--0,0,0,0,0,0,0,3,5,9,--

R115)

0,0,0,0,0,0,0,3,6,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,  
3,6,--0,0,0,0,0,0,0,3,6,8,--0,0,0,0,0,0,0,3,6,9,--

R116)

0,0,0,0,0,0,0,3,7,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,  
0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,3,7,9,--

R117)

0,0,0,0,0,0,0,3,8,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,  
0,--0,1,0,--0,0,0,0,0,0,0,3,8,--

R118)

0,0,0,0,0,0,0,4,6,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,  
0,0,4,6,--0,0,0,0,0,0,0,4,6,8,--0,0,0,0,0,0,0,4,6,9,--

R119)

0,0,0,0,0,0,0,4,7,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--  
0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,4,7,9,--

R120)

0,0,0,0,0,0,0,4,8,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,  
0,--0,1,0,--0,0,0,0,0,0,0,4,8,--

R121)

0,0,0,0,0,0,0,5,7,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,  
1,0,--0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,5,7,9,--

R122)

0,0,0,0,0,0,0,5,8,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,  
0,2,0,--0,1,0,--0,0,0,0,0,0,0,5,8,--

R123)

0,0,0,0,0,0,0,6,8,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,  
0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,6,8,--

R124)

0,0,0,0,0,0,0,7,0,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,  
0,2,0,--0,1,0,--

R125)

0,0,0,0,0,0,1,3,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,1,3,5,--0,0,0,0,0,0,1,3,5,  
7,--0,0,0,0,0,0,1,3,5,8,--0,0,0,0,0,0,1,3,5,9,--

R126)

0,0,0,0,0,0,1,3,6,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,1,3,6,--0,0,0,0,  
0,0,1,3,6,8,--0,0,0,0,0,0,1,3,6,9,--

R127)

0,0,0,0,0,0,1,3,7,-->0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,1,3,  
7,--0,0,0,0,0,0,1,3,7,9,--

R128)

0,0,0,0,0,0,1,3,8,-->0,1,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,  
0,0,0,0,0,1,3,8,--

R129)

0,0,0,0,0,0,1,4,6,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,1,4,6,--0,0,0,0,  
0,0,1,4,6,8,--0,0,0,0,0,0,1,4,6,9,--

R130)

0,0,0,0,0,0,1,4,7,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,1,4,7,

--0,0,0,0,0,0,1,4,7,9,--  
R131)  
0,0,0,0,0,0,1,4,8,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,  
0,0,0,1,4,8,--  
R132)  
0,0,0,0,0,0,1,5,7,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,1,5,  
7,--0,0,0,0,0,0,1,5,7,9,--  
R133)  
0,0,0,0,0,0,1,5,8,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,  
0,0,0,1,5,8,--  
R134)  
0,0,0,0,0,0,1,6,8,-->0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,  
0,0,0,0,0,1,6,8,--  
R135)  
0,0,0,0,0,0,2,4,6,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,2,4,6,--0,0,0,0,  
0,0,2,4,6,8,--0,0,0,0,0,0,2,4,6,9,--  
R136)  
0,0,0,0,0,0,2,4,7,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,2,4,7,  
--0,0,0,0,0,0,2,4,7,9,--  
R137)  
0,0,0,0,0,0,2,4,8,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,  
0,0,0,2,4,8,--  
R138)  
0,0,0,0,0,0,2,5,7,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,2,5,7,  
--0,0,0,0,0,0,2,5,7,9,--  
R139)  
0,0,0,0,0,0,2,5,8,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,  
0,0,2,5,8,--  
R140)  
0,0,0,0,0,0,2,6,8,-->0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,  
0,0,0,2,6,8,--  
R141)  
0,0,0,0,0,0,3,5,7,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,3,5,  
7,--0,0,0,0,0,0,3,5,7,9,--  
R142)  
0,0,0,0,0,0,3,5,8,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,  
0,0,0,3,5,8,--  
R143)  
0,0,0,0,0,0,3,6,8,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,  
0,0,0,3,6,8,--  
R144)  
0,0,0,0,0,0,4,6,8,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,  
0,0,0,0,0,4,6,8,--  
R145)  
0,0,0,0,0,1,3,5,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,1,3,5,7,--0,0,0,0,0,  
1,3,5,7,9,--  
R146)  
0,0,0,0,0,1,3,5,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,1,3,5,8,--  
R147)  
0,0,0,0,0,1,3,6,8,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,1,3,6,8,--

R148)

0,0,0,0,0,1,4,6,8,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,1,4,6,8,--

R149)

0,0,0,0,0,2,4,6,8,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,2,4,6,8,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,: 0,1,0,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,: 0,0,1,3,: 0,0,2,0,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,: 0,0,0,1,3,:

0,0,0,1,4,: 0,0,0,2,4,: 0,0,0,3,0,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,:

0,0,0,0,0,5,: 0,0,0,0,1,3,: 0,0,0,0,1,4,: 0,0,0,0,1,5,: 0,0,0,0,2,4,: 0,0,0,0,2,5,:

0,0,0,0,3,5,: 0,0,0,0,4,0,: 0,0,0,1,3,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,:

0,0,0,0,0,0,4,: 0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,: 0,0,0,0,0,1,3,: 0,0,0,0,0,1,4,:

0,0,0,0,0,1,5,: 0,0,0,0,0,1,6,: 0,0,0,0,0,2,4,: 0,0,0,0,0,2,5,: 0,0,0,0,0,2,6,:

0,0,0,0,0,3,5,: 0,0,0,0,0,3,6,: 0,0,0,0,0,4,6,: 0,0,0,0,0,5,0,: 0,0,0,0,1,3,5,:

0,0,0,0,1,3,6,: 0,0,0,0,1,4,6,: 0,0,0,0,2,4,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:

0,0,0,0,0,0,1,3,: 0,0,0,0,0,0,1,4,: 0,0,0,0,0,0,1,5,: 0,0,0,0,0,0,1,6,:

0,0,0,0,0,0,1,7,: 0,0,0,0,0,0,2,4,: 0,0,0,0,0,0,2,5,: 0,0,0,0,0,0,2,6,:

0,0,0,0,0,0,2,7,: 0,0,0,0,0,0,3,5,: 0,0,0,0,0,0,3,6,: 0,0,0,0,0,0,3,7,:

0,0,0,0,0,0,4,6,: 0,0,0,0,0,0,4,7,: 0,0,0,0,0,0,5,7,: 0,0,0,0,0,0,6,0,:

0,0,0,0,0,1,3,5,: 0,0,0,0,0,1,3,6,: 0,0,0,0,0,1,3,7,: 0,0,0,0,0,1,4,6,:

0,0,0,0,0,1,4,7,: 0,0,0,0,0,1,5,7,: 0,0,0,0,0,2,4,6,: 0,0,0,0,0,2,4,7,:

0,0,0,0,0,2,5,7,: 0,0,0,0,0,3,5,7,: 0,0,0,0,1,3,5,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,:

0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,1,3,: 0,0,0,0,0,0,0,1,4,:

0,0,0,0,0,0,0,1,5,: 0,0,0,0,0,0,0,1,6,: 0,0,0,0,0,0,0,1,7,: 0,0,0,0,0,0,0,1,8,:

0,0,0,0,0,0,0,2,4,: 0,0,0,0,0,0,0,2,5,: 0,0,0,0,0,0,0,2,6,: 0,0,0,0,0,0,0,2,7,:

0,0,0,0,0,0,0,2,8,: 0,0,0,0,0,0,0,3,5,: 0,0,0,0,0,0,0,3,6,: 0,0,0,0,0,0,0,3,7,:

0,0,0,0,0,0,0,3,8,: 0,0,0,0,0,0,0,4,6,: 0,0,0,0,0,0,0,4,7,: 0,0,0,0,0,0,0,4,8,:

0,0,0,0,0,0,0,5,7,: 0,0,0,0,0,0,0,5,8,: 0,0,0,0,0,0,0,6,8,: 0,0,0,0,0,0,0,7,0,:

0,0,0,0,0,0,1,3,5,: 0,0,0,0,0,0,1,3,6,: 0,0,0,0,0,0,1,3,7,: 0,0,0,0,0,0,1,3,8,:

0,0,0,0,0,0,1,4,6,: 0,0,0,0,0,0,1,4,7,: 0,0,0,0,0,0,1,4,8,: 0,0,0,0,0,0,1,5,7,:

0,0,0,0,0,0,1,5,8,: 0,0,0,0,0,0,1,6,8,: 0,0,0,0,0,0,2,4,6,: 0,0,0,0,0,0,2,4,7,:

0,0,0,0,0,0,2,4,8,: 0,0,0,0,0,0,2,5,7,: 0,0,0,0,0,0,2,5,8,: 0,0,0,0,0,0,2,6,8,:

0,0,0,0,0,0,3,5,7,: 0,0,0,0,0,0,3,5,8,: 0,0,0,0,0,0,3,6,8,: 0,0,0,0,0,0,4,6,8,:

0,0,0,0,0,1,3,5,7,: 0,0,0,0,0,1,3,5,8,: 0,0,0,0,0,1,3,6,8,: 0,0,0,0,0,1,4,6,8,:

0,0,0,0,0,2,4,6,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,:

0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,:

0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,0,1,3,: 0,0,0,0,0,0,0,0,1,4,:

0,0,0,0,0,0,0,0,1,5,: 0,0,0,0,0,0,0,0,1,6,: 0,0,0,0,0,0,0,0,1,7,:

0,0,0,0,0,0,0,0,1,8,: 0,0,0,0,0,0,0,0,1,9,: 0,0,0,0,0,0,0,0,2,4,:

0,0,0,0,0,0,0,0,2,5,: 0,0,0,0,0,0,0,0,2,6,: 0,0,0,0,0,0,0,0,2,7,:

0,0,0,0,0,0,0,0,2,8, : 0,0,0,0,0,0,0,0,2,9, : 0,0,0,0,0,0,0,0,3,5, :  
 0,0,0,0,0,0,0,0,3,6, : 0,0,0,0,0,0,0,0,3,7, : 0,0,0,0,0,0,0,0,3,8, :  
 0,0,0,0,0,0,0,0,3,9, : 0,0,0,0,0,0,0,0,4,6, : 0,0,0,0,0,0,0,0,4,7, :  
 0,0,0,0,0,0,0,0,4,8, : 0,0,0,0,0,0,0,0,4,9, : 0,0,0,0,0,0,0,0,5,7, :  
 0,0,0,0,0,0,0,0,5,8, : 0,0,0,0,0,0,0,0,5,9, : 0,0,0,0,0,0,0,0,6,8, :  
 0,0,0,0,0,0,0,0,6,9, : 0,0,0,0,0,0,0,0,7,9, : 0,0,0,0,0,0,0,0,8,0, :  
 0,0,0,0,0,0,0,1,3,5, : 0,0,0,0,0,0,0,1,3,6, : 0,0,0,0,0,0,0,1,3,7, :  
 0,0,0,0,0,0,0,1,3,8, : 0,0,0,0,0,0,0,1,3,9, : 0,0,0,0,0,0,0,1,4,6, :  
 0,0,0,0,0,0,0,1,4,7, : 0,0,0,0,0,0,0,1,4,8, : 0,0,0,0,0,0,0,1,4,9, :  
 0,0,0,0,0,0,0,1,5,7, : 0,0,0,0,0,0,0,1,5,8, : 0,0,0,0,0,0,0,1,5,9, :  
 0,0,0,0,0,0,0,1,6,8, : 0,0,0,0,0,0,0,1,6,9, : 0,0,0,0,0,0,0,1,7,9, :  
 0,0,0,0,0,0,0,2,4,6, : 0,0,0,0,0,0,0,2,4,7, : 0,0,0,0,0,0,0,2,4,8, :  
 0,0,0,0,0,0,0,2,4,9, : 0,0,0,0,0,0,0,2,5,7, : 0,0,0,0,0,0,0,2,5,8, :  
 0,0,0,0,0,0,0,2,5,9, : 0,0,0,0,0,0,0,2,6,8, : 0,0,0,0,0,0,0,2,6,9, :  
 0,0,0,0,0,0,0,2,7,9, : 0,0,0,0,0,0,0,3,5,7, : 0,0,0,0,0,0,0,3,5,8, :  
 0,0,0,0,0,0,0,3,5,9, : 0,0,0,0,0,0,0,3,6,8, : 0,0,0,0,0,0,0,3,6,9, :  
 0,0,0,0,0,0,0,3,7,9, : 0,0,0,0,0,0,0,4,6,8, : 0,0,0,0,0,0,0,4,6,9, :  
 0,0,0,0,0,0,0,4,7,9, : 0,0,0,0,0,0,0,5,7,9, : 0,0,0,0,0,0,1,3,5,7, :  
 0,0,0,0,0,0,1,3,5,8, : 0,0,0,0,0,0,1,3,5,9, : 0,0,0,0,0,0,1,3,6,8, :  
 0,0,0,0,0,0,1,3,6,9, : 0,0,0,0,0,0,1,3,7,9, : 0,0,0,0,0,0,1,4,6,8, :  
 0,0,0,0,0,0,1,4,6,9, : 0,0,0,0,0,0,1,4,7,9, : 0,0,0,0,0,0,1,5,7,9, :  
 0,0,0,0,0,0,2,4,6,8, : 0,0,0,0,0,0,2,4,6,9, : 0,0,0,0,0,0,2,4,7,9, :  
 0,0,0,0,0,0,2,5,7,9, : 0,0,0,0,0,0,3,5,7,9, : 0,0,0,0,0,1,3,5,7,9, :  
 Number new nodes in level n is given by : 1,2,4,6,9,14,22,35,56,90,

-----Class

1140-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][100][102][120][201]]$

-----

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--
- R3) 0,1,-->0,1,0,--0,1,2,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R5) 0,0,1,-->0,1,0,--0,0,1,2,--0,1,--
- R6) 0,0,2,-->0,1,0,--0,0,2,1,--0,1,2,--
- R7) 0,1,0,-->
- R8) 0,1,2,-->0,1,2,--
- R9) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R10) 0,0,0,1,-->0,1,0,--0,0,0,1,2,--0,0,1,--0,0,2,--
- R11) 0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,1,2,--0,1,--
- R12) 0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,2,--
- R13) 0,0,1,2,-->0,0,1,2,--0,1,--
- R14) 0,0,2,1,-->0,1,0,--
- R15) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--
- R16) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R17) 0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,1,2,--0,0,1,--0,0,2,--

R18) 0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,1,2,--0,1,--  
R19) 0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,2,--  
R20) 0,0,0,1,2,-->0,0,0,1,2,--0,0,1,--0,0,2,--  
R21) 0,0,0,3,2,-->0,1,0,--0,0,2,1,--  
R22)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R23)  
0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,2,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,  
4,--  
R24) 0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,1,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R25) 0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,1,2,--0,0,1,--0,0,2,--  
R26) 0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,1,2,--0,1,--  
R27)  
0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,1,2,--  
R28) 0,0,0,0,1,2,-->0,0,0,0,1,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R29) 0,0,0,0,4,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--  
R30)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R31)  
0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,  
--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R32)  
0,0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,1,2,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,  
3,--0,0,0,0,4,--  
R33)  
0,0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,1,2,--0,0,0,1,--0,0,0,2,--0,  
0,0,3,--  
R34)  
0,0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,1,2,--0,0,1,--0,  
0,2,--  
R35)  
0,0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,1,  
2,--0,1,--  
R36)  
0,0,0,0,0,0,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,  
0,0,0,6,5,--0,1,2,--  
R37)  
0,0,0,0,0,1,2,-->0,0,0,0,0,1,2,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R38) 0,0,0,0,0,5,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--  
R39)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--  
R40)  
0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,  
0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R41)  
0,0,0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,--0,0,0,0,0,2,--

0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R42)  
0,0,0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,1,2,--0,0,0,0,1,--0,0,0,  
0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R43)  
0,0,0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,1,2,--0,0,0,  
1,--0,0,0,2,--0,0,0,3,--  
R44)  
0,0,0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,  
0,1,2,--0,0,1,--0,0,2,--  
R45)  
0,0,0,0,0,0,0,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,  
0,0,0,0,6,5,--0,0,1,2,--0,1,--  
R46)  
0,0,0,0,0,0,0,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,  
0,0,0,0,6,5,--0,0,0,0,0,0,7,6,--0,1,2,--  
R47)  
0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,  
0,0,0,4,--0,0,0,0,0,5,--  
R48)  
0,0,0,0,0,0,6,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--  
R49)  
0,0,0,0,0,0,0,0,0,-->0,  
2,--0,  
0,0,6,--0,  
R50)  
0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
0,0,0,7,--  
R51)  
0,0,0,0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,--0,0,0,0,  
0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--  
R52)  
0,0,0,0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,1,--  
0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R53)  
0,0,0,0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,1,2,--0,  
0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R54)  
0,0,0,0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,  
0,0,0,1,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R55)  
0,0,0,0,0,0,0,0,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,  
0,0,0,0,0,6,5,--0,0,0,1,2,--0,0,1,--0,0,2,--  
R56)  
0,0,0,0,0,0,0,0,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,  
0,0,0,0,0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,1,2,--0,1,--  
R57)  
0,0,0,0,0,0,0,0,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,  
0,0,0,0,0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,0,8,7,--0,1,2,--



R58)

0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R59)

0,0,0,0,0,0,0,7,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,6,5,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,: 0,1,0,: 0,1,2,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,: 0,0,1,2,: 0,0,2,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,: 0,0,0,1,2,: 0,0,0,3,2,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,: 0,0,0,0,0,5,: 0,0,0,0,1,2,: 0,0,0,0,4,3,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,: 0,0,0,0,0,0,4,: 0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,: 0,0,0,0,0,1,2,: 0,0,0,0,0,5,4,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:

0,0,0,0,0,0,1,2,: 0,0,0,0,0,0,6,5,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,1,2,: 0,0,0,0,0,0,0,7,6,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,:

0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,:

0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,0,1,2,: 0,0,0,0,0,0,0,8,7,:

Number new nodes in level n is given by : 1,2,5,6,7,8,9,10,11,12,

-----Class

1141-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][100][102][120][210]]

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--

R3) 0,1,-->0,1,0,--0,1,2,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R5) 0,0,1,-->0,1,0,--0,0,1,2,--0,1,--

R6) 0,0,2,-->0,0,2,0,--0,1,0,--0,1,2,--

R7) 0,1,0,-->

R8) 0,1,2,-->0,1,2,--

R9) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R10) 0,0,0,1,-->0,1,0,--0,0,0,1,2,--0,0,1,--0,0,2,--

R11) 0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,1,2,--0,1,--

R12) 0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,2,--

R13) 0,0,1,2,-->0,0,1,2,--0,1,--

R14) 0,0,2,0,-->0,1,0,--

R15)

0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--  
R16) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R17) 0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,1,2,--0,0,1,--0,0,2,--  
R18) 0,0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,1,2,--0,1,--  
R19) 0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,2,--  
R20) 0,0,0,1,2,-->0,0,0,1,2,--0,0,1,--0,0,2,--  
R21) 0,0,0,3,0,-->0,0,2,0,--0,1,0,--  
R22)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R23)  
0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,2,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,  
4,--  
R24) 0,0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,1,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R25) 0,0,0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,1,2,--0,0,1,--0,0,2,--  
R26) 0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,1,2,--0,1,--  
R27)  
0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,2,--  
R28) 0,0,0,0,1,2,-->0,0,0,0,1,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R29) 0,0,0,0,4,0,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--  
R30)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R31)  
0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,  
--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R32)  
0,0,0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,0,1,2,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,  
3,--0,0,0,0,4,--  
R33)  
0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,1,2,--0,0,0,1,--0,0,0,2,--0,  
0,0,3,--  
R34)  
0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,1,2,--0,0,1,--0,  
0,2,--  
R35)  
0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,1,  
2,--0,1,--  
R36)  
0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,  
0,--0,1,0,--0,1,2,--  
R37)  
0,0,0,0,0,1,2,-->0,0,0,0,0,1,2,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R38) 0,0,0,0,0,5,0,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--  
R39)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,  
0,0,0,0,7,--0,0,0,0,0,0,0,8,--  
R40)

0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,  
0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R41)

0,0,0,0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,--0,0,0,0,0,2,--  
0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R42)

0,0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,1,2,--0,0,0,0,1,--0,0,0,  
0,2,--0,0,0,0,3,--0,0,0,0,4,--

R43)

0,0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,1,2,--0,0,0,  
1,--0,0,0,2,--0,0,0,3,--

R44)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,  
0,1,2,--0,0,1,--0,0,2,--

R45)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,  
2,0,--0,1,0,--0,0,1,2,--0,1,--

R46)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,  
0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,2,--

R47)

0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,  
0,0,0,4,--0,0,0,0,0,5,--

R48)

0,0,0,0,0,0,6,0,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--

R49)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R50)

0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,  
0,0,0,7,--

R51)

0,0,0,0,0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,--0,0,0,0,  
0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R52)

0,0,0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,--  
0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R53)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,1,2,--0,  
0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R54)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,  
0,0,0,1,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R55)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,  
0,2,0,--0,1,0,--0,0,0,1,2,--0,0,1,--0,0,2,--

R56)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,

4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,1,2,--0,1,--  
R57)  
0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,8,0,--0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,6,0,--0,  
0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,2,--  
R58)  
0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,  
0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R59)  
0,0,0,0,0,0,0,7,0,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,  
0,2,0,--0,1,0,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, : 0,0,2, : 0,1,0, : 0,1,2, :  
LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,2, : 0,0,0,3, : 0,0,1,2, : 0,0,2,0, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,1,2, :  
0,0,0,3,0, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, :  
0,0,0,0,0,5, : 0,0,0,0,1,2, : 0,0,0,0,4,0, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :  
0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,1,2, : 0,0,0,0,0,5,0, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :  
0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :  
0,0,0,0,0,0,1,2, : 0,0,0,0,0,0,6,0, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, :  
0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, :  
0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,1,2, : 0,0,0,0,0,0,0,7,0, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :  
0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, :  
0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :  
0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,1,2, : 0,0,0,0,0,0,0,0,8,0, :  
Number new nodes in level n is given by : 1,2,5,6,7,8,9,10,11,12,

-----Class

1142-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][100][102][201][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--  
R3) 0,1,-->0,1,0,--0,1,--  
R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R5) 0,0,1,-->0,1,0,--0,0,1,--0,0,2,--  
R6) 0,0,2,-->0,1,0,--0,1,0,--0,0,2,--  
R7) 0,1,0,-->  
R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R9) 0,0,0,1,-->0,1,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R10) 0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,2,--0,0,0,3,--  
R11) 0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,3,--

R12)  
0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--  
R13) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R14) 0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R15) 0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,3,--0,0,0,0,4,--  
R16) 0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,4,--  
R17)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R18)  
0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,  
0,0,0,5,--  
R19)  
0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,  
5,--  
R20)  
0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R21) 0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R22) 0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,5,--  
R23)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R24)  
0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,  
0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R25)  
0,0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,  
0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R26)  
0,0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,  
0,5,--0,0,0,0,0,0,6,--  
R27)  
0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--  
R28)  
0,0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,5,--0,0,0,0,0,  
0,6,--  
R29)  
0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,6,--  
R30)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--  
R31)  
0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,  
0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R32)  
0,0,0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,  
0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R33)

0,0,0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R34)

0,0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R35)

0,0,0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R36)

0,0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R37)

0,0,0,0,0,0,0,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,7,--

R38)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,9,--

R39)

0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R40)

0,0,0,0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R41)

0,0,0,0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R42)

0,0,0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R43)

0,0,0,0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R44)

0,0,0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R45)

0,0,0,0,0,0,0,0,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R46)

0,0,0,0,0,0,0,0,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,8,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,: 0,1,0,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,:

LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, :  
 0,0,0,0,0,5, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, :  
 0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, :  
 0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :  
 0,0,0,0,0,0,0,0,0,9, :

Number new nodes in level n is given by : 1,2,4,4,5,6,7,8,9,10,

-----Class

1143-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][100][110][120][201]]$

-----

--

Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,0, --0,0,1, --0,0,2, --
- R3) 0,1, -->0,1,0, --0,1,2, --
- R4) 0,0,0, -->0,0,0,0, --0,0,0,1, --0,0,0,2, --0,0,0,3, --
- R5) 0,0,1, -->0,0,1,0, --0,1,0, --0,1, --
- R6) 0,0,2, -->0,1,0, --0,0,1, --0,1,2, --
- R7) 0,1,0, -->0,1,0, --0,1, --
- R8) 0,1,2, -->0,1,2, --
- R9) 0,0,0,0, -->0,0,0,0,0, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --
- R10) 0,0,0,1, -->0,0,0,1,0, --0,0,1,0, --0,0,1, --0,0,2, --
- R11) 0,0,0,2, -->0,0,1,0, --0,0,0,1, --0,1,0, --0,1, --
- R12) 0,0,0,3, -->0,1,0, --0,0,1, --0,0,0,2, --0,1,2, --
- R13) 0,0,1,0, -->0,0,1,0, --0,0,1, --0,0,2, --
- R14) 0,0,0,0,0, -->0,0,0,0,0,0, --0,0,0,0,0,1, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5, --
- R15) 0,0,0,0,1, -->0,0,0,0,1,0, --0,0,0,1,0, --0,0,0,1, --0,0,0,2, --0,0,0,3, --
- R16) 0,0,0,0,2, -->0,0,0,1,0, --0,0,0,0,1, --0,0,1,0, --0,0,1, --0,0,2, --
- R17) 0,0,0,0,3, -->0,0,1,0, --0,0,0,1, --0,0,0,0,2, --0,1,0, --0,1, --
- R18) 0,0,0,0,4, -->0,1,0, --0,0,1, --0,0,0,2, --0,0,0,0,3, --0,1,2, --
- R19) 0,0,0,1,0, -->0,0,0,1,0, --0,0,0,1, --0,0,0,2, --0,0,0,3, --
- R20) 0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,0,0,0,0,0,1, --0,0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --
- R21) 0,0,0,0,0,1, -->0,0,0,0,0,1,0, --0,0,0,0,1,0, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --
- R22) 0,0,0,0,0,1, -->0,0,0,0,0,1,0, --0,0,0,0,1,0, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --

0,0,0,0,0,2,-->0,0,0,0,1,0,--0,0,0,0,0,1,--0,0,0,1,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,  
--

R23)

0,0,0,0,0,3,-->0,0,0,1,0,--0,0,0,0,1,--0,0,0,0,0,2,--0,0,1,0,--0,0,1,--0,0,2,--

R24) 0,0,0,0,0,4,-->0,0,1,0,--0,0,0,1,--0,0,0,0,2,--0,0,0,0,0,3,--0,1,0,--0,1,--

R25) 0,0,0,0,0,5,-->0,1,0,--0,0,1,--0,0,0,2,--0,0,0,0,3,--0,0,0,0,0,4,--0,1,2,--

R26) 0,0,0,0,1,0,-->0,0,0,0,1,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R27)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R28)

0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,  
0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R29)

0,0,0,0,0,0,2,-->0,0,0,0,0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,1,0,--0,0,0,0,1,--0,0,0,0,  
2,--0,0,0,0,3,--0,0,0,0,4,--

R30)

0,0,0,0,0,0,3,-->0,0,0,0,1,0,--0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,1,0,--0,0,0,1,--  
0,0,0,2,--0,0,0,3,--

R31)

0,0,0,0,0,0,4,-->0,0,0,1,0,--0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,1,0,--0,  
0,1,--0,0,2,--

R32)

0,0,0,0,0,0,5,-->0,0,1,0,--0,0,0,1,--0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,1,  
0,--0,1,--

R33)

0,0,0,0,0,0,6,-->0,1,0,--0,0,1,--0,0,0,2,--0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,0,5,  
--0,1,2,--

R34)

0,0,0,0,0,1,0,-->0,0,0,0,0,1,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,  
0,4,--0,0,0,0,0,5,--

R35)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R36)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,  
0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R37)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,0,--0,0,0,0,0,1,  
--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R38)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,1,0,--  
0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R39)

0,0,0,0,0,0,0,4,-->0,0,0,0,1,0,--0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,  
0,0,1,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R40)

0,0,0,0,0,0,0,5,-->0,0,0,1,0,--0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,  
0,0,4,--0,0,1,0,--0,0,1,--0,0,2,--



R41)

0,0,0,0,0,0,0,6,-->0,0,1,0,--0,0,0,1,--0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,1,0,--0,1,--

R42)

0,0,0,0,0,0,0,7,-->0,1,0,--0,0,1,--0,0,0,2,--0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,1,2,--

R43)

0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R44)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R45)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

R46)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--

R47)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--

R48)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,1,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--

R49)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,1,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--

R50)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,1,0,--0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,1,0,--0,0,1,--0,0,2,--

R51)

0,0,0,0,0,0,0,0,7,-->0,0,1,0,--0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,1,0,--0,1,--

R52)

0,0,0,0,0,0,0,0,8,-->0,1,0,--0,0,1,--0,0,0,2,--0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,1,2,--

R53)

0,0,0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,: 0,1,0,: 0,1,2,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,: 0,0,1,0,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,: 0,0,0,1,0,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,:

0,0,0,0,0,5,: 0,0,0,0,1,0,:  
 LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,:  
 0,0,0,0,0,0,4,: 0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,: 0,0,0,0,0,1,0,:  
 LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,:  
 0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:  
 0,0,0,0,0,0,1,0,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:  
 0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,:  
 0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,1,0,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,2,:  
 0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,:  
 0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,:  
 0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,0,1,0,:  
 Number new nodes in level n is given by : 1,2,5,5,6,7,8,9,10,11,

-----Class

1144-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][100][110][120][210]]$   
 -----

--  
Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--
- R3) 0,1,-->0,1,0,--0,1,2,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R5) 0,0,1,-->0,0,1,0,--0,1,0,--0,1,--
- R6) 0,0,2,-->0,0,1,--0,1,0,--0,1,2,--
- R7) 0,1,0,-->0,1,0,--0,1,--
- R8) 0,1,2,-->0,1,2,--
- R9) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R10) 0,0,0,1,-->0,0,0,1,0,--0,0,1,0,--0,0,1,--0,0,2,--
- R11) 0,0,0,2,-->0,0,0,1,--0,0,1,0,--0,1,0,--0,1,--
- R12) 0,0,0,3,-->0,0,0,2,--0,0,1,--0,1,0,--0,1,2,--
- R13) 0,0,1,0,-->0,0,1,0,--0,0,1,--0,0,2,--
- R14)  
0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--
- R15) 0,0,0,0,1,-->0,0,0,0,1,0,--0,0,0,1,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R16) 0,0,0,0,2,-->0,0,0,0,1,--0,0,0,1,0,--0,0,1,0,--0,0,1,--0,0,2,--
- R17) 0,0,0,0,3,-->0,0,0,0,2,--0,0,0,1,--0,0,1,0,--0,1,0,--0,1,--
- R18) 0,0,0,0,4,-->0,0,0,0,3,--0,0,0,2,--0,0,1,--0,1,0,--0,1,2,--
- R19) 0,0,0,1,0,-->0,0,0,1,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R20)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--
- R21)  
0,0,0,0,0,1,-->0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,  
0,0,0,4,--
- R22)  
0,0,0,0,0,2,-->0,0,0,0,0,1,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,

--

R23)

0,0,0,0,0,3,-->0,0,0,0,0,2,--0,0,0,0,1,--0,0,0,1,0,--0,0,1,0,--0,0,1,--0,0,2,--

R24) 0,0,0,0,0,4,-->0,0,0,0,0,3,--0,0,0,0,2,--0,0,0,1,--0,0,1,0,--0,1,0,--0,1,--

R25) 0,0,0,0,0,5,-->0,0,0,0,0,4,--0,0,0,0,3,--0,0,0,2,--0,0,1,--0,1,0,--0,1,2,--

R26) 0,0,0,0,1,0,-->0,0,0,0,1,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R27)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,

0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R28)

0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,

0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R29)

0,0,0,0,0,0,2,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,0,1,--0,0,0,0,

2,--0,0,0,0,3,--0,0,0,0,4,--

R30)

0,0,0,0,0,0,3,-->0,0,0,0,0,0,2,--0,0,0,0,0,1,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,0,1,--

0,0,0,2,--0,0,0,3,--

R31)

0,0,0,0,0,0,4,-->0,0,0,0,0,0,3,--0,0,0,0,0,2,--0,0,0,0,1,--0,0,0,1,0,--0,0,1,0,--0,

0,1,--0,0,2,--

R32)

0,0,0,0,0,0,5,-->0,0,0,0,0,0,4,--0,0,0,0,0,3,--0,0,0,0,2,--0,0,0,1,--0,0,1,0,--0,1,

0,--0,1,--

R33)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,5,--0,0,0,0,0,4,--0,0,0,0,3,--0,0,0,2,--0,0,1,--0,1,0,

--0,1,2,--

R34)

0,0,0,0,0,1,0,-->0,0,0,0,0,1,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,

0,4,--0,0,0,0,0,5,--

R35)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,

0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,

,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R36)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,

0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R37)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,0,1,

--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R38)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,2,--0,0,0,0,0,0,1,--0,0,0,0,0,1,0,--0,0,0,0,1,0,--

0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R39)

0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,3,--0,0,0,0,0,0,2,--0,0,0,0,0,1,--0,0,0,0,1,0,--0,

0,0,1,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R40)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,4,--0,0,0,0,0,0,3,--0,0,0,0,0,2,--0,0,0,0,1,--0,0,

0,1,0,--0,0,1,0,--0,0,1,--0,0,2,--

R41)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,5,--0,0,0,0,0,0,4,--0,0,0,0,0,3,--0,0,0,0,2,--0,0,  
0,1,--0,0,1,0,--0,1,0,--0,1,--

R42)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,6,--0,0,0,0,0,0,5,--0,0,0,0,0,4,--0,0,0,0,3,--0,0,  
0,2,--0,0,1,--0,1,0,--0,1,2,--

R43)

0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,  
--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R44)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,2,  
2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R45)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,--0,  
0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,  
,6,--0,0,0,0,0,0,7,--

R46)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,  
0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,  
,0,0,6,--

R47)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,0,--0,0,0,  
0,0,1,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R48)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,1,--0,0,0,0,  
0,1,0,--0,0,0,0,1,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R49)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,2,--0,0,0,0,  
0,1,--0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--

R50)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,3,--0,0,0,0,  
0,2,--0,0,0,0,1,--0,0,0,0,1,0,--0,0,1,0,--0,0,1,--0,0,2,--

R51)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,4,--0,0,0,0,  
0,3,--0,0,0,0,2,--0,0,0,0,1,--0,0,1,0,--0,1,0,--0,1,--

R52)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,5,--0,0,0,0,  
0,4,--0,0,0,0,3,--0,0,0,0,2,--0,0,1,--0,1,0,--0,1,2,--

R53)

0,0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,-

-

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,: 0,1,0,: 0,1,2,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,: 0,0,1,0,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,: 0,0,0,1,0,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,:

0,0,0,0,0,5,: 0,0,0,0,1,0,:

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,1,0, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :  
 0,0,0,0,0,0,1,0, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, :  
 0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,1,0, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, :  
 0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :  
 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,1,0, :  
 Number new nodes in level n is given by : 1,2,5,5,6,7,8,9,10,11,

-----Class

1145-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][100][110][201][210]]$

-----

--

Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,0, --0,0,1, --0,0,2, --
- R3) 0,1, -->0,1, --0,1, --
- R4) 0,0,0, -->0,0,0,0, --0,0,0,1, --0,0,0,2, --0,0,0,3, --
- R5) 0,0,1, -->0,0,1, --0,0,1, --0,0,2, --
- R6) 0,0,2, -->0,1, --0,1, --0,0,2, --
- R7) 0,0,0,0, -->0,0,0,0,0, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --
- R8) 0,0,0,1, -->0,0,0,1, --0,0,0,1, --0,0,0,2, --0,0,0,3, --
- R9) 0,0,0,2, -->0,0,1, --0,0,1, --0,0,0,2, --0,0,0,3, --
- R10) 0,0,0,3, -->0,1, --0,1, --0,1, --0,0,0,3, --
- R11)  
0,0,0,0,0, -->0,0,0,0,0,0, --0,0,0,0,0,1, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --  
0,0,0,0,0,5, --
- R12) 0,0,0,0,1, -->0,0,0,0,1, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --
- R13) 0,0,0,0,2, -->0,0,0,1, --0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --
- R14) 0,0,0,0,3, -->0,0,1, --0,0,1, --0,0,1, --0,0,0,0,3, --0,0,0,0,4, --
- R15) 0,0,0,0,4, -->0,1, --0,1, --0,1, --0,1, --0,0,0,0,4, --
- R16)  
0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,0,0,0,0,0,1, --0,0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,  
0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --
- R17)  
0,0,0,0,0,1, -->0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4,  
--0,0,0,0,0,5, --
- R18)  
0,0,0,0,0,2, -->0,0,0,0,1, --0,0,0,0,1, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,  
0,0,0,0,5, --
- R19)  
0,0,0,0,0,3, -->0,0,0,1, --0,0,0,1, --0,0,0,1, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,  
5, --
- R20) 0,0,0,0,0,4, -->0,0,1, --0,0,1, --0,0,1, --0,0,1, --0,0,0,0,0,4, --0,0,0,0,0,5, --

R21) 0,0,0,0,0,5,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,0,0,0,0,5,--  
R22)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R23)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,  
0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R24)  
0,0,0,0,0,0,2,-->0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,  
0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R25)  
0,0,0,0,0,0,3,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,  
--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R26)  
0,0,0,0,0,0,4,-->0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,0,0,0,4,--0,0,0,0,0,  
0,5,--0,0,0,0,0,0,6,--  
R27)  
0,0,0,0,0,0,5,-->0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,0,0,0,0,5,--0,0,0,0,0,  
0,6,--  
R28) 0,0,0,0,0,0,6,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,0,0,0,0,0,6,--  
R29)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--  
R30)  
0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,  
0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R31)  
0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R32)  
0,0,0,0,0,0,0,3,-->0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R33)  
0,0,0,0,0,0,0,4,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,0,0,4,  
--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R34)  
0,0,0,0,0,0,0,5,-->0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,0,0,0,0,  
5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R35)  
0,0,0,0,0,0,0,6,-->0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,0,0,0,0,6,  
--0,0,0,0,0,0,7,--  
R36)  
0,0,0,0,0,0,0,7,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,0,0,0,0,0,7,--  
R37)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--  
R38)  
0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,

0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R39)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R40)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R41)

0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R42)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R43)

0,0,0,0,0,0,0,6,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R44)

0,0,0,0,0,0,0,7,-->0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R45)

0,0,0,0,0,0,0,8,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,0,0,0,0,0,0,8,--

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, : 0,1, :
- LEN=3) 0,0,0, : 0,0,1, : 0,0,2, :
- LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,2, : 0,0,0,3, :
- LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, :
- LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :
- LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, :
- LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :
- LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, :
- LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, :

Number new nodes in level n is given by : 1,2,3,4,5,6,7,8,9,10,

-----Class

1146-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][100][120][201][210]]

-----  
--  
Rules of T[L]:

R1) 0, -->0,0, --0,1, --

R2) 0,0, -->0,0,0, --0,0,1, --0,0,2, --

R3) 0,1, -->0,1,0, --0,1,2, --

R4) 0,0,0, -->0,0,0,0, --0,0,0,1, --0,0,0,2, --0,0,0,3, --

R5) 0,0,1, -->0,0,1,0, --0,1,0, --0,1, --

R6) 0,0,2, -->0,1,0, --0,1,0, --0,1,2, --

R7) 0,1,0, -->0,1,0, --0,1, --

R8) 0,1,2, -->0,1,2, --

R9) 0,0,0,0, -->0,0,0,0,0, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --

R10) 0,0,0,1, -->0,0,0,1,0, --0,0,1,0, --0,0,1, --0,0,2, --

R11) 0,0,0,2, -->0,0,1,0, --0,0,1,0, --0,1,0, --0,1, --

R12) 0,0,0,3, -->0,1,0, --0,1,0, --0,1,0, --0,1,2, --

R13) 0,0,1,0, -->0,0,1,0, --0,0,1, --0,0,2, --

R14)

0,0,0,0,0, -->0,0,0,0,0,0, --0,0,0,0,0,1, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --  
0,0,0,0,0,5, --

R15) 0,0,0,0,1, -->0,0,0,0,1,0, --0,0,0,1,0, --0,0,0,1, --0,0,0,2, --0,0,0,3, --

R16) 0,0,0,0,2, -->0,0,0,1,0, --0,0,0,1,0, --0,0,1,0, --0,0,1, --0,0,2, --

R17) 0,0,0,0,3, -->0,0,1,0, --0,0,1,0, --0,0,1,0, --0,1,0, --0,1, --

R18) 0,0,0,0,4, -->0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,1,2, --

R19) 0,0,0,1,0, -->0,0,0,1,0, --0,0,0,1, --0,0,0,2, --0,0,0,3, --

R20)

0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,0,0,0,0,0,1, --0,0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,  
0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --

R21)

0,0,0,0,0,1, -->0,0,0,0,0,1,0, --0,0,0,0,1,0, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,  
0,0,0,4, --

R22)

0,0,0,0,0,2, -->0,0,0,0,1,0, --0,0,0,0,1,0, --0,0,0,1,0, --0,0,0,1, --0,0,0,2, --0,0,0,3,  
--

R23) 0,0,0,0,0,3, -->0,0,0,1,0, --0,0,0,1,0, --0,0,0,1,0, --0,0,1,0, --0,0,1, --0,0,2, --

R24) 0,0,0,0,0,4, -->0,0,1,0, --0,0,1,0, --0,0,1,0, --0,0,1,0, --0,1,0, --0,1, --

R25) 0,0,0,0,0,5, -->0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,1,2, --

R26) 0,0,0,0,1,0, -->0,0,0,0,1,0, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --

R27)

0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,1, --0,0,0,0,0,0,0,2, --0,0,0,0,0,0,  
0,3, --0,0,0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --0,0,0,0,0,0,7, --

R28)

0,0,0,0,0,0,1, -->0,0,0,0,0,0,1,0, --0,0,0,0,0,1,0, --0,0,0,0,0,1, --0,0,0,0,0,2, --0,0,  
0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5, --

R29)

0,0,0,0,0,0,2, -->0,0,0,0,0,1,0, --0,0,0,0,0,1,0, --0,0,0,0,1,0, --0,0,0,0,1, --0,0,0,0,  
2, --0,0,0,0,3, --0,0,0,0,4, --

R30)

0,0,0,0,0,0,3, -->0,0,0,0,1,0, --0,0,0,0,1,0, --0,0,0,0,1,0, --0,0,0,1,0, --0,0,0,1, --0,  
0,0,2, --0,0,0,3, --

R31)



0,0,0,0,0,0,4,-->0,0,0,1,0,--0,0,0,1,0,--0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,0,1,--  
0,0,2,--

R32)

0,0,0,0,0,0,5,-->0,0,1,0,--0,0,1,0,--0,0,1,0,--0,0,1,0,--0,0,1,0,--0,1,0,--0,1,--

R33) 0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,--

R34)

0,0,0,0,0,1,0,-->0,0,0,0,0,1,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,  
0,4,--0,0,0,0,0,5,--

R35)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R36)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,  
0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R37)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,0,1,  
--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R38)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,  
0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R39)

0,0,0,0,0,0,0,4,-->0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,  
0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R40)

0,0,0,0,0,0,0,5,-->0,0,0,1,0,--0,0,0,1,0,--0,0,0,1,0,--0,0,0,1,0,--0,0,0,1,0,--0,0,  
1,0,--0,0,1,--0,0,2,--

R41)

0,0,0,0,0,0,0,6,-->0,0,1,0,--0,0,1,0,--0,0,1,0,--0,0,1,0,--0,0,1,0,--0,0,1,0,--0,1,  
0,--0,1,--

R42)

0,0,0,0,0,0,0,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,--

R43)

0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,  
--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R44)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,2,  
2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,  
,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R45)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,--0,  
0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
,6,--0,0,0,0,0,0,7,--

R46)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,  
0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,  
,0,0,6,--

R47)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,  
0,1,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R48)  
0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,0,1,0,  
--0,0,0,0,1,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R49)  
0,0,0,0,0,0,0,0,5,-->0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,  
0,1,0,--0,0,0,1,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R50)  
0,0,0,0,0,0,0,0,6,-->0,0,0,1,0,--0,0,0,1,0,--0,0,0,1,0,--0,0,0,1,0,--0,0,0,1,0,--0,  
0,0,1,0,--0,0,1,0,--0,0,1,--0,0,2,--  
R51)  
0,0,0,0,0,0,0,0,7,-->0,0,1,0,--0,0,1,0,--0,0,1,0,--0,0,1,0,--0,0,1,0,--0,0,1,0,--0,  
0,1,0,--0,1,0,--0,1,--  
R52)  
0,0,0,0,0,0,0,0,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,  
--0,1,2,--  
R53)  
0,0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,-  
-

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, : 0,0,2, : 0,1,0, : 0,1,2, :  
LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,2, : 0,0,0,3, : 0,0,1,0, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,1,0, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, :  
0,0,0,0,0,5, : 0,0,0,0,1,0, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :  
0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,1,0, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :  
0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :  
0,0,0,0,0,0,1,0, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, :  
0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, :  
0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,1,0, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :  
0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, :  
0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :  
0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,1,0, :  
Number new nodes in level n is given by : 1,2,5,5,6,7,8,9,10,11,

-----Class

1147-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][101][102][110][120]]

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--  
R3) 0,1,-->0,1,0,--0,1,0,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R5) 0,0,1,-->0,1,0,--0,0,1,2,--0,0,1,3,--  
R6) 0,0,2,-->0,0,2,0,--0,1,0,--0,1,0,--  
R7) 0,1,0,-->0,1,0,--  
R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R9) 0,0,0,1,-->0,1,0,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
R10) 0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,1,2,--0,0,1,3,--  
R11) 0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,0,--0,1,0,--  
R12) 0,0,1,2,-->0,0,1,2,--0,0,1,3,--  
R13) 0,0,1,3,-->0,0,1,3,2,--0,1,0,--  
R14) 0,0,2,0,-->0,0,2,0,--0,1,0,--  
R15)  
0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--  
R16) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--  
R17) 0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
R18) 0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,0,--0,0,1,2,--0,0,1,3,--  
R19) 0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,3,0,--0,1,0,--  
R20) 0,0,0,1,2,-->0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
R21) 0,0,0,1,3,-->0,0,1,3,2,--0,0,1,2,--0,0,1,3,--  
R22) 0,0,0,1,4,-->0,0,0,1,4,2,--0,0,0,1,4,2,--0,1,0,--  
R23) 0,0,0,3,0,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,0,--  
R24) 0,0,0,3,1,-->0,1,0,--0,0,1,3,2,--  
R25) 0,0,1,3,2,-->  
R26)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R27)  
0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,  
5,--0,0,0,0,0,1,6,--  
R28)  
0,0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,  
1,5,--  
R29)  
0,0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,0,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,  
--  
R30)  
0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,3,0,--0,0,1,2,--0,0,  
1,3,--  
R31)  
0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,  
0,0,4,0,--0,1,0,--  
R32) 0,0,0,0,1,2,-->0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--  
R33) 0,0,0,0,1,3,-->0,0,1,3,2,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
R34) 0,0,0,0,1,4,-->0,0,0,1,4,2,--0,0,0,1,4,2,--0,0,1,2,--0,0,1,3,--  
R35) 0,0,0,0,1,5,-->0,0,0,0,1,5,2,--0,0,0,0,1,5,3,--0,0,0,0,1,5,2,--0,1,0,--  
R36) 0,0,0,0,4,0,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,3,0,--  
R37) 0,0,0,0,4,1,-->0,1,0,--0,0,0,1,4,2,--0,0,0,1,4,2,--  
R38) 0,0,0,0,4,2,-->0,0,2,0,--0,1,0,--0,0,1,3,2,--  
R39) 0,0,0,1,4,2,-->0,0,1,3,2,--

R40)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R41)

0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--

R42)

0,0,0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--

R43)

0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,0,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R44)

0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,3,0,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--

R45)

0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,4,0,--0,0,1,2,--0,0,1,3,--

R46)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,5,0,--0,1,0,--

R47)

0,0,0,0,0,1,2,-->0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--

R48)

0,0,0,0,0,1,3,-->0,0,1,3,2,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R49)

0,0,0,0,0,1,4,-->0,0,0,1,4,2,--0,0,0,1,4,2,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--

R50)

0,0,0,0,0,1,5,-->0,0,0,0,1,5,2,--0,0,0,0,1,5,3,--0,0,0,0,1,5,2,--0,0,1,2,--0,0,1,3,--

R51)

0,0,0,0,0,1,6,-->0,0,0,0,0,1,6,2,--0,0,0,0,0,1,6,3,--0,0,0,0,0,1,6,4,--0,0,0,0,0,1,6,2,--0,1,0,--

R52)

0,0,0,0,0,5,0,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,0,0,4,0,--

R53) 0,0,0,0,0,5,1,-->0,1,0,--0,0,0,0,1,5,2,--0,0,0,0,1,5,3,--0,0,0,0,1,5,2,--

R54) 0,0,0,0,0,5,2,-->0,0,2,0,--0,1,0,--0,0,0,1,4,2,--0,0,0,1,4,2,--

R55) 0,0,0,0,0,5,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,0,--0,0,1,3,2,--

R56) 0,0,0,0,1,5,2,-->0,0,0,1,4,2,--0,0,0,1,4,2,--

R57) 0,0,0,0,1,5,3,-->0,0,1,3,2,--0,0,1,3,2,--

R58)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R59)

0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,1,4,--0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,1,7,--0,0,0,0,0,0,0,1,8,--

-

R60)

0,0,0,0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,  
0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--

R61)

0,0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,0,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,  
--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--

R62)

0,0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,3,0,--0,0,0,0,1,  
2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R63)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--  
0,0,0,0,4,0,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--

R64)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,  
0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,5,0,--0,0,1,2,--0,0,1,3,--

R65)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,7,2,--0,0,  
0,0,0,0,0,7,3,--0,0,0,0,0,0,0,7,4,--0,0,0,0,0,0,0,7,5,--0,0,0,0,0,0,6,0,--0,1,0,--

R66)

0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,  
0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--

R67)

0,0,0,0,0,0,1,3,-->0,0,1,3,2,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,  
0,0,0,1,5,--0,0,0,0,0,1,6,--

R68)

0,0,0,0,0,0,1,4,-->0,0,0,1,4,2,--0,0,0,1,4,2,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,  
1,4,--0,0,0,0,1,5,--

R69)

0,0,0,0,0,0,1,5,-->0,0,0,0,1,5,2,--0,0,0,0,1,5,3,--0,0,0,0,1,5,2,--0,0,0,1,2,--0,0,  
0,1,3,--0,0,0,1,4,--

R70)

0,0,0,0,0,0,1,6,-->0,0,0,0,0,1,6,2,--0,0,0,0,0,1,6,3,--0,0,0,0,0,1,6,4,--0,0,0,0,0,  
1,6,2,--0,0,1,2,--0,0,1,3,--

R71)

0,0,0,0,0,0,1,7,-->0,0,0,0,0,0,1,7,2,--0,0,0,0,0,0,1,7,3,--0,0,0,0,0,0,1,7,4,--0,0,  
0,0,0,0,1,7,5,--0,0,0,0,0,0,1,7,2,--0,1,0,--

R72)

0,0,0,0,0,0,6,0,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,  
0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,5,0,--

R73)

0,0,0,0,0,0,6,1,-->0,1,0,--0,0,0,0,0,1,6,2,--0,0,0,0,0,1,6,3,--0,0,0,0,0,1,6,4,--0,  
0,0,0,0,1,6,2,--

R74)

0,0,0,0,0,0,6,2,-->0,0,2,0,--0,1,0,--0,0,0,0,1,5,2,--0,0,0,0,1,5,3,--0,0,0,0,1,5,2,  
--

R75)

0,0,0,0,0,0,6,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,0,--0,0,0,1,4,2,--0,0,0,1,4,2,--

R76)

0,0,0,0,0,0,6,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,3,0,--0,0,1,3,2,

--

R77) 0,0,0,0,0,1,6,2,-->0,0,0,0,1,5,2,--0,0,0,0,1,5,3,--0,0,0,0,1,5,2,--

R78) 0,0,0,0,0,1,6,3,-->0,0,1,3,2,--0,0,0,1,4,2,--0,0,0,1,4,2,--

R79) 0,0,0,0,0,1,6,4,-->0,0,0,1,4,2,--0,0,0,1,4,2,--0,0,1,3,2,--

R80)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,  
0,0,6,--0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,9,--

R81)

0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,  
0,0,0,1,4,--0,0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,0,1,7,--0,0,0,0,  
0,0,0,0,0,1,8,--0,0,0,0,0,0,0,0,1,9,--

R82)

0,0,0,0,0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,3,--0,0,0,  
0,0,0,0,0,1,4,--0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,1,7,--0,0,0,0,  
0,0,0,1,8,--

R83)

0,0,0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,0,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,  
0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--

R84)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,3,0,--0,0,0,0,  
0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--

R85)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,  
--0,0,0,0,4,0,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R86)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,  
0,0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,5,0,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--

R87)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,7,2,--0,  
0,0,0,0,0,0,7,3,--0,0,0,0,0,0,7,4,--0,0,0,0,0,0,7,5,--0,0,0,0,0,0,6,0,--0,0,1,2,  
--0,0,1,3,--

R88)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,0,--0,0,0,0,0,0,0,8,1,--0,0,0,0,0,0,0,8,  
2,--0,0,0,0,0,0,0,8,3,--0,0,0,0,0,0,0,8,4,--0,0,0,0,0,0,0,8,5,--0,0,0,0,0,0,0,  
0,8,6,--0,0,0,0,0,0,0,7,0,--0,1,0,--

R89)

0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,1,4,--0,  
0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,1,7,--0,0,0,0,0,0,0,1,8,--

R90)

0,0,0,0,0,0,0,1,3,-->0,0,1,3,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,  
4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--

R91)

0,0,0,0,0,0,0,1,4,-->0,0,0,1,4,2,--0,0,0,1,4,2,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,  
0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--

R92)

0,0,0,0,0,0,0,1,5,-->0,0,0,0,1,5,2,--0,0,0,0,1,5,3,--0,0,0,0,1,5,2,--0,0,0,0,1,2,--  
0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R93)

0,0,0,0,0,0,0,1,6,-->0,0,0,0,0,1,6,2,--0,0,0,0,0,1,6,3,--0,0,0,0,0,1,6,4,--0,0,0,0,

0,1,6,2,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
 R94)  
 0,0,0,0,0,0,1,7,-->0,0,0,0,0,0,1,7,2,--0,0,0,0,0,0,1,7,3,--0,0,0,0,0,0,1,7,4,--0,  
 0,0,0,0,0,1,7,5,--0,0,0,0,0,0,1,7,2,--0,0,1,2,--0,0,1,3,--  
 R95)  
 0,0,0,0,0,0,1,8,-->0,0,0,0,0,0,1,8,2,--0,0,0,0,0,0,1,8,3,--0,0,0,0,0,0,1,8,  
 4,--0,0,0,0,0,0,1,8,5,--0,0,0,0,0,0,1,8,6,--0,0,0,0,0,0,1,8,2,--0,1,0,--  
 R96)  
 0,0,0,0,0,0,7,0,-->0,0,0,0,0,0,7,0,--0,0,0,0,0,0,7,1,--0,0,0,0,0,0,7,2,--0,  
 0,0,0,0,0,0,7,3,--0,0,0,0,0,0,7,4,--0,0,0,0,0,0,7,5,--0,0,0,0,0,0,6,0,--  
 R97)  
 0,0,0,0,0,0,7,1,-->0,1,0,--0,0,0,0,0,0,1,7,2,--0,0,0,0,0,0,1,7,3,--0,0,0,0,0,0,1,  
 7,4,--0,0,0,0,0,0,1,7,5,--0,0,0,0,0,0,1,7,2,--  
 R98)  
 0,0,0,0,0,0,7,2,-->0,0,2,0,--0,1,0,--0,0,0,0,0,1,6,2,--0,0,0,0,0,1,6,3,--0,0,0,0,  
 0,1,6,4,--0,0,0,0,0,1,6,2,--  
 R99)  
 0,0,0,0,0,0,7,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,0,--0,0,0,0,1,5,2,--0,0,0,0,1,5,  
 3,--0,0,0,0,1,5,2,--  
 R100)  
 0,0,0,0,0,0,7,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,3,0,--0,0,0,1,  
 4,2,--0,0,0,1,4,2,--  
 R101)  
 0,0,0,0,0,0,7,5,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,  
 --0,0,0,0,4,0,--0,0,1,3,2,--  
 R102)  
 0,0,0,0,0,0,1,7,2,-->0,0,0,0,0,1,6,2,--0,0,0,0,0,1,6,3,--0,0,0,0,0,1,6,4,--0,0,0,0,  
 0,1,6,2,--  
 R103)  
 0,0,0,0,0,0,1,7,3,-->0,0,1,3,2,--0,0,0,0,1,5,2,--0,0,0,0,1,5,3,--0,0,0,0,1,5,2,--  
 R104) 0,0,0,0,0,0,1,7,4,-->0,0,0,1,4,2,--0,0,0,1,4,2,--0,0,0,1,4,2,--0,0,0,1,4,2,--  
 R105)  
 0,0,0,0,0,0,1,7,5,-->0,0,0,0,1,5,2,--0,0,0,0,1,5,3,--0,0,0,0,1,5,2,--0,0,1,3,2,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,1, : 0,0,2, : 0,1,0, :  
 LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,2, : 0,0,0,3, : 0,0,1,2, : 0,0,1,3, : 0,0,2,0, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,1,2, :  
 0,0,0,1,3, : 0,0,0,1,4, : 0,0,0,3,0, : 0,0,0,3,1, : 0,0,1,3,2, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, :  
 0,0,0,0,0,5, : 0,0,0,0,1,2, : 0,0,0,0,1,3, : 0,0,0,0,1,4, : 0,0,0,0,1,5, : 0,0,0,0,4,0, :  
 0,0,0,0,4,1, : 0,0,0,0,4,2, : 0,0,0,1,4,2, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,1,2, : 0,0,0,0,0,1,3, :  
 0,0,0,0,0,1,4, : 0,0,0,0,0,1,5, : 0,0,0,0,0,1,6, : 0,0,0,0,0,5,0, : 0,0,0,0,0,5,1, :  
 0,0,0,0,0,5,2, : 0,0,0,0,0,5,3, : 0,0,0,0,1,5,2, : 0,0,0,0,1,5,3, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :  
 0,0,0,0,0,0,1,2, : 0,0,0,0,0,0,1,3, : 0,0,0,0,0,0,1,4, : 0,0,0,0,0,0,1,5, :

0,0,0,0,0,0,1,6,: 0,0,0,0,0,0,1,7,: 0,0,0,0,0,0,6,0,: 0,0,0,0,0,0,6,1,:  
 0,0,0,0,0,0,6,2,: 0,0,0,0,0,0,6,3,: 0,0,0,0,0,0,6,4,: 0,0,0,0,0,1,6,2,:  
 0,0,0,0,0,1,6,3,: 0,0,0,0,0,1,6,4,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:  
 0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,:  
 0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,1,2,: 0,0,0,0,0,0,0,1,3,:  
 0,0,0,0,0,0,0,1,4,: 0,0,0,0,0,0,0,1,5,: 0,0,0,0,0,0,0,1,6,: 0,0,0,0,0,0,0,1,7,:  
 0,0,0,0,0,0,0,1,8,: 0,0,0,0,0,0,0,7,0,: 0,0,0,0,0,0,0,7,1,: 0,0,0,0,0,0,0,7,2,:  
 0,0,0,0,0,0,0,7,3,: 0,0,0,0,0,0,0,7,4,: 0,0,0,0,0,0,0,7,5,: 0,0,0,0,0,0,1,7,2,:  
 0,0,0,0,0,0,1,7,3,: 0,0,0,0,0,0,1,7,4,: 0,0,0,0,0,0,1,7,5,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,2,:  
 0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,:  
 0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,:  
 0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,0,1,2,: 0,0,0,0,0,0,0,0,1,3,:  
 0,0,0,0,0,0,0,0,1,4,: 0,0,0,0,0,0,0,0,1,5,: 0,0,0,0,0,0,0,0,1,6,:  
 0,0,0,0,0,0,0,0,1,7,: 0,0,0,0,0,0,0,0,1,8,: 0,0,0,0,0,0,0,0,1,9,:  
 0,0,0,0,0,0,0,0,8,0,: 0,0,0,0,0,0,0,0,8,1,: 0,0,0,0,0,0,0,0,8,2,:  
 0,0,0,0,0,0,0,0,8,3,: 0,0,0,0,0,0,0,0,8,4,: 0,0,0,0,0,0,0,0,8,5,:  
 0,0,0,0,0,0,0,0,8,6,: 0,0,0,0,0,0,0,1,8,2,: 0,0,0,0,0,0,0,1,8,3,:  
 0,0,0,0,0,0,0,1,8,4,: 0,0,0,0,0,0,0,1,8,5,: 0,0,0,0,0,0,0,1,8,6,:  
 Number new nodes in level n is given by : 1,2,4,7,11,14,18,22,26,30,

-----Class  
 1148-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][101][102][110][201]]$   
 -----  
 --  
 Rules of  $T[L]$ :  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--  
 R3) 0,1,-->0,1,0,--0,1,--  
 R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
 R5) 0,0,1,-->0,1,0,--0,0,1,--0,0,2,--  
 R6) 0,0,2,-->0,1,0,--0,1,0,--0,0,2,--  
 R7) 0,1,0,-->0,1,0,--  
 R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
 R9) 0,0,0,1,-->0,1,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
 R10) 0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,2,--0,0,0,3,--  
 R11) 0,0,0,3,-->0,1,0,--0,1,0,--0,0,0,3,2,--0,0,0,3,--  
 R12)  
 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
 0,0,0,0,0,5,--  
 R13) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
 R14) 0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
 R15) 0,0,0,0,3,-->0,1,0,--0,1,0,--0,0,0,0,3,2,--0,0,0,0,3,--0,0,0,0,4,--  
 R16) 0,0,0,0,4,-->0,1,0,--0,1,0,--0,0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,4,--  
 R17) 0,0,0,3,2,-->0,1,0,--0,1,0,--  
 R18)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
 0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--



R19)

0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R20)

0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R21)

0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,0,0,0,3,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R22)

0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,0,0,0,3,2,--0,0,0,0,0,4,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R23)

0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,0,0,0,3,2,--0,0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,5,--

R24) 0,0,0,0,0,4,3,-->0,1,0,--0,1,0,--0,0,0,0,3,2,--

R25)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R26)

0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R27)

0,0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R28)

0,0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,0,0,0,3,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R29)

0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,0,0,0,3,2,--0,0,0,0,0,4,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R30)

0,0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,0,0,0,3,2,--0,0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R31)

0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,0,0,0,3,2,--0,0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--0,0,0,0,0,0,6,--

R32) 0,0,0,0,0,0,5,4,-->0,1,0,--0,1,0,--0,0,0,0,3,2,--0,0,0,0,0,4,3,--

R33)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R34)

0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R35)

0,0,0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R36)

0,0,0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,0,0,0,3,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--

0,0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R37)

0,0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,0,4,--0,0,  
0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R38)

0,0,0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,  
0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R39)

0,0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,  
0,0,0,6,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R40)

0,0,0,0,0,0,0,7,-->0,1,0,--0,1,0,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,  
0,0,0,6,5,--0,0,0,0,0,0,7,6,--0,0,0,0,0,0,7,--

R41) 0,0,0,0,0,0,6,5,-->0,1,0,--0,1,0,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--

R42)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R43)

0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,  
,--0,0,0,0,0,0,0,0,8,--

R44)

0,0,0,0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,  
0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,  
,0,0,0,8,--

R45)

0,0,0,0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,0,0,3,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,  
0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,  
,--

R46)

0,0,0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,0,0,4,--  
0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R47)

0,0,0,0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,  
0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R48)

0,0,0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,  
0,0,0,0,6,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R49)

0,0,0,0,0,0,0,0,7,-->0,1,0,--0,1,0,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,  
0,0,0,0,6,5,--0,0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R50)

0,0,0,0,0,0,0,0,8,-->0,1,0,--0,1,0,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,  
0,0,0,0,6,5,--0,0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,0,8,7,--0,0,0,0,0,0,0,0,8,--

R51)

0,0,0,0,0,0,0,7,6,-->0,1,0,--0,1,0,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,  
0,0,0,0,6,5,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:  
 LEN=3) 0,0,0,: 0,0,1,: 0,0,2,: 0,1,0,:  
 LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,:  
 LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,: 0,0,0,3,2,:  
 LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,:  
 0,0,0,0,0,5,: 0,0,0,0,4,3,:  
 LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,:  
 0,0,0,0,0,0,4,: 0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,: 0,0,0,0,0,5,4,:  
 LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,:  
 0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:  
 0,0,0,0,0,0,6,5,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:  
 0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,:  
 0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,7,6,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,2,:  
 0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,:  
 0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,:  
 0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,0,8,7,:  
 Number new nodes in level n is given by : 1,2,4,4,6,7,8,9,10,11,

-----Class

1149-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][101][102][110][210]]$   
 -----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--
- R3) 0,1,-->0,1,0,--0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R5) 0,0,1,-->0,1,0,--0,0,1,--0,0,1,3,--
- R6) 0,0,2,-->0,0,2,0,--0,0,2,1,--0,0,2,--
- R7) 0,1,0,-->0,1,0,--
- R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R9) 0,0,0,1,-->0,1,0,--0,0,0,1,--0,0,0,1,3,--0,0,0,1,4,--
- R10) 0,0,0,2,-->0,0,2,0,--0,0,2,1,--0,0,0,2,--0,0,0,2,4,--
- R11) 0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--0,0,0,3,--
- R12) 0,0,1,3,-->0,1,0,--0,0,2,1,--0,0,1,3,--
- R13) 0,0,2,0,-->0,0,2,0,--0,0,2,1,--
- R14) 0,0,2,1,-->
- R15) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--
- R16) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--
- R17) 0,0,0,0,2,-->0,0,2,0,--0,0,2,1,--0,0,0,0,2,--0,0,0,0,2,4,--0,0,0,0,2,5,--
- R18) 0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,3,--0,0,0,0,3,5,--
- R19) 0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,4,--
- R20) 0,0,0,1,3,-->0,1,0,--0,0,2,1,--0,0,0,1,3,--0,0,0,1,3,5,--
- R21) 0,0,0,1,4,-->0,1,0,--0,0,0,3,1,--0,0,2,1,--0,0,0,1,4,--
- R22) 0,0,0,2,4,-->0,0,2,0,--0,0,2,1,--0,0,2,1,--0,0,0,2,4,--

R23) 0,0,0,3,0,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--  
R24) 0,0,0,3,1,-->0,0,2,1,--  
R25)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R26)  
0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,  
--0,0,0,0,0,1,6,--  
R27)  
0,0,0,0,0,2,-->0,0,2,0,--0,0,2,1,--0,0,0,0,0,2,--0,0,0,0,0,2,4,--0,0,0,0,0,2,5,--0,  
0,0,0,0,2,6,--  
R28)  
0,0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,3,--0,0,0,0,0,3,5,--0,0,  
0,0,0,3,6,--  
R29)  
0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,4,--0,0,  
0,0,0,4,6,--  
R30)  
0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--  
0,0,0,0,0,5,--  
R31)  
0,0,0,0,1,3,-->0,1,0,--0,0,2,1,--0,0,0,0,1,3,--0,0,0,0,1,3,5,--0,0,0,0,1,3,6,--  
R32) 0,0,0,0,1,4,-->0,1,0,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,1,4,--0,0,0,0,1,4,6,--  
R33) 0,0,0,0,1,5,-->0,1,0,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,1,5,--  
R34) 0,0,0,0,2,4,-->0,0,2,0,--0,0,2,1,--0,0,2,1,--0,0,0,0,2,4,--0,0,0,0,2,4,6,--  
R35) 0,0,0,0,2,5,-->0,0,2,0,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,2,5,--  
R36) 0,0,0,0,3,5,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,3,5,--  
R37) 0,0,0,0,4,0,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--  
R38) 0,0,0,0,4,1,-->0,0,0,3,1,--0,0,2,1,--  
R39) 0,0,0,1,3,5,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,0,1,3,5,--  
R40)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R41)  
0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,  
0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--  
R42)  
0,0,0,0,0,0,2,-->0,0,2,0,--0,0,2,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,2,4,--0,0,0,0,0,0,  
2,5,--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,2,7,--  
R43)  
0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,3,5,  
--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,7,--  
R44)  
0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,4,--  
0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,7,--  
R45)  
0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,  
--0,0,0,0,0,0,5,--0,0,0,0,0,0,5,7,--  
R46)  
0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--

0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,6,--

R47)

0,0,0,0,0,1,3,-->0,1,0,--0,0,2,1,--0,0,0,0,0,1,3,--0,0,0,0,0,1,3,5,--0,0,0,0,0,1,3,6,--0,0,0,0,0,1,3,7,--

R48)

0,0,0,0,0,1,4,-->0,1,0,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,1,4,--0,0,0,0,0,1,4,6,--0,0,0,0,0,1,4,7,--

R49)

0,0,0,0,0,1,5,-->0,1,0,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,1,5,--0,0,0,0,0,1,5,7,--

R50)

0,0,0,0,0,1,6,-->0,1,0,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,1,6,--

R51)

0,0,0,0,0,2,4,-->0,0,2,0,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,2,4,--0,0,0,0,0,2,4,6,--0,0,0,0,0,2,4,7,--

R52)

0,0,0,0,0,2,5,-->0,0,2,0,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,2,5,--0,0,0,0,0,2,5,7,--

R53)

0,0,0,0,0,2,6,-->0,0,2,0,--0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,2,6,--

R54)

0,0,0,0,0,3,5,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,3,5,--0,0,0,0,0,3,5,7,--

R55)

0,0,0,0,0,3,6,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,3,6,--

R56)

0,0,0,0,0,4,6,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,4,6,--

R57)

0,0,0,0,0,5,0,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--

R58) 0,0,0,0,0,5,1,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--

R59)

0,0,0,0,1,3,5,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,0,0,1,3,5,--0,0,0,0,1,3,5,7,--

R60) 0,0,0,0,1,3,6,-->0,1,0,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,1,3,6,--

R61) 0,0,0,0,1,4,6,-->0,1,0,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,1,4,6,--

R62) 0,0,0,0,2,4,6,-->0,0,2,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,2,4,6,--

R63)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R64)

0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,1,4,--0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,1,7,--0,0,0,0,0,0,0,1,8,--

R65)

0,0,0,0,0,0,0,2,-->0,0,2,0,--0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,2,4,--0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,2,8,--

R66)

0,0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,  
0,3,5,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,7,--0,0,0,0,0,0,3,8,--

R67)

0,0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,  
4,--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,7,--0,0,0,0,0,0,4,8,--

R68)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,  
1,--0,0,0,0,0,0,5,--0,0,0,0,0,0,5,7,--0,0,0,0,0,0,5,8,--

R69)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,  
--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,6,--0,0,0,0,0,0,6,8,--

R70)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,6,1,--0,0,0,  
0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,7,--

R71)

0,0,0,0,0,0,1,3,-->0,1,0,--0,0,2,1,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,3,5,--0,0,0,0,  
0,0,1,3,6,--0,0,0,0,0,0,1,3,7,--0,0,0,0,0,0,1,3,8,--

R72)

0,0,0,0,0,0,1,4,-->0,1,0,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,4,  
6,--0,0,0,0,0,0,1,4,7,--0,0,0,0,0,0,1,4,8,--

R73)

0,0,0,0,0,0,1,5,-->0,1,0,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,1,5,--0,  
0,0,0,0,0,0,1,5,7,--0,0,0,0,0,0,1,5,8,--

R74)

0,0,0,0,0,0,1,6,-->0,1,0,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,  
0,0,0,0,1,6,--0,0,0,0,0,0,1,6,8,--

R75)

0,0,0,0,0,0,1,7,-->0,1,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,  
1,--0,0,2,1,--0,0,0,0,0,0,1,7,--

R76)

0,0,0,0,0,0,2,4,-->0,0,2,0,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,2,4,--0,0,0,0,0,0,2,4,  
6,--0,0,0,0,0,0,2,4,7,--0,0,0,0,0,0,2,4,8,--

R77)

0,0,0,0,0,0,2,5,-->0,0,2,0,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,2,5,--0,0,  
0,0,0,0,2,5,7,--0,0,0,0,0,0,2,5,8,--

R78)

0,0,0,0,0,0,2,6,-->0,0,2,0,--0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,  
0,0,2,6,--0,0,0,0,0,0,2,6,8,--

R79)

0,0,0,0,0,0,2,7,-->0,0,2,0,--0,0,2,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,  
0,2,1,--0,0,0,0,0,0,2,7,--

R80)

0,0,0,0,0,0,3,5,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,3,5,--0,  
0,0,0,0,0,0,3,5,7,--0,0,0,0,0,0,3,5,8,--

R81)

0,0,0,0,0,0,3,6,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,  
0,0,3,6,--0,0,0,0,0,0,3,6,8,--

R82)

0,0,0,0,0,0,3,7,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,

2,1,--0,0,0,0,0,0,3,7,--  
R83)  
0,0,0,0,0,0,4,6,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,  
0,0,0,0,4,6,--0,0,0,0,0,0,4,6,8,--  
R84)  
0,0,0,0,0,0,4,7,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,  
0,2,1,--0,0,0,0,0,0,4,7,--  
R85)  
0,0,0,0,0,0,5,7,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,  
1,--0,0,2,1,--0,0,0,0,0,0,5,7,--  
R86)  
0,0,0,0,0,0,6,0,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,  
--0,0,0,3,1,--0,0,2,1,--  
R87) 0,0,0,0,0,0,6,1,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--  
R88)  
0,0,0,0,0,1,3,5,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,1,3,5,--0,0,0,0,0,1,3,5,7,  
--0,0,0,0,0,1,3,5,8,--  
R89)  
0,0,0,0,0,1,3,6,-->0,1,0,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,1,3,6,--0,0,0,  
0,0,1,3,6,8,--  
R90)  
0,0,0,0,0,1,3,7,-->0,1,0,--0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,  
1,3,7,--  
R91)  
0,0,0,0,0,1,4,6,-->0,1,0,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,1,4,6,--0,0,0,  
0,0,1,4,6,8,--  
R92)  
0,0,0,0,0,1,4,7,-->0,1,0,--0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,1,  
4,7,--  
R93)  
0,0,0,0,0,1,5,7,-->0,1,0,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,  
1,5,7,--  
R94)  
0,0,0,0,0,2,4,6,-->0,0,2,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,2,4,6,--0,0,0,  
0,0,2,4,6,8,--  
R95)  
0,0,0,0,0,2,4,7,-->0,0,2,0,--0,0,2,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,2,  
4,7,--  
R96)  
0,0,0,0,0,2,5,7,-->0,0,2,0,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,2,  
5,7,--  
R97)  
0,0,0,0,0,3,5,7,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,  
3,5,7,--  
R98) 0,0,0,0,1,3,5,7,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,1,3,5,7,--  
R99)  
0,0,0,0,0,0,0,0,0,-->0,  
2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--  
R100)

0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,  
0,0,1,4,--0,0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,0,1,7,--0,0,0,0,  
,0,0,0,0,1,8,--0,0,0,0,0,0,0,0,1,9,--

R101)

0,0,0,0,0,0,0,0,2,-->0,0,2,0,--0,0,2,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,2,4,--  
0,0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,0,2,  
,8,--0,0,0,0,0,0,0,0,2,9,--

R102)

0,0,0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,3,--0,0,0,0,  
0,0,0,0,3,5,--0,0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,0,3,8,--0,0,  
,0,0,0,0,0,0,3,9,--

R103)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,  
0,0,4,--0,0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,0,4,8,--0,0,0,0,0,  
,0,0,0,4,9,--

R104)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,  
2,1,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,0,5,8,--0,0,0,0,0,0,  
,0,5,9,--

R105)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,  
1,--0,0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,  
,6,9,--

R106)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,6,1,--0,0,  
0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,  
,7,9,--

R107)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,0,--0,0,0,0,0,0,0,8,1,--0,0,0,0,0,0,7,1,  
--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,  
,0,0,8,--

R108)

0,0,0,0,0,0,0,1,3,-->0,1,0,--0,0,2,1,--0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,1,3,5,--0,  
0,0,0,0,0,0,1,3,6,--0,0,0,0,0,0,0,1,3,7,--0,0,0,0,0,0,0,1,3,8,--0,0,0,0,0,0,0,1,3,9,  
,--

R109)

0,0,0,0,0,0,0,1,4,-->0,1,0,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,1,4,--0,0,0,0,0,0,  
0,1,4,6,--0,0,0,0,0,0,0,1,4,7,--0,0,0,0,0,0,0,1,4,8,--0,0,0,0,0,0,0,1,4,9,--

R110)

0,0,0,0,0,0,0,1,5,-->0,1,0,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,1,5,  
--0,0,0,0,0,0,0,1,5,7,--0,0,0,0,0,0,0,1,5,8,--0,0,0,0,0,0,0,1,5,9,--

R111)

0,0,0,0,0,0,0,1,6,-->0,1,0,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,  
0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,1,6,8,--0,0,0,0,0,0,0,1,6,9,--

R112)

0,0,0,0,0,0,0,1,7,-->0,1,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,  
3,1,--0,0,2,1,--0,0,0,0,0,0,0,1,7,--0,0,0,0,0,0,0,1,7,9,--

R113)

0,0,0,0,0,0,0,1,8,-->0,1,0,--0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--  
0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,1,8,--



R114)

0,0,0,0,0,0,0,2,4,-->0,0,2,0,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,2,4,--0,0,0,0,0,0,  
0,2,4,6,--0,0,0,0,0,0,2,4,7,--0,0,0,0,0,0,2,4,8,--0,0,0,0,0,0,2,4,9,--

R115)

0,0,0,0,0,0,0,2,5,-->0,0,2,0,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,2,5,--  
0,0,0,0,0,0,0,2,5,7,--0,0,0,0,0,0,2,5,8,--0,0,0,0,0,0,2,5,9,--

R116)

0,0,0,0,0,0,0,2,6,-->0,0,2,0,--0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,  
0,0,0,0,2,6,--0,0,0,0,0,0,2,6,8,--0,0,0,0,0,0,2,6,9,--

R117)

0,0,0,0,0,0,0,2,7,-->0,0,2,0,--0,0,2,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--  
0,0,2,1,--0,0,0,0,0,0,2,7,--0,0,0,0,0,0,2,7,9,--

R118)

0,0,0,0,0,0,0,2,8,-->0,0,2,0,--0,0,2,1,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,  
4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,2,8,--

R119)

0,0,0,0,0,0,0,3,5,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,3,5,  
--0,0,0,0,0,0,3,5,7,--0,0,0,0,0,0,3,5,8,--0,0,0,0,0,0,3,5,9,--

R120)

0,0,0,0,0,0,0,3,6,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,  
0,0,0,0,3,6,--0,0,0,0,0,0,3,6,8,--0,0,0,0,0,0,3,6,9,--

R121)

0,0,0,0,0,0,0,3,7,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,  
0,2,1,--0,0,0,0,0,0,3,7,--0,0,0,0,0,0,3,7,9,--

R122)

0,0,0,0,0,0,0,3,8,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,  
--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,3,8,--

R123)

0,0,0,0,0,0,0,4,6,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,  
0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,6,8,--0,0,0,0,0,0,4,6,9,--

R124)

0,0,0,0,0,0,0,4,7,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--  
0,0,2,1,--0,0,0,0,0,0,4,7,--0,0,0,0,0,0,4,7,9,--

R125)

0,0,0,0,0,0,0,4,8,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,4,1,  
--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,4,8,--

R126)

0,0,0,0,0,0,0,5,7,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,  
2,1,--0,0,2,1,--0,0,0,0,0,0,5,7,--0,0,0,0,0,0,5,7,9,--

R127)

0,0,0,0,0,0,0,5,8,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,  
2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,5,8,--

R128)

0,0,0,0,0,0,0,6,8,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,  
1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,6,8,--

R129)

0,0,0,0,0,0,0,7,0,-->0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,6,1,--0,0,  
0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--

R130)

0,0,0,0,0,0,0,7,1,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,

0,2,1,--  
R131)  
0,0,0,0,0,0,1,3,5,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,1,3,5,--0,0,0,0,0,0,1,  
3,5,7,--0,0,0,0,0,0,1,3,5,8,--0,0,0,0,0,0,1,3,5,9,--  
R132)  
0,0,0,0,0,0,1,3,6,-->0,1,0,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,1,3,6,--0,  
0,0,0,0,0,0,1,3,6,8,--0,0,0,0,0,0,1,3,6,9,--  
R133)  
0,0,0,0,0,0,1,3,7,-->0,1,0,--0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,  
0,0,1,3,7,--0,0,0,0,0,0,1,3,7,9,--  
R134)  
0,0,0,0,0,0,1,3,8,-->0,1,0,--0,0,2,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,  
0,2,1,--0,0,0,0,0,0,1,3,8,--  
R135)  
0,0,0,0,0,0,1,4,6,-->0,1,0,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,1,4,6,--0,  
0,0,0,0,0,0,1,4,6,8,--0,0,0,0,0,0,1,4,6,9,--  
R136)  
0,0,0,0,0,0,1,4,7,-->0,1,0,--0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,  
0,1,4,7,--0,0,0,0,0,0,1,4,7,9,--  
R137)  
0,0,0,0,0,0,1,4,8,-->0,1,0,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,  
1,--0,0,0,0,0,0,1,4,8,--  
R138)  
0,0,0,0,0,0,1,5,7,-->0,1,0,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,  
0,0,1,5,7,--0,0,0,0,0,0,1,5,7,9,--  
R139)  
0,0,0,0,0,0,1,5,8,-->0,1,0,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,  
1,--0,0,0,0,0,0,1,5,8,--  
R140)  
0,0,0,0,0,0,1,6,8,-->0,1,0,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,  
0,2,1,--0,0,0,0,0,0,1,6,8,--  
R141)  
0,0,0,0,0,0,2,4,6,-->0,0,2,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,2,4,6,--0,  
0,0,0,0,0,0,2,4,6,8,--0,0,0,0,0,0,2,4,6,9,--  
R142)  
0,0,0,0,0,0,2,4,7,-->0,0,2,0,--0,0,2,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,  
0,2,4,7,--0,0,0,0,0,0,2,4,7,9,--  
R143)  
0,0,0,0,0,0,2,4,8,-->0,0,2,0,--0,0,2,1,--0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,  
1,--0,0,0,0,0,0,2,4,8,--  
R144)  
0,0,0,0,0,0,2,5,7,-->0,0,2,0,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,  
0,2,5,7,--0,0,0,0,0,0,2,5,7,9,--  
R145)  
0,0,0,0,0,0,2,5,8,-->0,0,2,0,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,  
--0,0,0,0,0,0,2,5,8,--  
R146)  
0,0,0,0,0,0,2,6,8,-->0,0,2,0,--0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,  
1,--0,0,0,0,0,0,2,6,8,--  
R147)

0,0,0,0,0,0,3,5,7,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,  
0,0,3,5,7,--0,0,0,0,0,0,3,5,7,9,--

R148)

0,0,0,0,0,0,3,5,8,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,  
1,--0,0,0,0,0,0,3,5,8,--

R149)

0,0,0,0,0,0,3,6,8,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,  
1,--0,0,0,0,0,0,3,6,8,--

R150)

0,0,0,0,0,0,4,6,8,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,  
0,2,1,--0,0,0,0,0,0,4,6,8,--

R151)

0,0,0,0,0,1,3,5,7,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,1,3,5,7,--0,0,  
0,0,0,1,3,5,7,9,--

R152)

0,0,0,0,0,1,3,5,8,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,1,  
3,5,8,--

R153)

0,0,0,0,0,1,3,6,8,-->0,1,0,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,1,  
3,6,8,--

R154)

0,0,0,0,0,1,4,6,8,-->0,1,0,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,1,  
4,6,8,--

R155)

0,0,0,0,0,2,4,6,8,-->0,0,2,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,2,  
4,6,8,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,: 0,1,0,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,: 0,0,1,3,: 0,0,2,0,: 0,0,2,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,: 0,0,0,1,3,:

0,0,0,1,4,: 0,0,0,2,4,: 0,0,0,3,0,: 0,0,0,3,1,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,:

0,0,0,0,0,5,: 0,0,0,0,1,3,: 0,0,0,0,1,4,: 0,0,0,0,1,5,: 0,0,0,0,2,4,: 0,0,0,0,2,5,:

0,0,0,0,3,5,: 0,0,0,0,4,0,: 0,0,0,0,4,1,: 0,0,0,1,3,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,:

0,0,0,0,0,0,4,: 0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,: 0,0,0,0,0,1,3,: 0,0,0,0,0,1,4,:

0,0,0,0,0,1,5,: 0,0,0,0,0,1,6,: 0,0,0,0,0,2,4,: 0,0,0,0,0,2,5,: 0,0,0,0,0,2,6,:

0,0,0,0,0,3,5,: 0,0,0,0,0,3,6,: 0,0,0,0,0,4,6,: 0,0,0,0,0,5,0,: 0,0,0,0,0,5,1,:

0,0,0,0,1,3,5,: 0,0,0,0,1,3,6,: 0,0,0,0,1,4,6,: 0,0,0,0,2,4,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:

0,0,0,0,0,0,1,3,: 0,0,0,0,0,0,1,4,: 0,0,0,0,0,0,1,5,: 0,0,0,0,0,0,1,6,:

0,0,0,0,0,0,1,7,: 0,0,0,0,0,0,2,4,: 0,0,0,0,0,0,2,5,: 0,0,0,0,0,0,2,6,:

0,0,0,0,0,0,2,7,: 0,0,0,0,0,0,3,5,: 0,0,0,0,0,0,3,6,: 0,0,0,0,0,0,3,7,:

0,0,0,0,0,0,4,6,: 0,0,0,0,0,0,4,7,: 0,0,0,0,0,0,5,7,: 0,0,0,0,0,0,6,0,:

0,0,0,0,0,0,6,1,: 0,0,0,0,0,1,3,5,: 0,0,0,0,0,1,3,6,: 0,0,0,0,0,1,3,7,:

0,0,0,0,0,1,4,6,: 0,0,0,0,0,1,4,7,: 0,0,0,0,0,1,5,7,: 0,0,0,0,0,2,4,6,:

0,0,0,0,0,2,4,7,: 0,0,0,0,0,2,5,7,: 0,0,0,0,0,3,5,7,: 0,0,0,0,1,3,5,7,:

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, :  
 0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,1,3, : 0,0,0,0,0,0,0,1,4, :  
 0,0,0,0,0,0,0,1,5, : 0,0,0,0,0,0,0,1,6, : 0,0,0,0,0,0,0,1,7, : 0,0,0,0,0,0,0,1,8, :  
 0,0,0,0,0,0,0,2,4, : 0,0,0,0,0,0,0,2,5, : 0,0,0,0,0,0,0,2,6, : 0,0,0,0,0,0,0,2,7, :  
 0,0,0,0,0,0,0,2,8, : 0,0,0,0,0,0,0,3,5, : 0,0,0,0,0,0,0,3,6, : 0,0,0,0,0,0,0,3,7, :  
 0,0,0,0,0,0,0,3,8, : 0,0,0,0,0,0,0,4,6, : 0,0,0,0,0,0,0,4,7, : 0,0,0,0,0,0,0,4,8, :  
 0,0,0,0,0,0,0,5,7, : 0,0,0,0,0,0,0,5,8, : 0,0,0,0,0,0,0,6,8, : 0,0,0,0,0,0,0,7,0, :  
 0,0,0,0,0,0,0,7,1, : 0,0,0,0,0,0,1,3,5, : 0,0,0,0,0,0,1,3,6, : 0,0,0,0,0,0,1,3,7, :  
 0,0,0,0,0,0,1,3,8, : 0,0,0,0,0,0,1,4,6, : 0,0,0,0,0,0,1,4,7, : 0,0,0,0,0,0,1,4,8, :  
 0,0,0,0,0,0,1,5,7, : 0,0,0,0,0,0,1,5,8, : 0,0,0,0,0,0,1,6,8, : 0,0,0,0,0,0,2,4,6, :  
 0,0,0,0,0,0,2,4,7, : 0,0,0,0,0,0,2,4,8, : 0,0,0,0,0,0,2,5,7, : 0,0,0,0,0,0,2,5,8, :  
 0,0,0,0,0,0,2,6,8, : 0,0,0,0,0,0,3,5,7, : 0,0,0,0,0,0,3,5,8, : 0,0,0,0,0,0,3,6,8, :  
 0,0,0,0,0,0,4,6,8, : 0,0,0,0,0,1,3,5,7, : 0,0,0,0,0,1,3,5,8, : 0,0,0,0,0,1,3,6,8, :  
 0,0,0,0,0,1,4,6,8, : 0,0,0,0,0,2,4,6,8, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, :  
 0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :  
 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,1,3, : 0,0,0,0,0,0,0,0,1,4, :  
 0,0,0,0,0,0,0,0,0,1,5, : 0,0,0,0,0,0,0,0,0,1,6, : 0,0,0,0,0,0,0,0,0,1,7, :  
 0,0,0,0,0,0,0,0,0,1,8, : 0,0,0,0,0,0,0,0,0,1,9, : 0,0,0,0,0,0,0,0,0,2,4, :  
 0,0,0,0,0,0,0,0,0,2,5, : 0,0,0,0,0,0,0,0,0,2,6, : 0,0,0,0,0,0,0,0,0,2,7, :  
 0,0,0,0,0,0,0,0,0,2,8, : 0,0,0,0,0,0,0,0,0,2,9, : 0,0,0,0,0,0,0,0,0,3,5, :  
 0,0,0,0,0,0,0,0,0,3,6, : 0,0,0,0,0,0,0,0,0,3,7, : 0,0,0,0,0,0,0,0,0,3,8, :  
 0,0,0,0,0,0,0,0,0,3,9, : 0,0,0,0,0,0,0,0,0,4,6, : 0,0,0,0,0,0,0,0,0,4,7, :  
 0,0,0,0,0,0,0,0,0,4,8, : 0,0,0,0,0,0,0,0,0,4,9, : 0,0,0,0,0,0,0,0,0,5,7, :  
 0,0,0,0,0,0,0,0,0,5,8, : 0,0,0,0,0,0,0,0,0,5,9, : 0,0,0,0,0,0,0,0,0,6,8, :  
 0,0,0,0,0,0,0,0,0,6,9, : 0,0,0,0,0,0,0,0,0,7,9, : 0,0,0,0,0,0,0,0,0,8,0, :  
 0,0,0,0,0,0,0,0,0,8,1, : 0,0,0,0,0,0,0,0,1,3,5, : 0,0,0,0,0,0,0,0,1,3,6, :  
 0,0,0,0,0,0,0,0,1,3,7, : 0,0,0,0,0,0,0,0,1,3,8, : 0,0,0,0,0,0,0,0,1,3,9, :  
 0,0,0,0,0,0,0,0,1,4,6, : 0,0,0,0,0,0,0,0,1,4,7, : 0,0,0,0,0,0,0,0,1,4,8, :  
 0,0,0,0,0,0,0,0,1,4,9, : 0,0,0,0,0,0,0,0,1,5,7, : 0,0,0,0,0,0,0,0,1,5,8, :  
 0,0,0,0,0,0,0,0,1,5,9, : 0,0,0,0,0,0,0,0,1,6,8, : 0,0,0,0,0,0,0,0,1,6,9, :  
 0,0,0,0,0,0,0,0,1,7,9, : 0,0,0,0,0,0,0,0,2,4,6, : 0,0,0,0,0,0,0,0,2,4,7, :  
 0,0,0,0,0,0,0,0,2,4,8, : 0,0,0,0,0,0,0,0,2,4,9, : 0,0,0,0,0,0,0,0,2,5,7, :  
 0,0,0,0,0,0,0,0,2,5,8, : 0,0,0,0,0,0,0,0,2,5,9, : 0,0,0,0,0,0,0,0,2,6,8, :  
 0,0,0,0,0,0,0,0,2,6,9, : 0,0,0,0,0,0,0,0,2,7,9, : 0,0,0,0,0,0,0,0,3,5,7, :  
 0,0,0,0,0,0,0,0,3,5,8, : 0,0,0,0,0,0,0,0,3,5,9, : 0,0,0,0,0,0,0,0,3,6,8, :  
 0,0,0,0,0,0,0,0,3,6,9, : 0,0,0,0,0,0,0,0,3,7,9, : 0,0,0,0,0,0,0,0,4,6,8, :  
 0,0,0,0,0,0,0,0,4,6,9, : 0,0,0,0,0,0,0,0,4,7,9, : 0,0,0,0,0,0,0,0,5,7,9, :  
 0,0,0,0,0,0,0,1,3,5,7, : 0,0,0,0,0,0,0,1,3,5,8, : 0,0,0,0,0,0,0,1,3,5,9, :  
 0,0,0,0,0,0,0,1,3,6,8, : 0,0,0,0,0,0,0,1,3,6,9, : 0,0,0,0,0,0,0,1,3,7,9, :  
 0,0,0,0,0,0,0,1,4,6,8, : 0,0,0,0,0,0,0,1,4,6,9, : 0,0,0,0,0,0,0,1,4,7,9, :  
 0,0,0,0,0,0,0,1,5,7,9, : 0,0,0,0,0,0,0,2,4,6,8, : 0,0,0,0,0,0,0,2,4,6,9, :  
 0,0,0,0,0,0,0,2,4,7,9, : 0,0,0,0,0,0,0,2,5,7,9, : 0,0,0,0,0,0,0,3,5,7,9, :  
 0,0,0,0,0,0,1,3,5,7,9, :

Number new nodes in level n is given by : 1,2,4,7,10,15,23,36,57,91,

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][101][102][120][201]]$

--

Rules of  $T[L]$ :

- R1)  $0, -->0,0, --0,1, --$
- R2)  $0,0, -->0,0,0, --0,0,1, --0,0,2, --$
- R3)  $0,1, -->0,1,0, --0,1,0, --$
- R4)  $0,0,0, -->0,0,0,0, --0,0,0,1, --0,0,0,2, --0,0,0,3, --$
- R5)  $0,0,1, -->0,1,0, --0,0,1,2, --0,0,1,3, --$
- R6)  $0,0,2, -->0,1,0, --0,1,0, --0,1,0, --$
- R7)  $0,1,0, -->0,1,0, --$
- R8)  $0,0,0,0, -->0,0,0,0,0, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --$
- R9)  $0,0,0,1, -->0,1,0, --0,0,0,1,2, --0,0,0,1,3, --0,0,0,1,4, --$
- R10)  $0,0,0,2, -->0,1,0, --0,1,0, --0,0,1,2, --0,0,1,3, --$
- R11)  $0,0,0,3, -->0,1,0, --0,1,0, --0,1, --0,1,0, --$
- R12)  $0,0,1,2, -->0,0,1,2, --0,0,1,3, --$
- R13)  $0,0,1,3, -->0,0,1,3,2, --0,1,0, --$
- R14)  $0,0,0,0,0, -->0,0,0,0,0,0, --0,0,0,0,0,1, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5, --$
- R15)  $0,0,0,0,1, -->0,1,0, --0,0,0,0,1,2, --0,0,0,0,1,3, --0,0,0,0,1,4, --0,0,0,0,1,5, --$
- R16)  $0,0,0,0,2, -->0,1,0, --0,1,0, --0,0,0,1,2, --0,0,0,1,3, --0,0,0,1,4, --$
- R17)  $0,0,0,0,3, -->0,1,0, --0,1,0, --0,1, --0,0,1,2, --0,0,1,3, --$
- R18)  $0,0,0,0,4, -->0,1,0, --0,1,0, --0,1, --0,0,0,0,4,3, --0,1,0, --$
- R19)  $0,0,0,1,2, -->0,0,0,1,2, --0,0,0,1,3, --0,0,0,1,4, --$
- R20)  $0,0,0,1,3, -->0,0,1,3,2, --0,0,1,2, --0,0,1,3, --$
- R21)  $0,0,0,1,4, -->0,0,1,3,2, --0,0,0,1,4,3, --0,1,0, --$
- R22)  $0,0,1,3,2, -->$
- R23)  $0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,0,0,0,0,0,1, --0,0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --$
- R24)  $0,0,0,0,0,1, -->0,1,0, --0,0,0,0,0,1,2, --0,0,0,0,0,1,3, --0,0,0,0,0,1,4, --0,0,0,0,0,1,5, --0,0,0,0,0,1,6, --$
- R25)  $0,0,0,0,0,2, -->0,1,0, --0,1,0, --0,0,0,0,1,2, --0,0,0,0,1,3, --0,0,0,0,1,4, --0,0,0,0,1,5, --$
- R26)  $0,0,0,0,0,3, -->0,1,0, --0,1,0, --0,1, --0,0,0,1,2, --0,0,0,1,3, --0,0,0,1,4, --$
- R27)  $0,0,0,0,0,4, -->0,1,0, --0,1,0, --0,1, --0,0,0,0,4,3, --0,0,1,2, --0,0,1,3, --$
- R28)  $0,0,0,0,0,5, -->0,1,0, --0,1,0, --0,1, --0,0,0,0,4,3, --0,0,0,0,0,5,4, --0,1,0, --$
- R29)  $0,0,0,0,1,2, -->0,0,0,0,1,2, --0,0,0,0,1,3, --0,0,0,0,1,4, --0,0,0,0,1,5, --$
- R30)  $0,0,0,0,1,3, -->0,0,1,3,2, --0,0,0,1,2, --0,0,0,1,3, --0,0,0,1,4, --$
- R31)  $0,0,0,0,1,4, -->0,0,1,3,2, --0,0,0,1,4,3, --0,0,1,2, --0,0,1,3, --$
- R32)  $0,0,0,0,1,5, -->0,0,1,3,2, --0,0,0,1,4,3, --0,0,0,0,1,5,4, --0,1,0, --$
- R33)  $0,0,0,0,4,3, -->0,1,0, --0,1,0, --0,1, --$
- R34)  $0,0,0,1,4,3, -->0,0,1,3,2, --$
- R35)  $0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,1, --0,0,0,0,0,0,0,2, --0,0,0,0,0,0,0,3, --0,0,0,0,0,0,0,4, --0,0,0,0,0,0,0,5, --0,0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --$
- R36)

0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,  
0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--

R37)

0,0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,  
0,0,0,0,1,5,--0,0,0,0,0,1,6,--

R38)

0,0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,  
0,0,0,1,5,--

R39)

0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,4,3,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,  
1,4,--

R40)

0,0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,1,2,--0,0,  
1,3,--

R41)

0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,  
5,--0,1,0,--

R42)

0,0,0,0,0,1,2,-->0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,  
0,0,0,0,1,6,--

R43)

0,0,0,0,0,1,3,-->0,0,1,3,2,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,  
--

R44)

0,0,0,0,0,1,4,-->0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--

R45)

0,0,0,0,0,1,5,-->0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,1,2,--0,0,1,3,--

R46)

0,0,0,0,0,1,6,-->0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,0,0,0,1,6,5,--0,1,0,  
--

R47) 0,0,0,0,0,5,4,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,4,3,--

R48) 0,0,0,0,1,5,4,-->0,0,1,3,2,--0,0,0,1,4,3,--

R49)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R50)

0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,1,  
4,--0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,1,7,--0,0,0,0,0,0,0,1,8,-

-

R51)

0,0,0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,  
1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--

R52)

0,0,0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,  
1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--

R53)

0,0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,4,3,--0,0,0,0,1,2,--0,0,0,0,1,3,--  
0,0,0,0,1,4,--0,0,0,0,1,5,--

R54)

0,0,0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,1,2,--  
0,0,0,1,3,--0,0,0,1,4,--

R55)

0,0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,  
6,5,--0,0,1,2,--0,0,1,3,--

R56)

0,0,0,0,0,0,0,7,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,  
6,5,--0,0,0,0,0,0,0,7,6,--0,1,0,--

R57)

0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,  
0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--

R58)

0,0,0,0,0,0,1,3,-->0,0,1,3,2,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,  
0,0,0,1,5,--0,0,0,0,0,1,6,--

R59)

0,0,0,0,0,0,1,4,-->0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,  
4,--0,0,0,0,1,5,--

R60)

0,0,0,0,0,0,1,5,-->0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,0,1,2,--0,0,0,1,3,  
--0,0,0,1,4,--

R61)

0,0,0,0,0,0,1,6,-->0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,0,0,0,1,6,5,--0,0,  
1,2,--0,0,1,3,--

R62)

0,0,0,0,0,0,1,7,-->0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,0,0,0,1,6,5,--0,0,  
0,0,0,0,1,7,6,--0,1,0,--

R63) 0,0,0,0,0,0,6,5,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--

R64) 0,0,0,0,0,1,6,5,-->0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--

R65)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R66)

0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,1,3,--0,0,0,0,0,  
0,0,0,1,4,--0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,0,1,7,--0,0,0,  
0,0,0,0,0,1,8,--0,0,0,0,0,0,0,0,1,9,--

R67)

0,0,0,0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,3,--0,0,0,  
0,0,0,0,1,4,--0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,1,7,--0,0,0,0,0,  
0,0,1,8,--

R68)

0,0,0,0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,  
0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--

R69)

0,0,0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,4,3,--0,0,0,0,0,1,2,--0,0,0,0,0,  
1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--

R70)

0,0,0,0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,1,  
2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R71)

0,0,0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--

R72)

0,0,0,0,0,0,0,0,7,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--0,0,0,0,0,0,7,6,--0,0,1,2,--0,0,1,3,--

R73)

0,0,0,0,0,0,0,0,8,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,8,7,--0,1,0,--

R74)

0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,1,4,--0,  
0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,1,7,--0,0,0,0,0,0,0,1,8,--

R75)

0,0,0,0,0,0,0,1,3,-->0,0,1,3,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,  
4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--

R76)

0,0,0,0,0,0,0,1,4,-->0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,  
0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--

R77)

0,0,0,0,0,0,0,1,5,-->0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,0,0,1,2,--0,0,0,  
0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R78)

0,0,0,0,0,0,0,1,6,-->0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,0,0,0,1,6,5,--0,  
0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--

R79)

0,0,0,0,0,0,0,1,7,-->0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,0,0,0,1,6,5,--0,  
0,0,0,0,0,1,7,6,--0,0,1,2,--0,0,1,3,--

R80)

0,0,0,0,0,0,0,1,8,-->0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,0,0,0,1,6,5,--0,  
0,0,0,0,0,1,7,6,--0,0,0,0,0,0,0,1,8,7,--0,1,0,--

R81)

0,0,0,0,0,0,0,7,6,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--

R82)

0,0,0,0,0,0,1,7,6,-->0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,0,0,0,1,6,5,--

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, : 0,1, :
- LEN=3) 0,0,0, : 0,0,1, : 0,0,2, : 0,1,0, :
- LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,2, : 0,0,0,3, : 0,0,1,2, : 0,0,1,3, :
- LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,1,2, :  
0,0,0,1,3, : 0,0,0,1,4, : 0,0,1,3,2, :
- LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, :  
0,0,0,0,0,5, : 0,0,0,0,1,2, : 0,0,0,0,1,3, : 0,0,0,0,1,4, : 0,0,0,0,1,5, : 0,0,0,0,4,3, :  
0,0,0,1,4,3, :
- LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :  
0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,1,2, : 0,0,0,0,0,1,3, :  
0,0,0,0,0,1,4, : 0,0,0,0,0,1,5, : 0,0,0,0,0,1,6, : 0,0,0,0,0,5,4, : 0,0,0,0,1,5,4, :
- LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :  
0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :  
0,0,0,0,0,0,1,2, : 0,0,0,0,0,0,1,3, : 0,0,0,0,0,0,1,4, : 0,0,0,0,0,0,1,5, :



0,0,0,0,0,0,1,6,: 0,0,0,0,0,0,1,7,: 0,0,0,0,0,0,6,5,: 0,0,0,0,0,1,6,5,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:  
 0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,:  
 0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,1,2,: 0,0,0,0,0,0,0,1,3,:  
 0,0,0,0,0,0,0,1,4,: 0,0,0,0,0,0,0,1,5,: 0,0,0,0,0,0,0,1,6,: 0,0,0,0,0,0,0,1,7,:  
 0,0,0,0,0,0,0,1,8,: 0,0,0,0,0,0,0,7,6,: 0,0,0,0,0,0,1,7,6,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,2,:  
 0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,:  
 0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,:  
 0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,0,1,2,: 0,0,0,0,0,0,0,0,1,3,:  
 0,0,0,0,0,0,0,0,1,4,: 0,0,0,0,0,0,0,0,1,5,: 0,0,0,0,0,0,0,0,1,6,:  
 0,0,0,0,0,0,0,0,1,7,: 0,0,0,0,0,0,0,0,1,8,: 0,0,0,0,0,0,0,0,1,9,:  
 0,0,0,0,0,0,0,0,8,7,: 0,0,0,0,0,0,0,1,8,7,:  
 Number new nodes in level n is given by : 1,2,4,6,9,12,14,16,18,20,

-----Class

1151-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][101][102][120][210]]$

-----  
 --  
 Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--
- R3) 0,1,-->0,1,0,--0,1,0,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R5) 0,0,1,-->0,1,0,--0,0,1,2,--0,0,1,3,--
- R6) 0,0,2,-->0,0,2,0,--0,0,2,1,--0,1,0,--
- R7) 0,1,0,-->0,1,0,--
- R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R9) 0,0,0,1,-->0,1,0,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--
- R10) 0,0,0,2,-->0,0,2,0,--0,0,2,1,--0,0,1,2,--0,0,1,3,--
- R11) 0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--0,1,0,--
- R12) 0,0,1,2,-->0,0,1,2,--0,0,1,3,--
- R13) 0,0,1,3,-->0,0,2,1,--0,1,0,--
- R14) 0,0,2,0,-->0,0,2,0,--0,0,2,1,--
- R15) 0,0,2,1,-->
- R16) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--
- R17) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--
- R18) 0,0,0,0,2,-->0,0,2,0,--0,0,2,1,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--
- R19) 0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--0,0,1,2,--0,0,1,3,--
- R20) 0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,1,0,--
- R21) 0,0,0,1,2,-->0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--
- R22) 0,0,0,1,3,-->0,0,2,1,--0,0,1,2,--0,0,1,3,--
- R23) 0,0,0,1,4,-->0,0,0,3,1,--0,0,2,1,--0,1,0,--
- R24) 0,0,0,3,0,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--
- R25) 0,0,0,3,1,-->0,0,2,1,--
- R26) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,

0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--  
R27)  
0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--  
R28)  
0,0,0,0,0,2,-->0,0,2,0,--0,0,2,1,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--  
R29)  
0,0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
--  
R30)  
0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,1,2,--0,0,1,3,--  
--  
R31)  
0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--  
0,1,0,--  
R32) 0,0,0,0,1,2,-->0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--  
R33) 0,0,0,0,1,3,-->0,0,2,1,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
R34) 0,0,0,0,1,4,-->0,0,0,3,1,--0,0,2,1,--0,0,1,2,--0,0,1,3,--  
R35) 0,0,0,0,1,5,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,1,0,--  
R36) 0,0,0,0,4,0,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--  
R37) 0,0,0,0,4,1,-->0,0,0,3,1,--0,0,2,1,--  
R38)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R39)  
0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--  
R40)  
0,0,0,0,0,0,2,-->0,0,2,0,--0,0,2,1,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--  
R41)  
0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--  
R42)  
0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
R43)  
0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,1,2,--0,0,1,3,--  
R44)  
0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,1,0,--  
R45)  
0,0,0,0,0,1,2,-->0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--  
R46)  
0,0,0,0,0,1,3,-->0,0,2,1,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--  
R47) 0,0,0,0,0,1,4,-->0,0,0,3,1,--0,0,2,1,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
R48) 0,0,0,0,0,1,5,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,1,2,--0,0,1,3,--

R49) 0,0,0,0,0,1,6,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,1,0,--  
R50)  
0,0,0,0,0,5,0,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,  
--  
R51) 0,0,0,0,0,5,1,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--  
R52)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--  
R53)  
0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,1,  
4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--0,0,0,0,0,0,1,8,--  
-  
R54)  
0,0,0,0,0,0,0,2,-->0,0,2,0,--0,0,2,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,  
0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--  
R55)  
0,0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,  
--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--  
R56)  
0,0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,1,2,--  
0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--  
R57)  
0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,  
1,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
R58)  
0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,  
--0,0,0,3,1,--0,0,2,1,--0,0,1,2,--0,0,1,3,--  
R59)  
0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,6,1,--0,0,0,  
0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,1,0,--  
R60)  
0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,  
0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--  
R61)  
0,0,0,0,0,0,1,3,-->0,0,2,1,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,  
0,0,1,5,--0,0,0,0,0,1,6,--  
R62)  
0,0,0,0,0,0,1,4,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--  
0,0,0,0,1,5,--  
R63)  
0,0,0,0,0,0,1,5,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,1,2,--0,0,0,1,3,--0,0,  
0,1,4,--  
R64)  
0,0,0,0,0,0,1,6,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,1,2,--0,  
0,1,3,--  
R65)  
0,0,0,0,0,0,1,7,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,  
2,1,--0,1,0,--  
R66)

0,0,0,0,0,0,6,0,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,5,1,--0,0,0,0,0,4,1,  
--0,0,0,3,1,--0,0,2,1,--

R67) 0,0,0,0,0,0,6,1,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--  
R68)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R69)  
0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,3,--0,0,0,0,0,  
0,0,0,1,4,--0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,1,7,--0,0,0,  
,0,0,0,0,0,1,8,--0,0,0,0,0,0,0,1,9,--

R70)  
0,0,0,0,0,0,0,2,-->0,0,2,0,--0,0,2,1,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,3,--0,  
0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--0,0,0,  
,0,0,0,0,1,8,--

R71)  
0,0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,  
0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--

R72)  
0,0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,1,  
2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--

R73)  
0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,  
2,1,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R74)  
0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,  
1,--0,0,0,3,1,--0,0,2,1,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--

R75)  
0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,6,1,--0,0,  
0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,1,2,--0,0,1,3,--

R76)  
0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,0,--0,0,0,0,0,0,0,8,1,--0,0,0,0,0,0,7,1,  
--0,0,0,0,0,6,1,--0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,1,0,--

R77)  
0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,1,4,--0,  
0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,1,7,--0,0,0,0,0,0,0,1,8,--

R78)  
0,0,0,0,0,0,0,1,3,-->0,0,2,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,  
--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--

R79)  
0,0,0,0,0,0,0,1,4,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,  
0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--

R80)  
0,0,0,0,0,0,0,1,5,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,1,2,--0,0,0,0,1,3,  
--0,0,0,0,1,4,--0,0,0,0,1,5,--

R81)  
0,0,0,0,0,0,0,1,6,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,1,2,  
--0,0,0,1,3,--0,0,0,1,4,--

R82)  
0,0,0,0,0,0,0,1,7,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,

0,2,1,--0,0,1,2,--0,0,1,3,--  
R83)  
0,0,0,0,0,0,0,1,8,-->0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,  
4,1,--0,0,0,3,1,--0,0,2,1,--0,1,0,--  
R84)  
0,0,0,0,0,0,0,7,0,-->0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,6,1,--0,0,  
0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--  
R85)  
0,0,0,0,0,0,0,7,1,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,  
0,2,1,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, : 0,0,2, : 0,1,0, :  
LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,2, : 0,0,0,3, : 0,0,1,2, : 0,0,1,3, : 0,0,2,0, :  
0,0,2,1, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,1,2, :  
0,0,0,1,3, : 0,0,0,1,4, : 0,0,0,3,0, : 0,0,0,3,1, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, :  
0,0,0,0,0,5, : 0,0,0,0,1,2, : 0,0,0,0,1,3, : 0,0,0,0,1,4, : 0,0,0,0,1,5, : 0,0,0,0,4,0, :  
0,0,0,0,4,1, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :  
0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,1,2, : 0,0,0,0,0,1,3, :  
0,0,0,0,0,1,4, : 0,0,0,0,0,1,5, : 0,0,0,0,0,1,6, : 0,0,0,0,0,5,0, : 0,0,0,0,0,5,1, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :  
0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :  
0,0,0,0,0,0,1,2, : 0,0,0,0,0,0,1,3, : 0,0,0,0,0,0,1,4, : 0,0,0,0,0,0,1,5, :  
0,0,0,0,0,0,1,6, : 0,0,0,0,0,0,1,7, : 0,0,0,0,0,0,6,0, : 0,0,0,0,0,0,6,1, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, :  
0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, :  
0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,1,2, : 0,0,0,0,0,0,0,1,3, :  
0,0,0,0,0,0,0,1,4, : 0,0,0,0,0,0,0,1,5, : 0,0,0,0,0,0,0,1,6, : 0,0,0,0,0,0,0,1,7, :  
0,0,0,0,0,0,0,1,8, : 0,0,0,0,0,0,0,7,0, : 0,0,0,0,0,0,0,7,1, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :  
0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, :  
0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :  
0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,1,2, : 0,0,0,0,0,0,0,0,1,3, :  
0,0,0,0,0,0,0,0,1,4, : 0,0,0,0,0,0,0,0,1,5, : 0,0,0,0,0,0,0,0,1,6, :  
0,0,0,0,0,0,0,0,1,7, : 0,0,0,0,0,0,0,0,1,8, : 0,0,0,0,0,0,0,0,1,9, :  
0,0,0,0,0,0,0,0,8,0, : 0,0,0,0,0,0,0,0,8,1, :

Number new nodes in level n is given by : 1,2,4,8,10,12,14,16,18,20,

-----Class

1152-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][101][102][201][210]]

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--

R3) 0,1,-->0,1,0,--0,1,--  
R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R5) 0,0,1,-->0,1,0,--0,0,1,--0,0,2,--  
R6) 0,0,2,-->0,1,0,--0,0,2,1,--0,0,2,--  
R7) 0,1,0,-->0,1,0,--  
R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R9) 0,0,0,1,-->0,1,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R10) 0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,2,--0,0,0,3,--  
R11) 0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,0,3,--  
R12) 0,0,2,1,-->  
R13)  
0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--  
R14) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R15) 0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R16) 0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,0,0,3,--0,0,0,0,4,--  
R17) 0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,4,--  
R18)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R19)  
0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,  
0,0,0,5,--  
R20)  
0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,  
0,5,--  
R21)  
0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,  
--  
R22)  
0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R23) 0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,5,--  
R24)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R25)  
0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,  
0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R26)  
0,0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--  
0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R27)  
0,0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,  
0,0,0,5,--0,0,0,0,0,0,6,--  
R28)  
0,0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,4,--0,0,0,0,0,0,  
5,--0,0,0,0,0,0,6,--  
R29)  
0,0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--

R30)  
0,0,0,0,0,0,6,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,  
0,0,6,--

R31)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R32)  
0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,  
0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R33)  
0,0,0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,  
0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R34)  
0,0,0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--  
0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R35)  
0,0,0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,4,--0,0,0,0,  
0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R36)  
0,0,0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,5,  
--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R37)  
0,0,0,0,0,0,0,6,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,  
0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R38)  
0,0,0,0,0,0,0,7,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,  
1,--0,0,0,0,0,0,0,7,--

R39)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R40)  
0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,  
,--0,0,0,0,0,0,0,0,8,--

R41)  
0,0,0,0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,  
0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,  
,0,0,0,0,8,--

R42)  
0,0,0,0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,  
0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,  
,--

R43)  
0,0,0,0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,4,--0,0,  
0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R44)  
0,0,0,0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,  
0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R45)

0,0,0,0,0,0,0,0,6,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,  
0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R46)

0,0,0,0,0,0,0,0,7,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,  
2,1,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R47)

0,0,0,0,0,0,0,0,8,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,  
2,1,--0,0,2,1,--0,0,0,0,0,0,0,8,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,0, : 0,0,1, : 0,0,2, : 0,1,0, :

LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,2, : 0,0,0,3, : 0,0,2,1, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, :

0,0,0,0,0,5, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :

0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :

0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, :

0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, :

0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :

0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, :

0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :

0,0,0,0,0,0,0,0,0,9, :

Number new nodes in level n is given by : 1,2,4,5,5,6,7,8,9,10,

-----Class

1153-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][101][110][120][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--

R3) 0,1,-->0,0,1,--0,1,2,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R5) 0,0,1,-->0,0,0,1,--0,0,1,2,--0,0,1,3,--

R6) 0,0,2,-->0,0,1,--0,0,1,--0,1,2,--

R7) 0,1,2,-->0,1,2,--

R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R9) 0,0,0,1,-->0,0,0,0,1,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--

R10) 0,0,0,2,-->0,0,0,1,--0,0,0,1,--0,0,1,2,--0,0,1,3,--

R11) 0,0,0,3,-->0,0,1,--0,0,1,--0,0,0,2,--0,1,2,--

R12) 0,0,1,2,-->0,0,1,2,--0,0,1,3,--

R13) 0,0,1,3,-->0,0,1,2,--0,1,2,--

R14)



0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--

R15)

0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R16) 0,0,0,0,2,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--

R17) 0,0,0,0,3,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,1,2,--0,0,0,0,1,3,--

R18) 0,0,0,0,4,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,1,2,--

R19) 0,0,0,0,1,2,-->0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--

R20) 0,0,0,0,1,3,-->0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,3,--

R21) 0,0,0,0,1,4,-->0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,2,--

R22)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R23)

0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,  
0,0,0,0,1,5,--0,0,0,0,0,1,6,--

R24)

0,0,0,0,0,2,-->0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,  
--0,0,0,0,1,5,--

R25)

0,0,0,0,0,3,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,  
1,4,--

R26)

0,0,0,0,0,4,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,1,2,--0,0,0,0,1,3,--

R27) 0,0,0,0,0,5,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,1,2,--

R28) 0,0,0,0,0,1,2,-->0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--

R29) 0,0,0,0,0,1,3,-->0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--

R30) 0,0,0,0,0,1,4,-->0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--

R31) 0,0,0,0,0,1,5,-->0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,2,--

R32)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

R33)

0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,  
1,4,--0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,1,7,--

R34)

0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,  
0,0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--

R35)

0,0,0,0,0,0,3,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,  
1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--

R36)

0,0,0,0,0,0,4,-->0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,1,2,--  
0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--

R37)

0,0,0,0,0,0,5,-->0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,  
1,2,--0,0,0,0,0,1,3,--

R38)

0,0,0,0,0,0,6,-->0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,  
--0,0,0,0,0,1,2,--

R39)

0,0,0,0,0,1,2,-->0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--

R40)

0,0,0,0,0,1,3,-->0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R41)

0,0,0,0,0,1,4,-->0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--

R42)

0,0,0,0,0,1,5,-->0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,1,2,--0,0,1,3,--

R43) 0,0,0,0,0,1,6,-->0,0,1,2,--0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,1,2,--

R44)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R45)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--0,0,0,0,0,0,1,8,--

R46)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--

R47)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--

R48)

0,0,0,0,0,0,0,4,-->0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R49)

0,0,0,0,0,0,0,5,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--

R50)

0,0,0,0,0,0,0,6,-->0,0,0,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--0,0,0,4,--0,0,0,5,--0,0,1,2,--0,0,1,3,--

R51)

0,0,0,0,0,0,0,7,-->0,0,1,--0,0,1,--0,0,2,--0,0,3,--0,0,4,--0,0,0,0,5,--0,0,0,0,0,6,--0,1,2,--

R52)

0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--

R53)

0,0,0,0,0,0,1,3,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--

R54)

0,0,0,0,0,0,1,4,-->0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,1,4,--0,0,0,0,1,5,--

R55)

0,0,0,0,0,0,1,5,-->0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,1,2,--0,0,1,3,--0,0,0,1,4,--

R56)

0,0,0,0,0,0,1,6,-->0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,  
1,2,--0,0,1,3,--

R57)

0,0,0,0,0,0,1,7,-->0,0,1,2,--0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,0,  
1,6,--0,1,2,--

R58)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,  
0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R59)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,1,  
3,--0,0,0,0,0,0,0,0,1,4,--0,0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,  
0,1,7,--0,0,0,0,0,0,0,0,1,8,--0,0,0,0,0,0,0,0,1,9,--

R60)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,2,--0,  
0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,  
0,0,0,0,1,7,--0,0,0,0,0,0,1,8,--

R61)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--  
-0,0,0,0,0,0,1,7,--

R62)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,0,3,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,  
6,--

R63)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,0,3,--  
0,0,0,0,0,0,0,4,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R64)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,  
0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--

R65)

0,0,0,0,0,0,0,0,7,-->0,0,0,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--0,0,0,4,--  
0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,1,2,--0,0,1,3,--

R66)

0,0,0,0,0,0,0,0,8,-->0,0,1,--0,0,1,--0,0,2,--0,0,3,--0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,1,2,--

R67)

0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,  
0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--0,0,0,0,0,0,1,8,--

R68)

0,0,0,0,0,0,0,1,3,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,  
0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--

R69)

0,0,0,0,0,0,0,1,4,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,1,2,--0,0,0,0,  
0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--

R70)

0,0,0,0,0,0,0,1,5,-->0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,  
1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R71)

0,0,0,0,0,0,0,1,6,-->0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,0,1,5,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--

R72)

0,0,0,0,0,0,0,1,7,-->0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,1,6,--0,0,0,0,1,2,--0,0,0,0,1,3,--

R73)

0,0,0,0,0,0,0,1,8,-->0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,1,7,--0,0,0,0,1,2,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,: 0,1,2,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,: 0,0,1,2,: 0,0,1,3,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,: 0,0,0,1,2,:

0,0,0,1,3,: 0,0,0,1,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,:

0,0,0,0,0,5,: 0,0,0,0,1,2,: 0,0,0,0,1,3,: 0,0,0,0,1,4,: 0,0,0,0,1,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,:

0,0,0,0,0,0,4,: 0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,: 0,0,0,0,0,1,2,: 0,0,0,0,0,1,3,:

0,0,0,0,0,1,4,: 0,0,0,0,0,1,5,: 0,0,0,0,0,1,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:

0,0,0,0,0,0,1,2,: 0,0,0,0,0,0,1,3,: 0,0,0,0,0,0,1,4,: 0,0,0,0,0,0,1,5,:

0,0,0,0,0,0,1,6,: 0,0,0,0,0,0,1,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,:

0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,1,2,: 0,0,0,0,0,0,0,1,3,:

0,0,0,0,0,0,0,1,4,: 0,0,0,0,0,0,0,1,5,: 0,0,0,0,0,0,0,1,6,: 0,0,0,0,0,0,0,1,7,:

0,0,0,0,0,0,0,1,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,:

0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,:

0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,0,1,2,: 0,0,0,0,0,0,0,0,1,3,:

0,0,0,0,0,0,0,0,1,4,: 0,0,0,0,0,0,0,0,1,5,: 0,0,0,0,0,0,0,0,1,6,:

0,0,0,0,0,0,0,0,1,7,: 0,0,0,0,0,0,0,0,1,8,: 0,0,0,0,0,0,0,0,1,9,:

Number new nodes in level n is given by : 1,2,4,6,8,10,12,14,16,18,

-----Class

1154-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][101][110][120][210]]

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--

R3) 0,1,-->0,0,1,--0,1,2,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R5) 0,0,1,-->0,0,0,1,--0,0,1,2,--0,0,1,3,--

R6) 0,0,2,-->0,0,0,2,--0,0,1,2,--0,1,2,--

R7) 0,1,2,-->0,1,2,--

R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R9) 0,0,0,1,-->0,0,0,0,1,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
R10) 0,0,0,2,-->0,0,0,0,2,--0,0,0,1,2,--0,0,1,2,--0,0,1,3,--  
R11) 0,0,0,3,-->0,0,0,0,3,--0,0,0,1,3,--0,0,1,2,--0,1,2,--  
R12) 0,0,1,2,-->0,0,1,2,--0,0,1,3,--  
R13) 0,0,1,3,-->0,0,1,2,--0,1,2,--  
R14)  
0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--  
R15)  
0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--  
R16) 0,0,0,0,2,-->0,0,0,0,0,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
R17) 0,0,0,0,3,-->0,0,0,0,0,3,--0,0,0,0,1,3,--0,0,0,1,2,--0,0,1,2,--0,0,1,3,--  
R18) 0,0,0,0,4,-->0,0,0,0,0,4,--0,0,0,0,1,4,--0,0,0,1,3,--0,0,1,2,--0,1,2,--  
R19) 0,0,0,1,2,-->0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
R20) 0,0,0,1,3,-->0,0,0,1,2,--0,0,1,2,--0,0,1,3,--  
R21) 0,0,0,1,4,-->0,0,0,1,3,--0,0,1,2,--0,1,2,--  
R22)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R23)  
0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,  
0,0,0,1,5,--0,0,0,0,0,1,6,--  
R24)  
0,0,0,0,0,2,-->0,0,0,0,0,0,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,  
1,4,--0,0,0,0,1,5,--  
R25)  
0,0,0,0,0,3,-->0,0,0,0,0,0,3,--0,0,0,0,0,1,3,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,3,  
--0,0,0,1,4,--  
R26)  
0,0,0,0,0,4,-->0,0,0,0,0,0,4,--0,0,0,0,0,1,4,--0,0,0,0,1,3,--0,0,0,1,2,--0,0,1,2,--  
0,0,1,3,--  
R27)  
0,0,0,0,0,5,-->0,0,0,0,0,0,5,--0,0,0,0,0,1,5,--0,0,0,0,1,4,--0,0,0,1,3,--0,0,1,2,--  
0,1,2,--  
R28) 0,0,0,0,1,2,-->0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--  
R29) 0,0,0,0,1,3,-->0,0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
R30) 0,0,0,0,1,4,-->0,0,0,0,1,3,--0,0,0,1,2,--0,0,1,2,--0,0,1,3,--  
R31) 0,0,0,0,1,5,-->0,0,0,0,1,4,--0,0,0,1,3,--0,0,1,2,--0,1,2,--  
R32)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R33)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,  
1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--  
R34)  
0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,  
--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--  
R35)  
0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,3,--0,0,0,0,0,0,1,3,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--

0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--  
R36)  
0,0,0,0,0,0,4,-->0,0,0,0,0,0,4,--0,0,0,0,0,0,1,4,--0,0,0,0,0,1,3,--0,0,0,0,1,2,--  
0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
R37)  
0,0,0,0,0,0,5,-->0,0,0,0,0,0,5,--0,0,0,0,0,0,1,5,--0,0,0,0,0,1,4,--0,0,0,0,1,3,--  
0,0,0,1,2,--0,0,1,2,--0,0,1,3,--  
R38)  
0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,--0,0,0,0,0,0,1,6,--0,0,0,0,0,1,5,--0,0,0,0,1,4,--  
0,0,0,1,3,--0,0,1,2,--0,1,2,--  
R39)  
0,0,0,0,0,1,2,-->0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,  
0,0,0,0,1,6,--  
R40)  
0,0,0,0,0,1,3,-->0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,  
1,5,--  
R41)  
0,0,0,0,0,1,4,-->0,0,0,0,0,1,3,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
R42)  
0,0,0,0,0,1,5,-->0,0,0,0,0,1,4,--0,0,0,0,1,3,--0,0,0,1,2,--0,0,1,2,--0,0,1,3,--  
R43) 0,0,0,0,0,1,6,-->0,0,0,0,0,1,5,--0,0,0,0,1,4,--0,0,0,1,3,--0,0,1,2,--0,1,2,--  
R44)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--  
R45)  
0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,3,--0,0,  
0,0,0,0,0,1,4,--0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,1,7,--0,0,0,0,  
,0,0,0,1,8,--  
R46)  
0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,  
0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,1,7,-  
-  
R47)  
0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,2,--0,0,0,  
0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--  
R48)  
0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,3,--0,0,0,  
0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--  
R49)  
0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,4,--0,0,0,  
0,0,1,3,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
R50)  
0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,5,--0,0,0,  
0,0,1,4,--0,0,0,0,1,3,--0,0,0,1,2,--0,0,1,2,--0,0,1,3,--  
R51)  
0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,1,7,--0,0,0,0,0,0,1,6,--0,0,0,  
0,0,1,5,--0,0,0,0,1,4,--0,0,0,1,3,--0,0,1,2,--0,1,2,--  
R52)  
0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,

0,1,5,--0,0,0,0,0,1,6,--0,0,0,0,0,1,7,--  
R53)  
0,0,0,0,0,1,3,-->0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,  
--0,0,0,0,1,5,--0,0,0,0,1,6,--  
R54)  
0,0,0,0,0,1,4,-->0,0,0,0,0,1,3,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,  
0,0,0,1,4,--0,0,0,0,1,5,--  
R55)  
0,0,0,0,0,1,5,-->0,0,0,0,0,1,4,--0,0,0,0,1,3,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,  
0,1,3,--0,0,0,1,4,--  
R56)  
0,0,0,0,0,1,6,-->0,0,0,0,0,1,5,--0,0,0,0,1,4,--0,0,0,0,1,3,--0,0,0,1,2,--0,0,  
1,2,--0,0,1,3,--  
R57)  
0,0,0,0,0,1,7,-->0,0,0,0,0,1,6,--0,0,0,0,1,5,--0,0,0,0,1,4,--0,0,0,1,3,--0,0,  
1,2,--0,1,2,--  
R58)  
0,0,0,0,0,0,0,0,0,-->0,  
2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,  
,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--  
R59)  
0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,1,  
3,--0,0,0,0,0,0,0,1,4,--0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,  
,0,1,7,--0,0,0,0,0,0,0,1,8,--0,0,0,0,0,0,0,1,9,--  
R60)  
0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,2,  
--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,  
,0,0,0,0,0,1,7,--0,0,0,0,0,0,1,8,--  
R61)  
0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,1,2,  
--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,  
,0,1,6,--0,0,0,0,0,1,7,--  
R62)  
0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,1,4,--0,0,0,0,0,0,0,1,3,  
--0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--  
-0,0,0,0,0,1,6,--  
R63)  
0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,1,4,  
--0,0,0,0,0,1,3,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,  
,0,1,5,--  
R64)  
0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,1,5,  
--0,0,0,0,0,1,4,--0,0,0,0,0,1,3,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,  
,--  
R65)  
0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,1,7,--0,0,0,0,0,0,0,1,6,  
--0,0,0,0,0,1,5,--0,0,0,0,0,1,4,--0,0,0,0,1,3,--0,0,0,1,2,--0,0,1,2,--0,0,1,3,--  
R66)  
0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,1,8,--0,0,0,0,0,0,0,1,7,  
--0,0,0,0,0,1,6,--0,0,0,0,0,1,5,--0,0,0,0,1,4,--0,0,0,1,3,--0,0,1,2,--0,1,2,--

R67)

0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,1,4,--0,  
0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--0,0,0,0,0,0,1,8,--

R68)

0,0,0,0,0,0,0,1,3,-->0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,  
0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--

R69)

0,0,0,0,0,0,0,1,4,-->0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,  
0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--

R70)

0,0,0,0,0,0,0,1,5,-->0,0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,3,--0,0,0,0,0,1,2,--0,0,0,0,  
1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R71)

0,0,0,0,0,0,0,1,6,-->0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,4,--0,0,0,0,0,1,3,--0,0,0,0,  
1,2,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--

R72)

0,0,0,0,0,0,0,1,7,-->0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,5,--0,0,0,0,0,1,4,--0,0,0,0,  
1,3,--0,0,0,1,2,--0,0,1,2,--0,0,1,3,--

R73)

0,0,0,0,0,0,0,1,8,-->0,0,0,0,0,0,0,1,7,--0,0,0,0,0,0,1,6,--0,0,0,0,0,1,5,--0,0,0,0,  
1,4,--0,0,0,1,3,--0,0,1,2,--0,1,2,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,: 0,1,2,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,: 0,0,1,2,: 0,0,1,3,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,: 0,0,0,1,2,:

0,0,0,1,3,: 0,0,0,1,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,:

0,0,0,0,0,5,: 0,0,0,0,1,2,: 0,0,0,0,1,3,: 0,0,0,0,1,4,: 0,0,0,0,1,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,:

0,0,0,0,0,0,4,: 0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,: 0,0,0,0,0,1,2,: 0,0,0,0,0,1,3,:

0,0,0,0,0,1,4,: 0,0,0,0,0,1,5,: 0,0,0,0,0,1,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:

0,0,0,0,0,0,1,2,: 0,0,0,0,0,0,1,3,: 0,0,0,0,0,0,1,4,: 0,0,0,0,0,0,1,5,:

0,0,0,0,0,0,1,6,: 0,0,0,0,0,0,1,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,:

0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,1,2,: 0,0,0,0,0,0,0,1,3,:

0,0,0,0,0,0,0,1,4,: 0,0,0,0,0,0,0,1,5,: 0,0,0,0,0,0,0,1,6,: 0,0,0,0,0,0,0,1,7,:

0,0,0,0,0,0,0,1,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,:

0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,:

0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,0,1,2,: 0,0,0,0,0,0,0,0,1,3,:

0,0,0,0,0,0,0,0,1,4,: 0,0,0,0,0,0,0,0,1,5,: 0,0,0,0,0,0,0,0,1,6,:

0,0,0,0,0,0,0,0,1,7,: 0,0,0,0,0,0,0,0,1,8,: 0,0,0,0,0,0,0,0,1,9,:

Number new nodes in level n is given by : 1,2,4,6,8,10,12,14,16,18,



-----Class

1155-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][101][110][201][210]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0, -->0,0, --0, --$

R2)  $0,0, -->0,0,0, --0,0, --0,0,2, --$

R3)  $0,0,0, -->0,0,0,0, --0,0,0, --0,0,0,2, --0,0,0,3, --$

R4)  $0,0,2, -->0,0, --0,0,2,1, --0,0,2, --$

R5)  $0,0,0,0, -->0,0,0,0,0, --0,0,0,0, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --$

R6)  $0,0,0,2, -->0,0,0, --0,0,0,2,1, --0,0,0,2, --0,0,0,3, --$

R7)  $0,0,0,3, -->0,0, --0,0,2,1, --0,0,2,1, --0,0,0,3, --$

R8)  $0,0,2,1, -->0,0,2,1, --0,0,2,1, --$

R9)

$0,0,0,0,0, -->0,0,0,0,0,0, --0,0,0,0,0, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5, --$

R10)  $0,0,0,0,2, -->0,0,0,0, --0,0,0,0,2,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --$

R11)  $0,0,0,0,3, -->0,0,0, --0,0,0,2,1, --0,0,0,2,1, --0,0,0,0,3, --0,0,0,0,4, --$

R12)  $0,0,0,0,4, -->0,0, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,0,0,4, --$

R13)  $0,0,0,2,1, -->0,0,0,2,1, --0,0,0,2,1, --0,0,0,2,1,5, --$

R14)

$0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0, --0,0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --$

R15)

$0,0,0,0,0,2, -->0,0,0,0,0, --0,0,0,0,0,2,1, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5, --$

R16)

$0,0,0,0,0,3, -->0,0,0,0, --0,0,0,0,2,1, --0,0,0,0,2,1, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5, --$

R17)

$0,0,0,0,0,4, -->0,0,0, --0,0,0,2,1, --0,0,0,2,1, --0,0,0,2,1, --0,0,0,0,0,4, --0,0,0,0,0,5, --$

R18)  $0,0,0,0,0,5, -->0,0, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,0,0,0,5, --$

R19)  $0,0,0,0,2,1, -->0,0,0,0,2,1, --0,0,0,0,2,1, --0,0,0,0,2,1,5, --0,0,0,0,2,1,6, --$

R20)  $0,0,0,2,1,5, -->0,0,2,1, --0,0,2,1, --0,0,0,2,1,5, --$

R21)

$0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,2, --0,0,0,0,0,0,0,3, --0,0,0,0,0,0,0,4, --0,0,0,0,0,0,0,5, --0,0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --$

R22)

$0,0,0,0,0,0,2, -->0,0,0,0,0,0, --0,0,0,0,0,0,2,1, --0,0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --$

R23)

$0,0,0,0,0,0,3, -->0,0,0,0,0, --0,0,0,0,0,2,1, --0,0,0,0,0,2,1, --0,0,0,0,0,0,3, --0,0,0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --$

R24)

$0,0,0,0,0,0,4, -->0,0,0,0, --0,0,0,0,2,1, --0,0,0,0,2,1, --0,0,0,0,2,1, --0,0,0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --$

R25)

$0,0,0,0,0,0,5, -->0,0,0, --0,0,0,2,1, --0,0,0,2,1, --0,0,0,2,1, --0,0,0,2,1, --0,0,0,0,0,0,5, --$

0,5,--0,0,0,0,0,0,6,--

R26)

0,0,0,0,0,0,6,-->0,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,6,--

R27)

0,0,0,0,0,2,1,-->0,0,0,0,0,2,1,--0,0,0,0,0,2,1,--0,0,0,0,0,2,1,5,--0,0,0,0,0,2,1,6,--0,0,0,0,0,2,1,7,--

R28) 0,0,0,0,2,1,5,-->0,0,0,2,1,--0,0,0,2,1,--0,0,0,0,2,1,5,--0,0,0,0,2,1,6,--

R29) 0,0,0,0,2,1,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,2,1,6,--

R30)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R31)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R32)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,--0,0,0,0,0,0,2,1,--0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R33)

0,0,0,0,0,0,0,4,-->0,0,0,0,0,--0,0,0,0,0,2,1,--0,0,0,0,0,2,1,--0,0,0,0,0,2,1,--0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R34)

0,0,0,0,0,0,0,5,-->0,0,0,0,--0,0,0,0,2,1,--0,0,0,0,2,1,--0,0,0,0,2,1,--0,0,0,0,2,1,--0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R35)

0,0,0,0,0,0,0,6,-->0,0,0,--0,0,0,2,1,--0,0,0,2,1,--0,0,0,2,1,--0,0,0,2,1,--0,0,0,2,1,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R36)

0,0,0,0,0,0,0,7,-->0,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,7,--

R37)

0,0,0,0,0,0,2,1,-->0,0,0,0,0,0,2,1,--0,0,0,0,0,0,2,1,--0,0,0,0,0,0,2,1,5,--0,0,0,0,0,0,2,1,6,--0,0,0,0,0,0,2,1,7,--0,0,0,0,0,0,2,1,8,--

R38)

0,0,0,0,0,2,1,5,-->0,0,0,0,2,1,--0,0,0,0,2,1,--0,0,0,0,0,2,1,5,--0,0,0,0,0,2,1,6,--0,0,0,0,0,2,1,7,--

R39)

0,0,0,0,0,2,1,6,-->0,0,0,2,1,--0,0,0,2,1,--0,0,0,2,1,--0,0,0,0,0,2,1,6,--0,0,0,0,0,2,1,7,--

R40) 0,0,0,0,0,2,1,7,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,2,1,7,--

R41)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R42)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R43)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R44)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R45)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R46)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R47)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R48)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,8,--

R49)

0,0,0,0,0,0,0,0,2,1,-->0,0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,0,2,1,5,--0,0,0,0,0,0,0,0,0,2,1,6,--0,0,0,0,0,0,0,0,0,2,1,7,--0,0,0,0,0,0,0,0,0,2,1,8,--0,0,0,0,0,0,0,0,0,2,1,9,--

R50)

0,0,0,0,0,0,0,0,2,1,5,-->0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,2,1,5,--0,0,0,0,0,0,0,0,2,1,6,--0,0,0,0,0,0,0,0,2,1,7,--0,0,0,0,0,0,0,0,2,1,8,--

R51)

0,0,0,0,0,0,0,0,2,1,6,-->0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,2,1,6,--0,0,0,0,0,0,0,0,2,1,7,--0,0,0,0,0,0,0,0,2,1,8,--

R52)

0,0,0,0,0,0,0,0,2,1,7,-->0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,2,1,7,--0,0,0,0,0,0,0,0,2,1,8,--

R53)

0,0,0,0,0,0,0,0,2,1,8,-->0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,2,1,8,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, :

LEN=3) 0,0,0, : 0,0,2, :

LEN=4) 0,0,0,0, : 0,0,0,2, : 0,0,0,3, : 0,0,2,1, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,2,1, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, : 0,0,0,0,2,1, : 0,0,0,2,1,5, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,2,1, : 0,0,0,0,2,1,5, : 0,0,0,0,2,1,6, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,2,1, : 0,0,0,0,0,2,1,5, : 0,0,0,0,0,2,1,6, : 0,0,0,0,0,2,1,7, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,0,3, :

0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,7,:  
 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,2,1,: 0,0,0,0,0,0,2,1,5,: 0,0,0,0,0,0,2,1,6,:  
 0,0,0,0,0,0,2,1,7,: 0,0,0,0,0,0,2,1,8,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,0,3,:  
 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,:  
 0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,0,9,:  
 0,0,0,0,0,0,0,2,1,: 0,0,0,0,0,0,2,1,5,: 0,0,0,0,0,0,2,1,6,:  
 0,0,0,0,0,0,2,1,7,: 0,0,0,0,0,0,2,1,8,: 0,0,0,0,0,0,2,1,9,:  
 Number new nodes in level n is given by : 1,1,2,4,5,7,9,11,13,15,

-----Class

1156-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][101][120][201][210]]$

-----

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--
- R3) 0,1,-->0,0,1,--0,1,2,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R5) 0,0,1,-->0,0,0,1,--0,0,1,2,--0,0,1,3,--
- R6) 0,0,2,-->0,0,1,--0,0,1,2,--0,1,2,--
- R7) 0,1,2,-->0,1,2,--
- R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R9) 0,0,0,1,-->0,0,0,0,1,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--
- R10) 0,0,0,2,-->0,0,0,1,--0,0,0,1,2,--0,0,1,2,--0,0,1,3,--
- R11) 0,0,0,3,-->0,0,1,--0,0,1,2,--0,0,1,2,--0,1,2,--
- R12) 0,0,1,2,-->0,0,1,2,--0,0,1,3,--
- R13) 0,0,1,3,-->0,0,1,2,--0,1,2,--
- R14)
- 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--
- R15)
- 0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--
- R16) 0,0,0,0,2,-->0,0,0,0,1,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--
- R17) 0,0,0,0,3,-->0,0,0,0,1,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,1,2,--0,0,1,3,--
- R18) 0,0,0,0,4,-->0,0,0,1,--0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,2,--0,1,2,--
- R19) 0,0,0,1,2,-->0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--
- R20) 0,0,0,1,3,-->0,0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,3,--
- R21) 0,0,0,1,4,-->0,0,0,1,2,--0,0,0,1,2,--0,1,2,--
- R22)
- 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--
- R23)
- 0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,  
0,0,0,1,5,--0,0,0,0,0,1,6,--
- R24)
- 0,0,0,0,0,2,-->0,0,0,0,0,1,--0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,  
4,--0,0,0,0,1,5,--
- R25)

0,0,0,0,0,3,-->0,0,0,0,1,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--

R26)

0,0,0,0,0,4,-->0,0,0,1,--0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,0,1,3,--

R27) 0,0,0,0,0,5,-->0,0,1,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,1,2,--

R28) 0,0,0,0,1,2,-->0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R29) 0,0,0,0,1,3,-->0,0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--

R30) 0,0,0,0,1,4,-->0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,0,1,3,--

R31) 0,0,0,0,1,5,-->0,0,1,2,--0,0,1,2,--0,0,1,2,--0,1,2,--

R32)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R33)

0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--

R34)

0,0,0,0,0,0,2,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--

R35)

0,0,0,0,0,0,3,-->0,0,0,0,0,1,--0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R36)

0,0,0,0,0,0,4,-->0,0,0,0,1,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--

R37)

0,0,0,0,0,0,5,-->0,0,0,1,--0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,0,1,3,--

R38)

0,0,0,0,0,0,6,-->0,0,1,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,1,2,--

R39)

0,0,0,0,0,1,2,-->0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--

R40)

0,0,0,0,0,1,3,-->0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R41)

0,0,0,0,0,1,4,-->0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--

R42) 0,0,0,0,0,1,5,-->0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,0,1,3,--

R43) 0,0,0,0,0,1,6,-->0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,1,2,--

R44)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R45)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,1,4,--0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,1,7,--0,0,0,0,0,0,0,1,8,--

R46)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,1,4,--0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,1,7,--

R47)  
0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--

R48)  
0,0,0,0,0,0,0,4,-->0,0,0,0,0,1,--0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R49)  
0,0,0,0,0,0,0,5,-->0,0,0,0,1,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--

R50)  
0,0,0,0,0,0,0,6,-->0,0,0,1,--0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,0,1,3,--

R51)  
0,0,0,0,0,0,0,7,-->0,0,1,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,1,2,--

R52)  
0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--

R53)  
0,0,0,0,0,0,1,3,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--

R54)  
0,0,0,0,0,0,1,4,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--

R55)  
0,0,0,0,0,0,1,5,-->0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--

R56)  
0,0,0,0,0,0,1,6,-->0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,3,--

R57) 0,0,0,0,0,0,1,7,-->0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,1,2,--

R58)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,0,0,9,--

R59)  
0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,0,0,0,1,4,--0,0,0,0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,0,0,0,1,7,--0,0,0,0,0,0,0,0,0,0,1,8,--0,0,0,0,0,0,0,0,0,0,1,9,--

R60)  
0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,0,1,4,--0,0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,0,1,7,--0,0,0,0,0,0,0,0,1,8,--

R61)  
0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,0,1,4,--0,0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,0,1,7,--

R62)  
0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--

,6,--  
R63)  
0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,1,--0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--  
0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--  
R64)  
0,0,0,0,0,0,0,0,6,-->0,0,0,0,1,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,  
1,2,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--  
R65)  
0,0,0,0,0,0,0,0,7,-->0,0,0,1,--0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,2,--0,0,  
0,1,2,--0,0,0,1,2,--0,0,1,2,--0,0,1,3,--  
R66)  
0,0,0,0,0,0,0,0,8,-->0,0,1,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,  
1,2,--0,0,1,2,--0,1,2,--  
R67)  
0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,1,4,--0,  
0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,1,7,--0,0,0,0,0,0,0,1,8,--  
R68)  
0,0,0,0,0,0,0,1,3,-->0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,  
0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--  
R69)  
0,0,0,0,0,0,0,1,4,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,0,  
1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--  
R70)  
0,0,0,0,0,0,0,1,5,-->0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--  
0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--  
R71)  
0,0,0,0,0,0,0,1,6,-->0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,  
1,2,--0,0,0,1,3,--0,0,0,1,4,--  
R72)  
0,0,0,0,0,0,0,1,7,-->0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,2,--0,  
0,1,2,--0,0,1,3,--  
R73)  
0,0,0,0,0,0,0,1,8,-->0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,  
1,2,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, : 0,0,2, : 0,1,2, :  
LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,2, : 0,0,0,3, : 0,0,1,2, : 0,0,1,3, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,1,2, :  
0,0,0,1,3, : 0,0,0,1,4, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, :  
0,0,0,0,0,5, : 0,0,0,0,1,2, : 0,0,0,0,1,3, : 0,0,0,0,1,4, : 0,0,0,0,1,5, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :  
0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,1,2, : 0,0,0,0,0,1,3, :  
0,0,0,0,0,1,4, : 0,0,0,0,0,1,5, : 0,0,0,0,0,1,6, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :  
0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :  
0,0,0,0,0,0,1,2, : 0,0,0,0,0,0,1,3, : 0,0,0,0,0,0,1,4, : 0,0,0,0,0,0,1,5, :  
0,0,0,0,0,0,1,6, : 0,0,0,0,0,0,1,7, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, :  
 0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,1,2, : 0,0,0,0,0,0,0,1,3, :  
 0,0,0,0,0,0,0,1,4, : 0,0,0,0,0,0,0,1,5, : 0,0,0,0,0,0,0,1,6, : 0,0,0,0,0,0,0,1,7, :  
 0,0,0,0,0,0,0,1,8, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, :  
 0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :  
 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,1,2, : 0,0,0,0,0,0,0,0,1,3, :  
 0,0,0,0,0,0,0,0,1,4, : 0,0,0,0,0,0,0,0,1,5, : 0,0,0,0,0,0,0,0,1,6, :  
 0,0,0,0,0,0,0,0,1,7, : 0,0,0,0,0,0,0,0,1,8, : 0,0,0,0,0,0,0,0,1,9, :

Number new nodes in level n is given by : 1,2,4,6,8,10,12,14,16,18,

-----Class

1157-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][102][110][120][201]]$

-----  
 --  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--  
 R3) 0,1,-->0,1,0,--0,1,0,--  
 R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
 R5) 0,0,1,-->0,1,0,--0,0,1,2,--0,0,1,3,--  
 R6) 0,0,2,-->0,1,0,--0,1,0,--0,1,0,--  
 R7) 0,1,0,-->0,1,0,--  
 R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
 R9) 0,0,0,1,-->0,1,0,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
 R10) 0,0,0,2,-->0,1,0,--0,1,0,--0,0,1,2,--0,0,1,3,--  
 R11) 0,0,0,3,-->0,1,0,--0,1,0,--0,1,--0,1,0,--  
 R12) 0,0,1,2,-->0,0,1,2,--0,0,1,3,--  
 R13) 0,0,1,3,-->0,0,1,3,2,--0,1,0,--  
 R14)  
 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
 0,0,0,0,0,5,--  
 R15) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--  
 R16) 0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
 R17) 0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,--0,0,1,2,--0,0,1,3,--  
 R18) 0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,4,3,--0,1,0,--  
 R19) 0,0,0,1,2,-->0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
 R20) 0,0,0,1,3,-->0,0,1,3,2,--0,0,1,2,--0,0,1,3,--  
 R21) 0,0,0,1,4,-->0,0,1,3,2,--0,0,0,1,4,3,--0,1,0,--  
 R22) 0,0,1,3,2,-->  
 R23)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
 0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
 R24)  
 0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,  
 5,--0,0,0,0,0,1,6,--  
 R25)



0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--  
R26) 0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
R27) 0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,4,3,--0,0,1,2,--0,0,1,3,--  
R28) 0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,4,3,--0,0,0,0,5,4,--0,1,0,--  
R29) 0,0,0,0,1,2,-->0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--  
R30) 0,0,0,0,1,3,-->0,0,1,3,2,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
R31) 0,0,0,0,1,4,-->0,0,1,3,2,--0,0,0,1,4,3,--0,0,1,2,--0,0,1,3,--  
R32) 0,0,0,0,1,5,-->0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,1,0,--  
R33) 0,0,0,0,4,3,-->0,1,0,--0,1,0,--0,1,--  
R34) 0,0,0,1,4,3,-->0,0,1,3,2,--  
R35)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R36)  
0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--  
R37)  
0,0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--  
R38)  
0,0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--  
R39)  
0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,4,3,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
R40)  
0,0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,1,2,--0,0,1,3,--  
R41)  
0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,6,5,--0,1,0,--  
R42)  
0,0,0,0,0,1,2,-->0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--  
R43)  
0,0,0,0,0,1,3,-->0,0,1,3,2,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--  
R44)  
0,0,0,0,0,1,4,-->0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
R45)  
0,0,0,0,0,1,5,-->0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,1,2,--0,0,1,3,--  
R46)  
0,0,0,0,0,1,6,-->0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,0,0,0,1,6,5,--0,1,0,--  
R47) 0,0,0,0,0,5,4,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,4,3,--  
R48) 0,0,0,0,1,5,4,-->0,0,1,3,2,--0,0,0,1,4,3,--  
R49)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R50)

0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,1,4,--0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,1,7,--0,0,0,0,0,0,0,1,8,--

-

R51)

0,0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,1,4,--0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,1,7,--

R52)

0,0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--

R53)

0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,4,3,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R54)

0,0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--

R55)

0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--0,0,0,1,2,--0,0,0,1,3,--

R56)

0,0,0,0,0,0,7,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--0,0,0,0,0,0,7,6,--0,1,0,--

R57)

0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--

R58)

0,0,0,0,0,0,1,3,-->0,0,1,3,2,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--

R59)

0,0,0,0,0,0,1,4,-->0,0,1,3,2,--0,0,0,0,1,4,3,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R60)

0,0,0,0,0,0,1,5,-->0,0,1,3,2,--0,0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--

R61)

0,0,0,0,0,0,1,6,-->0,0,1,3,2,--0,0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,0,0,0,1,6,5,--0,0,0,0,1,2,--0,0,0,0,1,3,--

R62)

0,0,0,0,0,0,1,7,-->0,0,1,3,2,--0,0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,0,0,0,1,6,5,--0,0,0,0,0,1,7,6,--0,1,0,--

R63) 0,0,0,0,0,0,6,5,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--

R64) 0,0,0,0,0,1,6,5,-->0,0,1,3,2,--0,0,0,0,1,4,3,--0,0,0,0,1,5,4,--

R65)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R66)

0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,0,1,4,--0,0,0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,0,0,1,7,--0,0,0,0,0,0,0,0,0,1,8,--

,0,0,0,0,0,1,8,--0,0,0,0,0,0,0,0,1,9,--  
R67)  
0,0,0,0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,3,--0,0,0,  
0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--0,0,0,0,  
,0,0,1,8,--  
R68)  
0,0,0,0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,  
0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--  
R69)  
0,0,0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,4,3,--0,0,0,0,0,1,2,--0,0,0,0,0,  
1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--0,0,0,0,1,6,--  
R70)  
0,0,0,0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,1,  
2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--  
R71)  
0,0,0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
R72)  
0,0,0,0,0,0,0,0,7,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--0,0,0,0,0,0,7,6,--0,0,1,2,--0,0,1,3,--  
R73)  
0,0,0,0,0,0,0,0,8,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--0,0,0,0,0,0,7,6,--0,0,0,0,0,0,8,7,--0,1,0,--  
R74)  
0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,  
0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--0,0,0,0,0,0,1,8,--  
R75)  
0,0,0,0,0,0,1,3,-->0,0,1,3,2,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,  
4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--0,0,0,0,0,1,7,--  
R76)  
0,0,0,0,0,0,1,4,-->0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,  
0,0,0,1,4,--0,0,0,0,1,5,--0,0,0,0,1,6,--  
R77)  
0,0,0,0,0,0,1,5,-->0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,0,0,1,2,--0,0,0,  
0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--  
R78)  
0,0,0,0,0,0,1,6,-->0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,0,0,1,6,5,--0,  
0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
R79)  
0,0,0,0,0,0,1,7,-->0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,0,0,1,6,5,--0,  
0,0,0,0,1,7,6,--0,0,1,2,--0,0,1,3,--  
R80)  
0,0,0,0,0,0,1,8,-->0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,0,0,1,6,5,--0,  
0,0,0,0,1,7,6,--0,0,0,0,0,0,1,8,7,--0,1,0,--  
R81)  
0,0,0,0,0,0,7,6,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--  
R82)  
0,0,0,0,0,0,1,7,6,-->0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,0,0,0,1,6,5,--  
List of different nodes in T[L]

LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,1, : 0,0,2, : 0,1,0, :  
 LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,2, : 0,0,0,3, : 0,0,1,2, : 0,0,1,3, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,1,2, :  
 0,0,0,1,3, : 0,0,0,1,4, : 0,0,1,3,2, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, :  
 0,0,0,0,0,5, : 0,0,0,0,1,2, : 0,0,0,0,1,3, : 0,0,0,0,1,4, : 0,0,0,0,1,5, : 0,0,0,0,4,3, :  
 0,0,0,1,4,3, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,1,2, : 0,0,0,0,0,1,3, :  
 0,0,0,0,0,1,4, : 0,0,0,0,0,1,5, : 0,0,0,0,0,1,6, : 0,0,0,0,0,5,4, : 0,0,0,0,1,5,4, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :  
 0,0,0,0,0,0,1,2, : 0,0,0,0,0,0,1,3, : 0,0,0,0,0,0,1,4, : 0,0,0,0,0,0,1,5, :  
 0,0,0,0,0,0,1,6, : 0,0,0,0,0,0,1,7, : 0,0,0,0,0,0,6,5, : 0,0,0,0,0,1,6,5, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, :  
 0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,1,2, : 0,0,0,0,0,0,0,1,3, :  
 0,0,0,0,0,0,0,1,4, : 0,0,0,0,0,0,0,1,5, : 0,0,0,0,0,0,0,1,6, : 0,0,0,0,0,0,0,1,7, :  
 0,0,0,0,0,0,0,1,8, : 0,0,0,0,0,0,0,7,6, : 0,0,0,0,0,0,1,7,6, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, :  
 0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :  
 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,1,2, : 0,0,0,0,0,0,0,0,1,3, :  
 0,0,0,0,0,0,0,0,1,4, : 0,0,0,0,0,0,0,0,1,5, : 0,0,0,0,0,0,0,0,1,6, :  
 0,0,0,0,0,0,0,0,1,7, : 0,0,0,0,0,0,0,0,1,8, : 0,0,0,0,0,0,0,0,1,9, :  
 0,0,0,0,0,0,0,0,8,7, : 0,0,0,0,0,0,0,1,8,7, :

Number new nodes in level n is given by : 1,2,4,6,9,12,14,16,18,20,

-----Class

1158-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][102][110][120][210]]$

-----

--

Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,0, --0,0,1, --0,0,2, --
- R3) 0,1, -->0,1,0, --0,1,0, --
- R4) 0,0,0, -->0,0,0,0, --0,0,0,1, --0,0,0,2, --0,0,0,3, --
- R5) 0,0,1, -->0,1,0, --0,0,1,2, --0,0,1,3, --
- R6) 0,0,2, -->0,0,2,0, --0,0,2,1, --0,1,0, --
- R7) 0,1,0, -->0,1,0, --
- R8) 0,0,0,0, -->0,0,0,0,0, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --
- R9) 0,0,0,1, -->0,1,0, --0,0,0,1,2, --0,0,0,1,3, --0,0,0,1,4, --
- R10) 0,0,0,2, -->0,0,2,0, --0,0,2,1, --0,0,1,2, --0,0,1,3, --
- R11) 0,0,0,3, -->0,0,0,3,0, --0,0,0,3,1, --0,0,2,1, --0,1,0, --
- R12) 0,0,1,2, -->0,0,1,2, --0,0,1,3, --
- R13) 0,0,1,3, -->0,0,2,1, --0,1,0, --
- R14) 0,0,2,0, -->0,0,2,0, --0,0,2,1, --

R15) 0,0,2,1,-->  
R16)  
0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--  
R17) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--  
R18) 0,0,0,0,2,-->0,0,2,0,--0,0,2,1,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
R19) 0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--0,0,1,2,--0,0,1,3,--  
R20) 0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,1,0,--  
R21) 0,0,0,1,2,-->0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
R22) 0,0,0,1,3,-->0,0,2,1,--0,0,1,2,--0,0,1,3,--  
R23) 0,0,0,1,4,-->0,0,0,3,1,--0,0,2,1,--0,1,0,--  
R24) 0,0,0,3,0,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--  
R25) 0,0,0,3,1,-->0,0,2,1,--  
R26)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R27)  
0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,  
5,--0,0,0,0,0,1,6,--  
R28)  
0,0,0,0,0,2,-->0,0,2,0,--0,0,2,1,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,  
0,1,5,--  
R29)  
0,0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,  
--  
R30)  
0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,1,2,--0,0,1,3,  
--  
R31)  
0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--  
0,1,0,--  
R32) 0,0,0,0,1,2,-->0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--  
R33) 0,0,0,0,1,3,-->0,0,2,1,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
R34) 0,0,0,0,1,4,-->0,0,0,3,1,--0,0,2,1,--0,0,1,2,--0,0,1,3,--  
R35) 0,0,0,0,1,5,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,1,0,--  
R36) 0,0,0,0,4,0,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--  
R37) 0,0,0,0,4,1,-->0,0,0,3,1,--0,0,2,1,--  
R38)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R39)  
0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,  
0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--  
R40)  
0,0,0,0,0,0,2,-->0,0,2,0,--0,0,2,1,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,  
--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--  
R41)  
0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,  
0,0,1,4,--0,0,0,0,1,5,--  
R42)

0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--

R43)

0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,1,2,--0,0,1,3,--

R44)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,1,0,--

R45)

0,0,0,0,0,1,2,-->0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,1,6,--

R46)

0,0,0,0,0,1,3,-->0,0,2,1,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R47) 0,0,0,0,0,1,4,-->0,0,0,3,1,--0,0,2,1,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--

R48) 0,0,0,0,0,1,5,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,1,2,--0,0,1,3,--

R49) 0,0,0,0,0,1,6,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,1,0,--

R50)

0,0,0,0,0,5,0,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--

R51) 0,0,0,0,0,5,1,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--

R52)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R53)

0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,1,4,--0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,1,7,--0,0,0,0,0,0,0,1,8,--

R54)

0,0,0,0,0,0,0,2,-->0,0,2,0,--0,0,2,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--

R55)

0,0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--

R56)

0,0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R57)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--

R58)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,1,2,--0,0,1,3,--

R59)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,1,0,--

R60)

0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--

R61)

0,0,0,0,0,0,1,3,-->0,0,2,1,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,  
0,0,1,5,--0,0,0,0,0,1,6,--

R62)

0,0,0,0,0,0,1,4,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--  
0,0,0,0,1,5,--

R63)

0,0,0,0,0,0,1,5,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,1,2,--0,0,0,1,3,--0,0,  
0,1,4,--

R64)

0,0,0,0,0,0,1,6,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,1,2,--0,  
0,1,3,--

R65)

0,0,0,0,0,0,1,7,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,  
2,1,--0,1,0,--

R66)

0,0,0,0,0,0,6,0,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,  
--0,0,0,3,1,--0,0,2,1,--

R67) 0,0,0,0,0,0,6,1,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--

R68)

0,0,0,0,0,0,0,0,-->0,  
2,--0,  
0,0,6,--0,  
0,0,7,--0,  
0,0,8,--0,  
0,0,9,--

R69)

0,0,0,0,0,0,0,0,1,-->0,1,0,--0,  
0,0,0,1,4,--0,  
0,0,0,0,0,0,1,8,--0,  
0,0,1,9,--

R70)

0,0,0,0,0,0,0,0,2,-->0,0,2,0,--0,0,2,1,--0,  
0,0,0,0,0,0,0,0,1,4,--0,  
0,0,0,0,0,0,1,8,--

R71)

0,0,0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--0,  
0,1,3,--0,0,0,0,0,0,0,0,1,4,--0,  
0,1,5,--0,  
0,1,6,--0,  
0,1,7,--

R72)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,1,  
2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--

R73)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,  
2,1,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--

R74)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,  
1,--0,0,0,0,3,1,--0,0,2,1,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--

R75)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,6,1,--0,0,  
0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,1,2,--0,0,1,3,--

R76)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,0,--0,0,0,0,0,0,0,8,1,--0,0,0,0,0,0,7,1,  
--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,1,0,--

R77)

0,0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,0,1,4,--0,

0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--0,0,0,0,0,0,1,8,--  
R78)

0,0,0,0,0,0,0,1,3,-->0,0,2,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,  
--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--  
R79)

0,0,0,0,0,0,0,1,4,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,  
0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--  
R80)

0,0,0,0,0,0,0,1,5,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,1,2,--0,0,0,0,1,3,  
--0,0,0,0,1,4,--0,0,0,0,1,5,--  
R81)

0,0,0,0,0,0,0,1,6,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,1,2,  
--0,0,0,1,3,--0,0,0,1,4,--  
R82)

0,0,0,0,0,0,0,1,7,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,  
0,2,1,--0,0,1,2,--0,0,1,3,--  
R83)

0,0,0,0,0,0,0,1,8,-->0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,  
4,1,--0,0,0,3,1,--0,0,2,1,--0,1,0,--  
R84)

0,0,0,0,0,0,0,7,0,-->0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,7,1,--0,0,0,0,0,0,6,1,--0,0,  
0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--  
R85)

0,0,0,0,0,0,0,7,1,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,  
0,2,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,: 0,1,0,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,: 0,0,1,2,: 0,0,1,3,: 0,0,2,0,:  
0,0,2,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,: 0,0,0,1,2,:  
0,0,0,1,3,: 0,0,0,1,4,: 0,0,0,3,0,: 0,0,0,3,1,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,:  
0,0,0,0,0,5,: 0,0,0,0,1,2,: 0,0,0,0,1,3,: 0,0,0,0,1,4,: 0,0,0,0,1,5,: 0,0,0,0,4,0,:  
0,0,0,0,4,1,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,:

0,0,0,0,0,0,4,: 0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,: 0,0,0,0,0,1,2,: 0,0,0,0,0,1,3,:

0,0,0,0,0,1,4,: 0,0,0,0,0,1,5,: 0,0,0,0,0,1,6,: 0,0,0,0,0,5,0,: 0,0,0,0,0,5,1,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:

0,0,0,0,0,0,1,2,: 0,0,0,0,0,0,1,3,: 0,0,0,0,0,0,1,4,: 0,0,0,0,0,0,1,5,:

0,0,0,0,0,0,1,6,: 0,0,0,0,0,0,1,7,: 0,0,0,0,0,0,6,0,: 0,0,0,0,0,0,6,1,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,:

0,0,0,0,0,0,0,0,7,:



0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,:  
 0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,0,1,2,: 0,0,0,0,0,0,0,0,1,3,:  
 0,0,0,0,0,0,0,0,1,4,: 0,0,0,0,0,0,0,0,1,5,: 0,0,0,0,0,0,0,0,1,6,:  
 0,0,0,0,0,0,0,0,1,7,: 0,0,0,0,0,0,0,0,1,8,: 0,0,0,0,0,0,0,0,1,9,:  
 0,0,0,0,0,0,0,8,0,: 0,0,0,0,0,0,0,8,1,:  
 Number new nodes in level n is given by : 1,2,4,8,10,12,14,16,18,20,

-----Class

1159-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][102][110][201][210]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--
- R3) 0,1,-->0,1,0,--0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R5) 0,0,1,-->0,1,0,--0,0,1,--0,0,2,--
- R6) 0,0,2,-->0,1,0,--0,0,2,1,--0,0,2,--
- R7) 0,1,0,-->0,1,0,--
- R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R9) 0,0,0,1,-->0,1,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R10) 0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,2,--0,0,0,3,--
- R11) 0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,0,3,--
- R12) 0,0,2,1,-->
- R13)
- 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--
- R14) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R15) 0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R16) 0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,0,0,3,--0,0,0,0,4,--
- R17) 0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,4,--
- R18)
- 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--
- R19)
- 0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--
- R20)
- 0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--
- R21)
- 0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--
- 
- R22)
- 0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,4,--0,0,0,0,0,5,--
- R23) 0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,5,--
- R24)
- 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R25)

0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R26)

0,0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R27)

0,0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R28)

0,0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R29)

0,0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R30)

0,0,0,0,0,0,6,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,6,--

R31)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R32)

0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R33)

0,0,0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R34)

0,0,0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R35)

0,0,0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R36)

0,0,0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R37)

0,0,0,0,0,0,0,6,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R38)

0,0,0,0,0,0,0,7,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,7,--

R39)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R40)

0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

, --0,0,0,0,0,0,0,0,8, --

R41)

0,0,0,0,0,0,0,0,2, -->0,1,0, --0,0,2,1, --0,0,0,0,0,0,0,0,2, --0,0,0,0,0,0,0,0,3, --0,0,0,0,0,0,0,4, --0,0,0,0,0,0,0,0,5, --0,0,0,0,0,0,0,0,6, --0,0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,8, --

R42)

0,0,0,0,0,0,0,0,3, -->0,1,0, --0,0,2,1, --0,0,2,1, --0,0,0,0,0,0,0,0,3, --0,0,0,0,0,0,0,0,4, --0,0,0,0,0,0,0,0,5, --0,0,0,0,0,0,0,0,6, --0,0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,0,8, --

R43)

0,0,0,0,0,0,0,0,4, -->0,1,0, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,0,0,0,0,0,0,4, --0,0,0,0,0,0,0,0,5, --0,0,0,0,0,0,0,0,6, --0,0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,0,8, --

R44)

0,0,0,0,0,0,0,0,5, -->0,1,0, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,0,0,0,0,0,0,5, --0,0,0,0,0,0,0,0,6, --0,0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,0,8, --

R45)

0,0,0,0,0,0,0,0,6, -->0,1,0, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,0,0,0,0,0,0,6, --0,0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,0,8, --

R46)

0,0,0,0,0,0,0,0,7, -->0,1,0, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,0,8, --

R47)

0,0,0,0,0,0,0,0,8, -->0,1,0, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,0,0,0,0,0,0,8, --

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,0, : 0,0,1, : 0,0,2, : 0,1,0, :

LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,2, : 0,0,0,3, : 0,0,2,1, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, :

0,0,0,0,0,5, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :

0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :

0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, :

0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, :

0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :

0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, :

0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :

0,0,0,0,0,0,0,0,0,9, :

Number new nodes in level n is given by : 1,2,4,5,5,6,7,8,9,10,

-----Class

1160-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][102][120][201][210]]

-----

--



0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--

R36)

0,0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R37)

0,0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--

R38)

0,0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,2,--0,0,1,3,--

R39)

0,0,0,0,0,0,6,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,0,--

R40)

0,0,0,0,0,1,2,-->0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--

R41)

0,0,0,0,0,1,3,-->0,0,2,1,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R42) 0,0,0,0,0,1,4,-->0,0,2,1,--0,0,2,1,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--

R43) 0,0,0,0,0,1,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,2,--0,0,1,3,--

R44) 0,0,0,0,0,1,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,0,--

R45)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R46)

0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,1,4,--0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,1,7,--0,0,0,0,0,0,0,1,8,--

R47)

0,0,0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--

R48)

0,0,0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--

R49)

0,0,0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R50)

0,0,0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--

R51)

0,0,0,0,0,0,0,6,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,2,--0,0,1,3,--

R52)

0,0,0,0,0,0,0,7,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,0,--

R53)

0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--

R54)

0,0,0,0,0,0,1,3,-->0,0,2,1,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,  
0,0,1,5,--0,0,0,0,0,1,6,--

R55)

0,0,0,0,0,0,1,4,-->0,0,2,1,--0,0,2,1,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,  
0,0,0,1,5,--

R56)

0,0,0,0,0,0,1,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,  
--

R57)

0,0,0,0,0,0,1,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,2,--0,0,1,3,--

R58) 0,0,0,0,0,0,1,7,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,0,--

R59)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R60)

0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,1,3,--0,0,0,0,0,  
0,0,0,1,4,--0,0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,0,1,7,--0,0,0,  
,0,0,0,0,0,1,8,--0,0,0,0,0,0,0,0,1,9,--

R61)

0,0,0,0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,3,--0,0,  
0,0,0,0,0,1,4,--0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,1,7,--0,0,0,0,  
,0,0,0,1,8,--

R62)

0,0,0,0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,  
--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--

R63)

0,0,0,0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,1,2,--0,0,0,0,  
0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--

R64)

0,0,0,0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,1,2,--  
0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--

R65)

0,0,0,0,0,0,0,0,6,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,  
0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--

R66)

0,0,0,0,0,0,0,0,7,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,  
2,1,--0,0,1,2,--0,0,1,3,--

R67)

0,0,0,0,0,0,0,0,8,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,  
2,1,--0,0,2,1,--0,1,0,--

R68)

0,0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,0,1,4,--0,  
0,0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,0,1,7,--0,0,0,0,0,0,0,0,1,8,--

R69)

0,0,0,0,0,0,0,0,1,3,-->0,0,2,1,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,1,4,  
--0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,1,7,--

R70)

0,0,0,0,0,0,0,0,1,4,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,  
1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--

R71)

0,0,0,0,0,0,0,1,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R72)

0,0,0,0,0,0,0,1,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--

R73)

0,0,0,0,0,0,0,1,7,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,2,--0,0,1,3,--

R74)

0,0,0,0,0,0,0,1,8,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,: 0,1,0,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,: 0,0,1,2,: 0,0,1,3,: 0,0,2,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,: 0,0,0,1,2,:

0,0,0,1,3,: 0,0,0,1,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,:

0,0,0,0,0,5,: 0,0,0,0,1,2,: 0,0,0,0,1,3,: 0,0,0,0,1,4,: 0,0,0,0,1,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,:

0,0,0,0,0,0,4,: 0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,: 0,0,0,0,0,1,2,: 0,0,0,0,0,1,3,:

0,0,0,0,0,1,4,: 0,0,0,0,0,1,5,: 0,0,0,0,0,1,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:

0,0,0,0,0,0,1,2,: 0,0,0,0,0,0,1,3,: 0,0,0,0,0,0,1,4,: 0,0,0,0,0,0,1,5,:

0,0,0,0,0,0,1,6,: 0,0,0,0,0,0,1,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,:

0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,1,2,: 0,0,0,0,0,0,0,1,3,:

0,0,0,0,0,0,0,1,4,: 0,0,0,0,0,0,0,1,5,: 0,0,0,0,0,0,0,1,6,: 0,0,0,0,0,0,0,1,7,:

0,0,0,0,0,0,0,1,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,:

0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,:

0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,0,1,2,: 0,0,0,0,0,0,0,0,1,3,:

0,0,0,0,0,0,0,0,1,4,: 0,0,0,0,0,0,0,0,1,5,: 0,0,0,0,0,0,0,0,1,6,:

0,0,0,0,0,0,0,0,1,7,: 0,0,0,0,0,0,0,0,1,8,: 0,0,0,0,0,0,0,0,1,9,:

Number new nodes in level n is given by : 1,2,4,7,8,10,12,14,16,18,

-----Class

1161-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][110][120][201][210]]

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--

R3) 0,1,-->0,0,1,--0,1,2,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R5) 0,0,1,-->0,0,0,1,--0,0,1,2,--0,0,1,3,--  
R6) 0,0,2,-->0,0,1,--0,0,1,2,--0,1,2,--  
R7) 0,1,2,-->0,1,2,--  
R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R9) 0,0,0,1,-->0,0,0,0,1,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
R10) 0,0,0,2,-->0,0,0,1,--0,0,0,1,2,--0,0,1,2,--0,0,1,3,--  
R11) 0,0,0,3,-->0,0,1,--0,0,1,2,--0,0,1,2,--0,1,2,--  
R12) 0,0,1,2,-->0,0,1,2,--0,0,1,3,--  
R13) 0,0,1,3,-->0,0,1,2,--0,1,2,--  
R14)  
0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--  
R15)  
0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--  
R16) 0,0,0,0,2,-->0,0,0,0,1,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
R17) 0,0,0,0,3,-->0,0,0,1,--0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,0,1,3,--  
R18) 0,0,0,0,4,-->0,0,1,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,1,2,--  
R19) 0,0,0,1,2,-->0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
R20) 0,0,0,1,3,-->0,0,0,1,2,--0,0,1,2,--0,0,1,3,--  
R21) 0,0,0,1,4,-->0,0,1,2,--0,0,1,2,--0,1,2,--  
R22)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R23)  
0,0,0,0,0,1,-->0,0,0,0,0,0,1,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,  
0,0,0,1,5,--0,0,0,0,0,1,6,--  
R24)  
0,0,0,0,0,2,-->0,0,0,0,0,1,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,  
4,--0,0,0,0,1,5,--  
R25)  
0,0,0,0,0,3,-->0,0,0,0,1,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,3,--0,0,  
0,1,4,--  
R26)  
0,0,0,0,0,4,-->0,0,0,1,--0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,0,1,3,--  
R27) 0,0,0,0,0,5,-->0,0,1,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,1,2,--  
R28) 0,0,0,0,1,2,-->0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--  
R29) 0,0,0,0,1,3,-->0,0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
R30) 0,0,0,0,1,4,-->0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,0,1,3,--  
R31) 0,0,0,0,1,5,-->0,0,1,2,--0,0,1,2,--0,0,1,2,--0,1,2,--  
R32)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R33)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,  
1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--  
R34)  
0,0,0,0,0,0,2,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--  
0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--  
R35)



0,0,0,0,0,0,3,-->0,0,0,0,0,1,--0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R36)

0,0,0,0,0,0,4,-->0,0,0,0,1,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--

R37)

0,0,0,0,0,0,5,-->0,0,0,1,--0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,0,1,3,--

R38)

0,0,0,0,0,0,6,-->0,0,1,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,1,2,--

R39)

0,0,0,0,0,1,2,-->0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--

R40)

0,0,0,0,0,1,3,-->0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R41)

0,0,0,0,0,1,4,-->0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--

R42) 0,0,0,0,0,1,5,-->0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,0,1,3,--

R43) 0,0,0,0,0,1,6,-->0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,1,2,--

R44)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R45)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,1,4,--0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,1,7,--0,0,0,0,0,0,0,1,8,--

R46)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,1,4,--0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,1,7,--

R47)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--

R48)

0,0,0,0,0,0,0,4,-->0,0,0,0,0,1,--0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R49)

0,0,0,0,0,0,0,5,-->0,0,0,0,1,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--

R50)

0,0,0,0,0,0,0,6,-->0,0,0,1,--0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,0,1,3,--

R51)

0,0,0,0,0,0,0,7,-->0,0,1,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,1,2,--

R52)

0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--

R53)

0,0,0,0,0,0,1,3,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,  
--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--

R54)

0,0,0,0,0,0,1,4,-->0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,  
0,0,1,4,--0,0,0,0,1,5,--

R55)

0,0,0,0,0,0,1,5,-->0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,3,  
--0,0,0,1,4,--

R56)

0,0,0,0,0,0,1,6,-->0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,0,1,  
3,--

R57) 0,0,0,0,0,0,1,7,-->0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,1,2,--

R58)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R59)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,1,  
3,--0,0,0,0,0,0,0,0,1,4,--0,0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,  
0,1,7,--0,0,0,0,0,0,0,0,1,8,--0,0,0,0,0,0,0,0,1,9,--

R60)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,1,2,--  
0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,1,4,--0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,1,6,--0,0,  
0,0,0,0,0,1,7,--0,0,0,0,0,0,0,1,8,--

R61)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,2,--0,0,  
0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,  
--0,0,0,0,0,0,1,7,--

R62)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,  
0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,  
6,--

R63)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,1,--0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--  
0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R64)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,1,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,  
1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--

R65)

0,0,0,0,0,0,0,0,7,-->0,0,0,1,--0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,2,--0,0,  
0,1,2,--0,0,0,1,2,--0,0,1,2,--0,0,1,3,--

R66)

0,0,0,0,0,0,0,0,8,-->0,0,1,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,  
1,2,--0,0,1,2,--0,1,2,--

R67)

0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,1,4,--0,  
0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,1,7,--0,0,0,0,0,0,0,1,8,--

R68)

0,0,0,0,0,0,0,1,3,-->0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,3,--0,0,0,  
0,0,0,1,4,--0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,1,7,--

R69)

0,0,0,0,0,0,0,1,4,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--

R70)

0,0,0,0,0,0,0,1,5,-->0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R71)

0,0,0,0,0,0,0,1,6,-->0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--

R72)

0,0,0,0,0,0,0,1,7,-->0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,0,1,3,--

R73)

0,0,0,0,0,0,0,1,8,-->0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,0,1,2,--0,1,2,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,0, : 0,0,1, : 0,0,2, : 0,1,2, :

LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,2, : 0,0,0,3, : 0,0,1,2, : 0,0,1,3, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,1,2, : 0,0,0,1,3, : 0,0,0,1,4, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, : 0,0,0,0,1,2, : 0,0,0,0,1,3, : 0,0,0,0,1,4, : 0,0,0,0,1,5, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, : 0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,1,2, : 0,0,0,0,0,1,3, : 0,0,0,0,0,1,4, : 0,0,0,0,0,1,5, : 0,0,0,0,0,1,6, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,1,2, : 0,0,0,0,0,0,1,3, : 0,0,0,0,0,0,1,4, : 0,0,0,0,0,0,1,5, : 0,0,0,0,0,0,1,6, : 0,0,0,0,0,0,1,7, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,1,2, : 0,0,0,0,0,0,0,1,3, : 0,0,0,0,0,0,0,1,4, : 0,0,0,0,0,0,0,1,5, : 0,0,0,0,0,0,0,1,6, : 0,0,0,0,0,0,0,1,7, : 0,0,0,0,0,0,0,1,8, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,1,2, : 0,0,0,0,0,0,0,0,1,3, : 0,0,0,0,0,0,0,0,1,4, : 0,0,0,0,0,0,0,0,1,5, : 0,0,0,0,0,0,0,0,1,6, : 0,0,0,0,0,0,0,0,1,7, : 0,0,0,0,0,0,0,0,1,8, : 0,0,0,0,0,0,0,0,1,9, :

Number new nodes in level n is given by : 1,2,4,6,8,10,12,14,16,18,

-----Class

1162-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[012][021][100][101][102]]

-----

--

Rules of T[L]:



List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,: 0,1,:
- LEN=3) 0,0,0,: 0,1,0,: 0,1,1,:
- LEN=4) 0,0,0,0,:
- LEN=5) 0,0,0,0,0,:
- LEN=6) 0,0,0,0,0,0,:
- LEN=7) 0,0,0,0,0,0,0,:
- LEN=8) 0,0,0,0,0,0,0,0,:
- LEN=9) 0,0,0,0,0,0,0,0,0,:
- LEN=10) 0,0,0,0,0,0,0,0,0,0,:

Number new nodes in level n is given by : 1,2,3,1,1,1,1,1,1,1,1,

-----Class

1164-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[012][021][100][101][120]]

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,1,--
- R3) 0,1,-->0,1,0,--0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--
- R5) 0,1,0,-->
- R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--
- R7) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R8) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R9) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R10) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R11) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,: 0,1,:
- LEN=3) 0,0,0,: 0,1,0,:
- LEN=4) 0,0,0,0,:
- LEN=5) 0,0,0,0,0,:
- LEN=6) 0,0,0,0,0,0,:
- LEN=7) 0,0,0,0,0,0,0,:
- LEN=8) 0,0,0,0,0,0,0,0,:
- LEN=9) 0,0,0,0,0,0,0,0,0,:
- LEN=10) 0,0,0,0,0,0,0,0,0,0,:

Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,

-----Class

1165-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[012][021][100][101][201]]

```

-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,0,--0,1,--0,1,--
R3) 0,1,-->0,1,0,--0,1,--
R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--
R5) 0,1,0,-->
R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--
R7) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--
R8) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
R9) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
R10)
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
1,--
R11)
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
--0,1,--0,1,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,0,0,: 0,1,0,:
LEN=4) 0,0,0,0,:
LEN=5) 0,0,0,0,0,:
LEN=6) 0,0,0,0,0,0,:
LEN=7) 0,0,0,0,0,0,0,:
LEN=8) 0,0,0,0,0,0,0,0,:
LEN=9) 0,0,0,0,0,0,0,0,0,:
LEN=10) 0,0,0,0,0,0,0,0,0,0,:
Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,

```

```

-----Class
1166-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[012][021][100][101][210]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,0,--0,1,--0,1,--
R3) 0,1,-->0,1,0,--0,1,--
R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--
R5) 0,1,0,-->
R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--
R7) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--
R8) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
R9) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
R10)
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
1,--
R11)

```

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, : 0,1, :
- LEN=3) 0,0,0, : 0,1,0, :
- LEN=4) 0,0,0,0, :
- LEN=5) 0,0,0,0,0, :
- LEN=6) 0,0,0,0,0,0, :
- LEN=7) 0,0,0,0,0,0,0, :
- LEN=8) 0,0,0,0,0,0,0,0, :
- LEN=9) 0,0,0,0,0,0,0,0,0, :
- LEN=10) 0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,

-----Class

1167-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[012][021][100][102][110]]

-----

--

Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,0, --0,1, --0,1, --
- R3) 0,1, -->0,1,0, --0,1,0, --
- R4) 0,0,0, -->0,0,0,0, --0,1, --0,1, --0,1, --
- R5) 0,1,0, -->0,1,0, --
- R6) 0,0,0,0, -->0,0,0,0,0, --0,1, --0,1, --0,1, --0,1, --
- R7) 0,0,0,0,0, -->0,0,0,0,0,0, --0,1, --0,1, --0,1, --0,1, --0,1, --
- R8) 0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --
- R9) 0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --
- R10) 0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --
- R11) 0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, : 0,1, :
- LEN=3) 0,0,0, : 0,1,0, :
- LEN=4) 0,0,0,0, :
- LEN=5) 0,0,0,0,0, :
- LEN=6) 0,0,0,0,0,0, :
- LEN=7) 0,0,0,0,0,0,0, :
- LEN=8) 0,0,0,0,0,0,0,0, :
- LEN=9) 0,0,0,0,0,0,0,0,0, :
- LEN=10) 0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,

-----Class

1168-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][100][102][120]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,1,--
- R3) 0,1,-->0,1,0,--0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--
- R5) 0,1,0,-->0,1,0,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--
- R7) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R8) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R9) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R10) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R11) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,: 0,1,:
- LEN=3) 0,0,0,: 0,1,0,:
- LEN=4) 0,0,0,0,:
- LEN=5) 0,0,0,0,0,:
- LEN=6) 0,0,0,0,0,0,:
- LEN=7) 0,0,0,0,0,0,0,:
- LEN=8) 0,0,0,0,0,0,0,0,:
- LEN=9) 0,0,0,0,0,0,0,0,0,:
- LEN=10) 0,0,0,0,0,0,0,0,0,0,:

Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,

-----Class

1169-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][100][102][201]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,1,--
- R3) 0,1,-->0,1,0,--0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--
- R5) 0,1,0,-->0,1,0,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--
- R7) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R8) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R9) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R10) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--



1,--  
R11)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,  
--0,1,--0,1,--  
List of different nodes in T[L]  
LEN=1) 0,  
LEN=2) 0,0,: 0,1,  
LEN=3) 0,0,0,: 0,1,0,  
LEN=4) 0,0,0,0,  
LEN=5) 0,0,0,0,0,  
LEN=6) 0,0,0,0,0,0,  
LEN=7) 0,0,0,0,0,0,0,  
LEN=8) 0,0,0,0,0,0,0,0,  
LEN=9) 0,0,0,0,0,0,0,0,0,  
LEN=10) 0,0,0,0,0,0,0,0,0,0,  
Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,

-----Class  
1170-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[012][021][100][102][210]]  
-----

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,1,--0,1,--  
R3) 0,1,-->0,1,0,--0,1,--  
R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--  
R5) 0,1,0,-->0,1,0,--  
R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--  
R7) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R8) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R9) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R10)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,  
1,--  
R11)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
--0,1,--0,1,--  
List of different nodes in T[L]  
LEN=1) 0,  
LEN=2) 0,0,: 0,1,  
LEN=3) 0,0,0,: 0,1,0,  
LEN=4) 0,0,0,0,  
LEN=5) 0,0,0,0,0,  
LEN=6) 0,0,0,0,0,0,  
LEN=7) 0,0,0,0,0,0,0,  
LEN=8) 0,0,0,0,0,0,0,0,  
LEN=9) 0,0,0,0,0,0,0,0,0,  
LEN=10) 0,0,0,0,0,0,0,0,0,0,  
Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,



R10)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 1,--  
 R11)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 --0,1,--0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,1,0, :  
 LEN=4) 0,0,0,0, :  
 LEN=5) 0,0,0,0,0, :  
 LEN=6) 0,0,0,0,0,0, :  
 LEN=7) 0,0,0,0,0,0,0, :  
 LEN=8) 0,0,0,0,0,0,0,0, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, :  
 Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class

1173-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][100][110][210]]$   
 -----

--  
 Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,1,--0,1,--  
 R3) 0,1,-->0,1,0,--0,1,0,--  
 R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--  
 R5) 0,1,0,-->0,1,0,--  
 R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--  
 R7) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R8) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R9) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R10)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 1,--  
 R11)  
 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 --0,1,--0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,1,0, :  
 LEN=4) 0,0,0,0, :  
 LEN=5) 0,0,0,0,0, :  
 LEN=6) 0,0,0,0,0,0, :  
 LEN=7) 0,0,0,0,0,0,0, :  
 LEN=8) 0,0,0,0,0,0,0,0, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, :

LEN=10) 0,0,0,0,0,0,0,0,0,0,0,0,0,  
Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,

-----Class

1174-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[012][021][100][120][201]]

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,1,--
- R3) 0,1,-->0,1,0,--0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--
- R5) 0,1,0,-->0,1,0,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--
- R7) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R8) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R9) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R10) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R11) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, : 0,1, :
- LEN=3) 0,0,0, : 0,1,0, :
- LEN=4) 0,0,0,0, :
- LEN=5) 0,0,0,0,0, :
- LEN=6) 0,0,0,0,0,0, :
- LEN=7) 0,0,0,0,0,0,0, :
- LEN=8) 0,0,0,0,0,0,0,0, :
- LEN=9) 0,0,0,0,0,0,0,0,0, :
- LEN=10) 0,0,0,0,0,0,0,0,0,0,0, :
- Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class

1175-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[012][021][100][120][210]]

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,1,--
- R3) 0,1,-->0,1,0,--0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--
- R5) 0,1,0,-->0,1,0,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--
- R7) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--

R8) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R9) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R10) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R11) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,1,0, :  
LEN=4) 0,0,0,0, :  
LEN=5) 0,0,0,0,0, :  
LEN=6) 0,0,0,0,0,0, :  
LEN=7) 0,0,0,0,0,0,0, :  
LEN=8) 0,0,0,0,0,0,0,0, :  
LEN=9) 0,0,0,0,0,0,0,0,0, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, :  
Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class  
1176-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][100][201][210]]$   
-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,1,--0,1,--  
R3) 0,1,-->0,1,0,--0,1,--  
R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--  
R5) 0,1,0,-->0,1,0,--  
R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--  
R7) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R8) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R9) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R10) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R11) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,1,0, :  
LEN=4) 0,0,0,0, :  
LEN=5) 0,0,0,0,0, :  
LEN=6) 0,0,0,0,0,0, :  
LEN=7) 0,0,0,0,0,0,0, :

LEN=8) 0,0,0,0,0,0,0,0,:  
LEN=9) 0,0,0,0,0,0,0,0,0,:  
LEN=10) 0,0,0,0,0,0,0,0,0,0,:  
Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class

1177-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][101][102][110]]$

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,1,--
- R3) 0,1,-->0,1,0,--0,1,0,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--
- R5) 0,1,0,-->0,1,0,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--
- R7) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R8) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R9) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R10) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R11) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0,:  
LEN=2) 0,0,: 0,1,:  
LEN=3) 0,0,0,: 0,1,0,:  
LEN=4) 0,0,0,0,:  
LEN=5) 0,0,0,0,0,:  
LEN=6) 0,0,0,0,0,0,:  
LEN=7) 0,0,0,0,0,0,0,:  
LEN=8) 0,0,0,0,0,0,0,0,:  
LEN=9) 0,0,0,0,0,0,0,0,0,:  
LEN=10) 0,0,0,0,0,0,0,0,0,0,:  
Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class

1178-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][101][102][120]]$

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,1,--
- R3) 0,1,-->0,1,0,--0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--
- R5) 0,1,0,-->0,1,0,--

R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--  
 R7) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R8) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R9) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R10) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R11) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,1,0, :  
 LEN=4) 0,0,0,0, :  
 LEN=5) 0,0,0,0,0, :  
 LEN=6) 0,0,0,0,0,0, :  
 LEN=7) 0,0,0,0,0,0,0, :  
 LEN=8) 0,0,0,0,0,0,0,0, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, :  
 Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class  
 1179-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][101][102][201]]$   
 -----

Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,1,--0,1,--  
 R3) 0,1,-->0,1,0,--0,1,--  
 R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--  
 R5) 0,1,0,-->0,1,0,--  
 R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--  
 R7) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R8) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R9) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R10) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R11) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,1,0, :  
 LEN=4) 0,0,0,0, :  
 LEN=5) 0,0,0,0,0, :

LEN=6) 0,0,0,0,0,0,:  
 LEN=7) 0,0,0,0,0,0,0,:  
 LEN=8) 0,0,0,0,0,0,0,0,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,:  
 Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class

1180-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][101][102][210]]$

-----  
 --  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,1,--0,1,--  
 R3) 0,1,-->0,1,0,--0,1,--  
 R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--  
 R5) 0,1,0,-->0,1,0,--  
 R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--  
 R7) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R8) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R9) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R10) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R11) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 --0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0,:  
 LEN=2) 0,0,: 0,1,:  
 LEN=3) 0,0,0,: 0,1,0,:  
 LEN=4) 0,0,0,0,:  
 LEN=5) 0,0,0,0,0,:  
 LEN=6) 0,0,0,0,0,0,:  
 LEN=7) 0,0,0,0,0,0,0,:  
 LEN=8) 0,0,0,0,0,0,0,0,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,:  
 Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class

1181-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][101][110][120]]$

-----  
 --  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,1,--0,1,--  
 R3) 0,1,-->0,1,0,--0,1,0,--



R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--  
R5) 0,1,0,-->0,1,0,--  
R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--  
R7) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R8) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R9) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R10)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
1,--  
R11)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
--0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,1,0, :  
LEN=4) 0,0,0,0, :  
LEN=5) 0,0,0,0,0, :  
LEN=6) 0,0,0,0,0,0, :  
LEN=7) 0,0,0,0,0,0,0, :  
LEN=8) 0,0,0,0,0,0,0,0, :  
LEN=9) 0,0,0,0,0,0,0,0,0, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,

-----Class

1182-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][101][110][201]]$

-----

--  
Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,1,--0,1,--  
R3) 0,1,-->0,1,0,--0,1,0,--  
R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--  
R5) 0,1,0,-->0,1,0,--  
R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--  
R7) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R8) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R9) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
R10)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
1,--  
R11)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
--0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,1,0, :

LEN=4) 0,0,0,0,:  
 LEN=5) 0,0,0,0,0,:  
 LEN=6) 0,0,0,0,0,0,:  
 LEN=7) 0,0,0,0,0,0,0,:  
 LEN=8) 0,0,0,0,0,0,0,0,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,:  
 Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class

1183-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][101][110][210]]$

--  
 Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,1,--
- R3) 0,1,-->0,1,0,--0,1,0,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--
- R5) 0,1,0,-->0,1,0,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--
- R7) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R8) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R9) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R10) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R11) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

List of different nodes in  $T[L]$

LEN=1) 0,:  
 LEN=2) 0,0,: 0,1,:  
 LEN=3) 0,0,0,: 0,1,0,:  
 LEN=4) 0,0,0,0,:  
 LEN=5) 0,0,0,0,0,:  
 LEN=6) 0,0,0,0,0,0,:  
 LEN=7) 0,0,0,0,0,0,0,:  
 LEN=8) 0,0,0,0,0,0,0,0,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,:  
 Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class

1184-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][101][120][201]]$

--  
 Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,1,--  
 R3) 0,1,-->0,1,0,--0,1,--  
 R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--  
 R5) 0,1,0,-->0,1,0,--  
 R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--  
 R7) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R8) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R9) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R10)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 1,--  
 R11)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 --0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,1,0, :  
 LEN=4) 0,0,0,0, :  
 LEN=5) 0,0,0,0,0, :  
 LEN=6) 0,0,0,0,0,0, :  
 LEN=7) 0,0,0,0,0,0,0, :  
 LEN=8) 0,0,0,0,0,0,0,0, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, :  
 Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class

1185-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][101][120][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,1,--0,1,--  
 R3) 0,1,-->0,1,0,--0,1,--  
 R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--  
 R5) 0,1,0,-->0,1,0,--  
 R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--  
 R7) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R8) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R9) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R10)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 1,--  
 R11)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 --0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0,: 0,1,:  
 LEN=3) 0,0,0,: 0,1,0,:  
 LEN=4) 0,0,0,0,:  
 LEN=5) 0,0,0,0,0,:  
 LEN=6) 0,0,0,0,0,0,:  
 LEN=7) 0,0,0,0,0,0,0,:  
 LEN=8) 0,0,0,0,0,0,0,0,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,:  
 Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class

1186-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][101][201][210]]$

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,1,--
- R3) 0,1,-->0,1,0,--0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--
- R5) 0,1,0,-->0,1,0,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--
- R7) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R8) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R9) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R10) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R11) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0,:  
 LEN=2) 0,0,: 0,1,:  
 LEN=3) 0,0,0,: 0,1,0,:  
 LEN=4) 0,0,0,0,:  
 LEN=5) 0,0,0,0,0,:  
 LEN=6) 0,0,0,0,0,0,:  
 LEN=7) 0,0,0,0,0,0,0,:  
 LEN=8) 0,0,0,0,0,0,0,0,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,:  
 Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class

1187-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][102][110][120]]$

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,1,--
- R3) 0,1,-->0,1,--0,1,1,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--
- R5) 0,1,1,-->0,1,1,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--
- R7) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R8) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R9) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R10) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R11) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, : 0,1, :
- LEN=3) 0,0,0, : 0,1,1, :
- LEN=4) 0,0,0,0, :
- LEN=5) 0,0,0,0,0, :
- LEN=6) 0,0,0,0,0,0, :
- LEN=7) 0,0,0,0,0,0,0, :
- LEN=8) 0,0,0,0,0,0,0,0, :
- LEN=9) 0,0,0,0,0,0,0,0,0, :
- LEN=10) 0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class

1188-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[012][021][102][110][201]]

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,1,--
- R3) 0,1,-->0,1,--0,1,1,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--
- R5) 0,1,1,-->0,1,1,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--
- R7) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R8) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R9) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R10) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R11) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, : 0,1, :
- LEN=3) 0,0,0, : 0,1,1, :
- LEN=4) 0,0,0,0, :
- LEN=5) 0,0,0,0,0, :
- LEN=6) 0,0,0,0,0,0, :
- LEN=7) 0,0,0,0,0,0,0, :
- LEN=8) 0,0,0,0,0,0,0,0, :
- LEN=9) 0,0,0,0,0,0,0,0,0, :
- LEN=10) 0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class

1189-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding L=[[012][021][102][110][210]]

-----

--

Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,0, --0,1, --0,1, --
- R3) 0,1, -->0,1, --0,1,1, --
- R4) 0,0,0, -->0,0,0,0, --0,1, --0,1, --0,1, --
- R5) 0,1,1, -->0,1,1, --
- R6) 0,0,0,0, -->0,0,0,0,0, --0,1, --0,1, --0,1, --0,1, --
- R7) 0,0,0,0,0, -->0,0,0,0,0,0, --0,1, --0,1, --0,1, --0,1, --0,1, --
- R8) 0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --
- R9) 0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --
- R10) 0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --
- R11) 0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, : 0,1, :
- LEN=3) 0,0,0, : 0,1,1, :
- LEN=4) 0,0,0,0, :
- LEN=5) 0,0,0,0,0, :
- LEN=6) 0,0,0,0,0,0, :
- LEN=7) 0,0,0,0,0,0,0, :
- LEN=8) 0,0,0,0,0,0,0,0, :
- LEN=9) 0,0,0,0,0,0,0,0,0, :
- LEN=10) 0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class

1190-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding L=[[012][021][102][120][201]]

-----  
--  
Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,1,--

R3) 0,1,-->0,1,--0,1,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--

R5) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--

R6) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--

R7) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

R8) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

R9)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

R10)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,:

LEN=4) 0,0,0,0,:

LEN=5) 0,0,0,0,0,:

LEN=6) 0,0,0,0,0,0,:

LEN=7) 0,0,0,0,0,0,0,:

LEN=8) 0,0,0,0,0,0,0,0,:

LEN=9) 0,0,0,0,0,0,0,0,0,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,:

Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,1,

-----Class

1191-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][102][120][210]]$

-----  
--  
Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,1,--

R3) 0,1,-->0,1,--0,1,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--

R5) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--

R6) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--

R7) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

R8) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

R9)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

R10)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, : 0,1, :
- LEN=3) 0,0,0, :
- LEN=4) 0,0,0,0, :
- LEN=5) 0,0,0,0,0, :
- LEN=6) 0,0,0,0,0,0, :
- LEN=7) 0,0,0,0,0,0,0, :
- LEN=8) 0,0,0,0,0,0,0,0, :
- LEN=9) 0,0,0,0,0,0,0,0,0, :
- LEN=10) 0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class

1192-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[012][021][102][201][210]]

-----

--  
Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,0, --0,1, --0,1, --
- R3) 0,1, -->0,1, --0,1, --
- R4) 0,0,0, -->0,0,0,0, --0,1, --0,1, --0,1, --
- R5) 0,0,0,0, -->0,0,0,0,0, --0,1, --0,1, --0,1, --0,1, --
- R6) 0,0,0,0,0, -->0,0,0,0,0,0, --0,1, --0,1, --0,1, --0,1, --0,1, --
- R7) 0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --
- R8) 0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --
- R9) 0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --
- R10) 0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, : 0,1, :
- LEN=3) 0,0,0, :
- LEN=4) 0,0,0,0, :
- LEN=5) 0,0,0,0,0, :
- LEN=6) 0,0,0,0,0,0, :
- LEN=7) 0,0,0,0,0,0,0, :
- LEN=8) 0,0,0,0,0,0,0,0, :
- LEN=9) 0,0,0,0,0,0,0,0,0, :
- LEN=10) 0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,

-----Class

1193-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[012][021][110][120][201]]

-----



--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,1,--

R3) 0,1,-->0,1,--0,1,1,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--

R5) 0,1,1,-->0,1,1,--

R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--

R7) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--

R8) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

R9) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

R10)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

R11)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,1,1,:

LEN=4) 0,0,0,0,:

LEN=5) 0,0,0,0,0,:

LEN=6) 0,0,0,0,0,0,:

LEN=7) 0,0,0,0,0,0,0,:

LEN=8) 0,0,0,0,0,0,0,0,:

LEN=9) 0,0,0,0,0,0,0,0,0,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,:

Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,

-----Class

1194-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[012][021][110][120][210]]

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,1,--

R3) 0,1,-->0,1,--0,1,1,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--

R5) 0,1,1,-->0,1,1,--

R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--

R7) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--

R8) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

R9) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

R10)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

R11)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

--0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,0, : 0,1,1, :

LEN=4) 0,0,0,0, :

LEN=5) 0,0,0,0,0, :

LEN=6) 0,0,0,0,0,0, :

LEN=7) 0,0,0,0,0,0,0, :

LEN=8) 0,0,0,0,0,0,0,0, :

LEN=9) 0,0,0,0,0,0,0,0,0, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class

1195-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][110][201][210]]$

-----

--

Rules of T[L]:

R1) 0, -->0,0,--0,1,--

R2) 0,0, -->0,0,0,--0,1,--0,1,--

R3) 0,1, -->0,1,--0,1,1,--

R4) 0,0,0, -->0,0,0,0,--0,1,--0,1,--0,1,--

R5) 0,1,1, -->0,1,1,--

R6) 0,0,0,0, -->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--

R7) 0,0,0,0,0, -->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--

R8) 0,0,0,0,0,0, -->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--

R9) 0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

R10)

0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

R11)

0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,0, : 0,1,1, :

LEN=4) 0,0,0,0, :

LEN=5) 0,0,0,0,0, :

LEN=6) 0,0,0,0,0,0, :

LEN=7) 0,0,0,0,0,0,0, :

LEN=8) 0,0,0,0,0,0,0,0, :

LEN=9) 0,0,0,0,0,0,0,0,0, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,

-----Class

1196-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][120][201][210]]$

- --  
 Rules of  $T[L]$ :  
 R1)  $0, -->0,0,--0,1,--$   
 R2)  $0,0, -->0,0,0,--0,1,--0,1,--$   
 R3)  $0,1, -->0,1,--0,1,--$   
 R4)  $0,0,0, -->0,0,0,0,--0,1,--0,1,--0,1,--$   
 R5)  $0,0,0,0, -->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--$   
 R6)  $0,0,0,0,0, -->0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--$   
 R7)  $0,0,0,0,0,0, -->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--$   
 R8)  $0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--$   
 R9)  
 $0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,$   
 $1,--$   
 R10)  
 $0,0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,$   
 $--0,1,--0,1,--$

List of different nodes in  $T[L]$

- LEN=1)  $0, :$   
 LEN=2)  $0,0, : 0,1, :$   
 LEN=3)  $0,0,0, :$   
 LEN=4)  $0,0,0,0, :$   
 LEN=5)  $0,0,0,0,0, :$   
 LEN=6)  $0,0,0,0,0,0, :$   
 LEN=7)  $0,0,0,0,0,0,0, :$   
 LEN=8)  $0,0,0,0,0,0,0,0, :$   
 LEN=9)  $0,0,0,0,0,0,0,0,0, :$   
 LEN=10)  $0,0,0,0,0,0,0,0,0,0, :$   
 Number new nodes in level n is given by :  $1,2,1,1,1,1,1,1,1,1,1,$

-----Class

1197-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][100][101][102][110]]$

- --  
 Rules of  $T[L]$ :  
 R1)  $0, -->0,0,--0,1,--$   
 R2)  $0,0, -->0,0,0,--0,1,--0,0,2,--$   
 R3)  $0,1, -->0,1,0,--0,1,1,--$   
 R4)  $0,0,0, -->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--$   
 R5)  $0,0,2, -->0,0,2,0,--0,0,2,0,--0,1,1,--$   
 R6)  $0,1,0, -->$   
 R7)  $0,1,1, -->0,1,1,--$   
 R8)  $0,0,0,0, -->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--$   
 R9)  $0,0,0,3, -->0,0,0,3,0,--0,0,2,0,--0,0,0,3,2,--0,1,1,--$   
 R10)  $0,0,2,0, -->0,1,0,--$   
 R11)  $0,0,0,0,0, -->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--$   
 R12)  $0,0,0,0,4, -->0,0,0,0,4,0,--0,0,2,0,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,1,--$   
 R13)  $0,0,0,3,0, -->0,1,0,--0,0,2,0,--$

R14) 0,0,0,3,2,-->0,0,2,0,--0,0,2,0,--  
R15)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--  
R16)  
0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,2,0,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--  
0,1,1,--  
R17) 0,0,0,0,4,0,-->0,1,0,--0,0,2,0,--0,0,0,3,0,--  
R18) 0,0,0,0,4,3,-->0,0,0,3,0,--0,0,2,0,--0,0,0,3,2,--  
R19)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R20)  
0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,2,0,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,  
4,--0,0,0,0,0,0,6,5,--0,1,1,--  
R21) 0,0,0,0,0,5,0,-->0,1,0,--0,0,2,0,--0,0,0,3,0,--0,0,0,0,4,0,--  
R22) 0,0,0,0,0,5,4,-->0,0,0,0,4,0,--0,0,2,0,--0,0,0,3,2,--0,0,0,0,4,3,--  
R23)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--  
R24)  
0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,0,2,0,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,  
0,5,4,--0,0,0,0,0,0,6,5,--0,0,0,0,0,0,0,7,6,--0,1,1,--  
R25)  
0,0,0,0,0,0,6,0,-->0,1,0,--0,0,2,0,--0,0,0,3,0,--0,0,0,0,4,0,--0,0,0,0,0,5,0,--  
R26)  
0,0,0,0,0,0,6,5,-->0,0,0,0,0,5,0,--0,0,2,0,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,  
4,--  
R27)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,9,  
,--  
R28)  
0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,8,0,--0,0,2,0,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,  
0,0,0,5,4,--0,0,0,0,0,0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,8,7,--0,1,1,--  
R29)  
0,0,0,0,0,0,0,7,0,-->0,1,0,--0,0,2,0,--0,0,0,3,0,--0,0,0,0,4,0,--0,0,0,0,0,5,0,--0,  
0,0,0,0,0,6,0,--  
R30)  
0,0,0,0,0,0,0,7,6,-->0,0,0,0,0,0,6,0,--0,0,2,0,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,  
0,5,4,--0,0,0,0,0,0,6,5,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,2, : 0,1,0, : 0,1,1, :  
LEN=4) 0,0,0,0, : 0,0,0,3, : 0,0,2,0, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,4, : 0,0,0,3,0, : 0,0,0,3,2, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, : 0,0,0,0,4,0, : 0,0,0,0,4,3, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,0, : 0,0,0,0,0,5,4, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,0, : 0,0,0,0,0,0,6,5, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,0,7,0, :  
 0,0,0,0,0,0,0,0,7,6, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,8,0, :  
 0,0,0,0,0,0,0,0,8,7, :

Number new nodes in level n is given by : 1,2,4,3,4,4,4,4,4,4,

-----Class

1198-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][100][101][102][120]]$

-----

--  
 Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
- R3) 0,1,-->0,1,0,--0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--
- R5) 0,0,2,-->0,0,2,0,--0,0,2,0,--0,0,2,--
- R6) 0,1,0,-->
- R7) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R8) 0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,0,0,3,2,--0,0,0,3,--
- R9) 0,0,2,0,-->0,1,0,--
- R10) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
- R11) 0,0,0,0,4,-->0,0,0,0,4,0,--0,0,2,0,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,4,--
- R12) 0,0,0,3,0,-->0,1,0,--0,0,2,0,--
- R13) 0,0,0,3,2,-->0,0,2,0,--0,0,2,0,--
- R14)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
 0,0,0,0,0,6,--
- R15)  
 0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,2,0,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--  
 0,0,0,0,0,5,--
- R16) 0,0,0,0,4,0,-->0,1,0,--0,0,2,0,--0,0,0,3,0,--
- R17) 0,0,0,0,4,3,-->0,0,0,3,0,--0,0,2,0,--0,0,0,3,2,--
- R18)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
 --0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--
- R19)  
 0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,2,0,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,  
 4,--0,0,0,0,0,6,5,--0,0,0,0,0,6,--
- R20) 0,0,0,0,0,5,0,-->0,1,0,--0,0,2,0,--0,0,0,3,0,--0,0,0,0,4,0,--
- R21) 0,0,0,0,0,5,4,-->0,0,0,0,4,0,--0,0,2,0,--0,0,0,3,2,--0,0,0,0,4,3,--
- R22)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
 0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--
- R23)  
 0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,0,2,0,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,  
 0,5,4,--0,0,0,0,0,6,5,--0,0,0,0,0,0,7,6,--0,0,0,0,0,7,--
- R24)  
 0,0,0,0,0,0,6,0,-->0,1,0,--0,0,2,0,--0,0,0,3,0,--0,0,0,0,4,0,--0,0,0,0,0,5,0,--
- R25)

0,0,0,0,0,0,6,5,-->0,0,0,0,0,5,0,--0,0,2,0,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--

R26)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R27)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,8,0,--0,0,2,0,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,0,8,7,--0,0,0,0,0,0,0,0,8,--

R28)

0,0,0,0,0,0,0,7,0,-->0,1,0,--0,0,2,0,--0,0,0,3,0,--0,0,0,0,4,0,--0,0,0,0,0,5,0,--0,0,0,0,0,6,0,--

R29)

0,0,0,0,0,0,0,7,6,-->0,0,0,0,0,0,6,0,--0,0,2,0,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,: 0,1,0,:

LEN=4) 0,0,0,0,: 0,0,0,3,: 0,0,2,0,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,: 0,0,0,3,0,: 0,0,0,3,2,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,: 0,0,0,0,4,0,: 0,0,0,0,4,3,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,: 0,0,0,0,0,5,0,: 0,0,0,0,0,5,4,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,6,0,: 0,0,0,0,0,0,6,5,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,7,0,:

0,0,0,0,0,0,0,7,6,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,8,0,:

0,0,0,0,0,0,0,0,8,7,:

Number new nodes in level n is given by : 1,2,3,3,4,4,4,4,4,4,

-----Class

1199-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[012][100][101][102][201]]

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->0,1,0,--0,1,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,1,0,--0,0,2,1,--0,0,2,--

R6) 0,1,0,-->

R7) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R8) 0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,3,--

R9) 0,0,2,1,-->0,1,0,--

R10) 0,0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--

R11) 0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,4,--

R12) 0,0,0,3,2,-->0,1,0,--0,0,2,1,--

R13)

$0,0,0,0,0,0, \rightarrow 0,0,0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,0,5, \rightarrow 0,0,0,0,0,6, \rightarrow$   
R14)  
 $0,0,0,0,0,5, \rightarrow 0,1,0, \rightarrow 0,0,2,1, \rightarrow 0,0,0,3,2, \rightarrow 0,0,0,0,4,3, \rightarrow 0,0,0,0,0,5,4, \rightarrow 0,0,0,0,0,5, \rightarrow$   
R15)  $0,0,0,0,4,3, \rightarrow 0,1,0, \rightarrow 0,0,2,1, \rightarrow 0,0,0,3,2, \rightarrow$   
R16)  
 $0,0,0,0,0,0,0, \rightarrow 0,0,0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,0,5, \rightarrow 0,0,0,0,0,6, \rightarrow 0,0,0,0,0,0,7, \rightarrow$   
R17)  
 $0,0,0,0,0,0,6, \rightarrow 0,1,0, \rightarrow 0,0,2,1, \rightarrow 0,0,0,3,2, \rightarrow 0,0,0,0,4,3, \rightarrow 0,0,0,0,0,5,4, \rightarrow 0,0,0,0,0,6,5, \rightarrow 0,0,0,0,0,6, \rightarrow$   
R18)  $0,0,0,0,0,5,4, \rightarrow 0,1,0, \rightarrow 0,0,2,1, \rightarrow 0,0,0,3,2, \rightarrow 0,0,0,0,4,3, \rightarrow$   
R19)  
 $0,0,0,0,0,0,0,0, \rightarrow 0,0,0,0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,0,5, \rightarrow 0,0,0,0,0,6, \rightarrow 0,0,0,0,0,0,7, \rightarrow 0,0,0,0,0,0,0,8, \rightarrow$   
R20)  
 $0,0,0,0,0,0,0,7, \rightarrow 0,1,0, \rightarrow 0,0,2,1, \rightarrow 0,0,0,3,2, \rightarrow 0,0,0,0,4,3, \rightarrow 0,0,0,0,0,5,4, \rightarrow 0,0,0,0,0,6,5, \rightarrow 0,0,0,0,0,0,7,6, \rightarrow 0,0,0,0,0,0,7, \rightarrow$   
R21)  
 $0,0,0,0,0,0,6,5, \rightarrow 0,1,0, \rightarrow 0,0,2,1, \rightarrow 0,0,0,3,2, \rightarrow 0,0,0,0,4,3, \rightarrow 0,0,0,0,0,5,4, \rightarrow$   
R22)  
 $0,0,0,0,0,0,0,0,0, \rightarrow 0,0,0,0,0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,0,5, \rightarrow 0,0,0,0,0,0,6, \rightarrow 0,0,0,0,0,0,0,7, \rightarrow 0,0,0,0,0,0,0,0,8, \rightarrow 0,0,0,0,0,0,0,0,9, \rightarrow$   
R23)  
 $0,0,0,0,0,0,0,8, \rightarrow 0,1,0, \rightarrow 0,0,2,1, \rightarrow 0,0,0,3,2, \rightarrow 0,0,0,0,4,3, \rightarrow 0,0,0,0,0,5,4, \rightarrow 0,0,0,0,0,6,5, \rightarrow 0,0,0,0,0,0,7,6, \rightarrow 0,0,0,0,0,0,0,8,7, \rightarrow 0,0,0,0,0,0,0,8, \rightarrow$   
R24)  
 $0,0,0,0,0,0,0,7,6, \rightarrow 0,1,0, \rightarrow 0,0,2,1, \rightarrow 0,0,0,3,2, \rightarrow 0,0,0,0,4,3, \rightarrow 0,0,0,0,0,5,4, \rightarrow 0,0,0,0,0,6,5, \rightarrow$

List of different nodes in  $T[L]$

- LEN=1) 0, :
  - LEN=2) 0,0, : 0,1, :
  - LEN=3) 0,0,0, : 0,0,2, : 0,1,0, :
  - LEN=4) 0,0,0,0, : 0,0,0,3, : 0,0,2,1, :
  - LEN=5) 0,0,0,0,0, : 0,0,0,0,4, : 0,0,0,3,2, :
  - LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, : 0,0,0,0,4,3, :
  - LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,4, :
  - LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,5, :
  - LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,6, :
  - LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,8,7, :
- Number new nodes in level n is given by : 1,2,3,3,3,3,3,3,3,3,

-----Class

1200-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012]][100][101][102][210]]$

-----

--

Rules of  $T[L]$ :

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,0, --0,1, --0,0,2, --
- R3) 0,1, -->0,1,0, --0,1, --
- R4) 0,0,0, -->0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --
- R5) 0,0,2, -->0,0,2,0, --0,1,0, --0,0,2, --
- R6) 0,1,0, -->
- R7) 0,0,0,0, -->0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --
- R8) 0,0,0,3, -->0,0,0,3,0, --0,1,0, --0,1,0, --0,0,0,3, --
- R9) 0,0,2,0, -->0,1,0, --
- R10) 0,0,0,0,0, -->0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --
- R11) 0,0,0,0,4, -->0,0,0,0,4,0, --0,1,0, --0,1,0, --0,1,0, --0,0,0,0,4, --
- R12) 0,0,0,3,0, -->0,1,0, --0,1,0, --
- R13) 0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --
- R14) 0,0,0,0,0,5, -->0,0,0,0,0,5,0, --0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,0,0,0,0,5, --
- R15) 0,0,0,0,4,0, -->0,1,0, --0,1,0, --0,1,0, --
- R16) 0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --0,0,0,0,0,0,7, --
- R17) 0,0,0,0,0,0,6, -->0,0,0,0,0,0,6,0, --0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,0,0,0,0,6, --
- R18) 0,0,0,0,0,5,0, -->0,1,0, --0,1,0, --0,1,0, --0,1,0, --
- R19) 0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --0,0,0,0,0,0,7, --0,0,0,0,0,0,0,8, --
- R20) 0,0,0,0,0,0,0,7, -->0,0,0,0,0,0,0,7,0, --0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,0,0,0,0,7, --
- R21) 0,0,0,0,0,0,6,0, -->0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,1,0, --
- R22) 0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,5, --0,0,0,0,0,6, --0,0,0,0,0,0,7, --0,0,0,0,0,0,0,8, --0,0,0,0,0,0,0,0,9, --
- R23) 0,0,0,0,0,0,0,0,8, -->0,0,0,0,0,0,0,0,8,0, --0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,0,0,0,0,8, --
- R24) 0,0,0,0,0,0,0,7,0, -->0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,1,0, --

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, : 0,1, :
- LEN=3) 0,0,0, : 0,0,2, : 0,1,0, :
- LEN=4) 0,0,0,0, : 0,0,0,3, : 0,0,2,0, :
- LEN=5) 0,0,0,0,0, : 0,0,0,0,4, : 0,0,0,3,0, :
- LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, : 0,0,0,0,4,0, :
- LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,0, :
- LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,0, :
- LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,0, :
- LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,8,0, :



Number new nodes in level n is given by : 1,2,3,3,3,3,3,3,3,3,

-----Class

1201-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][100][101][110][120]]$

-----

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
- R3) 0,1,-->0,1,0,--0,1,1,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--
- R5) 0,0,2,-->0,0,2,0,--0,0,2,0,--0,1,1,--
- R6) 0,1,0,-->
- R7) 0,1,1,-->0,1,1,--
- R8) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R9) 0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,0,0,3,2,--0,1,1,--
- R10) 0,0,2,0,-->0,1,0,--
- R11) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--
- R12) 0,0,0,0,4,-->0,0,0,0,4,0,--0,0,2,0,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,1,--
- R13) 0,0,0,3,0,-->0,1,0,--0,0,2,0,--
- R14) 0,0,0,3,2,-->0,0,2,0,--0,0,2,0,--
- R15)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--
- R16)  
0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,2,0,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--  
0,1,1,--
- R17) 0,0,0,0,4,0,-->0,1,0,--0,0,2,0,--0,0,0,3,0,--
- R18) 0,0,0,0,4,3,-->0,0,0,3,0,--0,0,2,0,--0,0,0,3,2,--
- R19)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,6,--0,0,0,0,0,0,7,--
- R20)  
0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,2,0,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,  
4,--0,0,0,0,0,6,5,--0,1,1,--
- R21) 0,0,0,0,0,5,0,-->0,1,0,--0,0,2,0,--0,0,0,3,0,--0,0,0,0,4,0,--
- R22) 0,0,0,0,0,5,4,-->0,0,0,0,4,0,--0,0,2,0,--0,0,0,3,2,--0,0,0,0,4,3,--
- R23)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--
- R24)  
0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,0,2,0,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,  
0,5,4,--0,0,0,0,0,6,5,--0,0,0,0,0,0,7,6,--0,1,1,--
- R25)  
0,0,0,0,0,0,6,0,-->0,1,0,--0,0,2,0,--0,0,0,3,0,--0,0,0,0,4,0,--0,0,0,0,0,5,0,--
- R26)  
0,0,0,0,0,0,6,5,-->0,0,0,0,0,5,0,--0,0,2,0,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,  
4,--
- R27)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--0,0,0,0,0,0,0,9

,--  
R28)

0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,0,--0,0,2,0,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,5,4,--0,0,0,0,0,6,5,--0,0,0,0,0,0,7,6,--0,0,0,0,0,0,8,7,--0,1,1,--

R29)

0,0,0,0,0,0,7,0,-->0,1,0,--0,0,2,0,--0,0,0,3,0,--0,0,0,0,4,0,--0,0,0,0,5,0,--0,0,0,0,6,0,--

R30)

0,0,0,0,0,0,7,6,-->0,0,0,0,0,6,0,--0,0,2,0,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,5,4,--0,0,0,0,6,5,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,: 0,1,0,: 0,1,1,:

LEN=4) 0,0,0,0,: 0,0,0,3,: 0,0,2,0,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,: 0,0,0,3,0,: 0,0,0,3,2,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,: 0,0,0,0,4,0,: 0,0,0,0,4,3,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,: 0,0,0,0,0,5,0,: 0,0,0,0,0,5,4,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,6,0,: 0,0,0,0,0,6,5,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,7,0,:

0,0,0,0,0,0,7,6,:

LEN=10) 0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,8,0,:

0,0,0,0,0,0,8,7,:

Number new nodes in level n is given by : 1,2,4,3,4,4,4,4,4,

-----Class

1202-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][100][101][110][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->0,1,0,--0,1,1,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,1,0,--0,0,2,1,--0,1,1,--

R6) 0,1,0,-->

R7) 0,1,1,-->0,1,1,--

R8) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,4,--

R9) 0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,1,--

R10) 0,0,2,1,-->0,1,0,--

R11) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,4,--0,0,0,5,--

R12) 0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,4,3,--0,1,1,--

R13) 0,0,0,3,2,-->0,1,0,--0,0,2,1,--

R14)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,4,--0,0,0,5,--0,0,0,0,6,--

R15)

$0,0,0,0,0,5, \rightarrow 0,1,0, \rightarrow 0,0,2,1, \rightarrow 0,0,0,3,2, \rightarrow 0,0,0,0,4,3, \rightarrow 0,0,0,0,0,5,4, \rightarrow 0,1,1, \rightarrow$   
R16)  $0,0,0,0,4,3, \rightarrow 0,1,0, \rightarrow 0,0,2,1, \rightarrow 0,0,0,3,2, \rightarrow$   
R17)  
 $0,0,0,0,0,0, \rightarrow 0,0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,0,5, \rightarrow$   
 $\rightarrow 0,0,0,0,0,6, \rightarrow 0,0,0,0,0,0,7, \rightarrow$   
R18)  
 $0,0,0,0,0,6, \rightarrow 0,1,0, \rightarrow 0,0,2,1, \rightarrow 0,0,0,3,2, \rightarrow 0,0,0,0,4,3, \rightarrow 0,0,0,0,0,5,4, \rightarrow 0,0,0, \rightarrow$   
 $0,0,0,6,5, \rightarrow 0,1,1, \rightarrow$   
R19)  $0,0,0,0,0,5,4, \rightarrow 0,1,0, \rightarrow 0,0,2,1, \rightarrow 0,0,0,3,2, \rightarrow 0,0,0,0,4,3, \rightarrow$   
R20)  
 $0,0,0,0,0,0,0, \rightarrow 0,0,0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0, \rightarrow$   
 $0,5, \rightarrow 0,0,0,0,0,6, \rightarrow 0,0,0,0,0,0,7, \rightarrow 0,0,0,0,0,0,0,8, \rightarrow$   
R21)  
 $0,0,0,0,0,0,7, \rightarrow 0,1,0, \rightarrow 0,0,2,1, \rightarrow 0,0,0,3,2, \rightarrow 0,0,0,0,4,3, \rightarrow 0,0,0,0,0,5,4, \rightarrow 0,0, \rightarrow$   
 $0,0,0,6,5, \rightarrow 0,0,0,0,0,7,6, \rightarrow 0,1,1, \rightarrow$   
R22)  
 $0,0,0,0,0,6,5, \rightarrow 0,1,0, \rightarrow 0,0,2,1, \rightarrow 0,0,0,3,2, \rightarrow 0,0,0,0,4,3, \rightarrow 0,0,0,0,0,5,4, \rightarrow$   
R23)  
 $0,0,0,0,0,0,0,0, \rightarrow 0,0,0,0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0, \rightarrow$   
 $0,0,0,5, \rightarrow 0,0,0,0,0,6, \rightarrow 0,0,0,0,0,0,7, \rightarrow 0,0,0,0,0,0,0,8, \rightarrow 0,0,0,0,0,0,0,9, \rightarrow$   
 $\rightarrow$   
R24)  
 $0,0,0,0,0,0,0,8, \rightarrow 0,1,0, \rightarrow 0,0,2,1, \rightarrow 0,0,0,3,2, \rightarrow 0,0,0,0,4,3, \rightarrow 0,0,0,0,0,5,4, \rightarrow 0, \rightarrow$   
 $0,0,0,6,5, \rightarrow 0,0,0,0,0,7,6, \rightarrow 0,0,0,0,0,0,8,7, \rightarrow 0,1,1, \rightarrow$   
R25)  
 $0,0,0,0,0,0,7,6, \rightarrow 0,1,0, \rightarrow 0,0,2,1, \rightarrow 0,0,0,3,2, \rightarrow 0,0,0,0,4,3, \rightarrow 0,0,0,0,0,5,4, \rightarrow 0, \rightarrow$   
 $0,0,0,6,5, \rightarrow$

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,2, : 0,1,0, : 0,1,1, :  
LEN=4) 0,0,0,0, : 0,0,0,3, : 0,0,2,1, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,4, : 0,0,0,3,2, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, : 0,0,0,0,4,3, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,4, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,5, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,6, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,8,7, :  
Number new nodes in level n is given by : 1,2,4,3,3,3,3,3,3,3,

-----Class

1203-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][100][101][110][210]]$

-----

--

Rules of T[L]:

R1)  $0, \rightarrow 0,0, \rightarrow 0,1, \rightarrow$   
R2)  $0,0, \rightarrow 0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow$   
R3)  $0,1, \rightarrow 0,1,0, \rightarrow 0,1,1, \rightarrow$   
R4)  $0,0,0, \rightarrow 0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow$

R5) 0,0,2,-->0,0,2,0,--0,1,0,--0,1,1,--  
R6) 0,1,0,-->  
R7) 0,1,1,-->0,1,1,--  
R8) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--  
R9) 0,0,0,3,-->0,0,0,3,0,--0,1,0,--0,1,0,--0,1,1,--  
R10) 0,0,2,0,-->0,1,0,--  
R11) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
R12) 0,0,0,0,4,-->0,0,0,0,4,0,--0,1,0,--0,1,0,--0,1,0,--0,1,1,--  
R13) 0,0,0,3,0,-->0,1,0,--0,1,0,--  
R14)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--  
R15) 0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,1,--  
R16) 0,0,0,0,4,0,-->0,1,0,--0,1,0,--0,1,0,--  
R17)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R18)  
0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,1,--  
R19) 0,0,0,0,0,5,0,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
R20)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--  
R21)  
0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,  
0,--0,1,1,--  
R22) 0,0,0,0,0,0,6,0,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
R23)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,9  
,--  
R24)  
0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,8,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
0,1,0,--0,1,0,--0,1,1,--  
R25) 0,0,0,0,0,0,0,7,0,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,2, : 0,1,0, : 0,1,1, :  
LEN=4) 0,0,0,0, : 0,0,0,3, : 0,0,2,0, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,4, : 0,0,0,3,0, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, : 0,0,0,0,4,0, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,0, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,0, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,0, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,8,0, :  
Number new nodes in level n is given by : 1,2,4,3,3,3,3,3,3,3,

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][100][101][120][201]]$

--

Rules of  $T[L]$ :

R1)  $0, -->0,0, --0,1, --$

R2)  $0,0, -->0,0,0, --0,1, --0,0,2, --$

R3)  $0,1, -->0,1,0, --0,1, --$

R4)  $0,0,0, -->0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --$

R5)  $0,0,2, -->0,1,0, --0,0,2,1, --0,0,2, --$

R6)  $0,1,0, -->$

R7)  $0,0,0,0, -->0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --$

R8)  $0,0,0,3, -->0,1,0, --0,0,2,1, --0,0,0,3,2, --0,0,0,3, --$

R9)  $0,0,2,1, -->0,1,0, --$

R10)  $0,0,0,0,0, -->0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --$

R11)  $0,0,0,0,4, -->0,1,0, --0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,4, --$

R12)  $0,0,0,3,2, -->0,1,0, --0,0,2,1, --$

R13)

$0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --$

R14)

$0,0,0,0,0,5, -->0,1,0, --0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,0,5,4, --0,0,0,0,0,5, --$

R15)  $0,0,0,0,4,3, -->0,1,0, --0,0,2,1, --0,0,0,3,2, --$

R16)

$0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,0,6, --0,0,0,0,0,0,7, --$

R17)

$0,0,0,0,0,0,6, -->0,1,0, --0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,0,5,4, --0,0,0,0,0,6,5, --0,0,0,0,0,0,6, --$

R18)  $0,0,0,0,0,5,4, -->0,1,0, --0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --$

R19)

$0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,0,8, --$

R20)

$0,0,0,0,0,0,7, -->0,1,0, --0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,0,5,4, --0,0,0,0,0,6,5, --0,0,0,0,0,0,0,7,6, --0,0,0,0,0,0,0,7, --$

R21)

$0,0,0,0,0,0,6,5, -->0,1,0, --0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,0,5,4, --$

R22)

$0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,5, --0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,0,8, --0,0,0,0,0,0,0,0,9, --$

R23)

$0,0,0,0,0,0,0,8, -->0,1,0, --0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,0,5,4, --0,0,0,0,0,6,5, --0,0,0,0,0,0,0,7,6, --0,0,0,0,0,0,0,0,8,7, --0,0,0,0,0,0,0,0,8, --$

R24)

$0,0,0,0,0,0,7,6, -->0,1,0, --0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,0,5,4, --0,0,0,0,0,6,5, --$

List of different nodes in  $T[L]$

LEN=1)  $0, :$

LEN=2) 0,0,: 0,1,:  
 LEN=3) 0,0,0,: 0,0,2,: 0,1,0,:  
 LEN=4) 0,0,0,0,: 0,0,0,3,: 0,0,2,1,:  
 LEN=5) 0,0,0,0,0,: 0,0,0,0,4,: 0,0,0,3,2,:  
 LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,: 0,0,0,0,4,3,:  
 LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,: 0,0,0,0,0,5,4,:  
 LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,6,5,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,7,6,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,0,8,7,:  
 Number new nodes in level n is given by : 1,2,3,3,3,3,3,3,3,3,

-----Class

1205-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][100][101][120][210]]$

-----

--

Rules of  $T[L]$ :

R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,1,--0,0,2,--  
 R3) 0,1,-->0,1,0,--0,1,--  
 R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--  
 R5) 0,0,2,-->0,0,2,0,--0,1,0,--0,0,2,--  
 R6) 0,1,0,-->  
 R7) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--  
 R8) 0,0,0,3,-->0,0,0,3,0,--0,1,0,--0,1,0,--0,0,0,3,--  
 R9) 0,0,2,0,-->0,1,0,--  
 R10) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--  
 R11) 0,0,0,0,4,-->0,0,0,0,4,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,4,--  
 R12) 0,0,0,3,0,-->0,1,0,--0,1,0,--  
 R13)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
 0,0,0,0,0,6,--  
 R14) 0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,5,--  
 R15) 0,0,0,0,4,0,-->0,1,0,--0,1,0,--0,1,0,--  
 R16)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
 --0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
 R17)  
 0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,  
 0,0,6,--  
 R18) 0,0,0,0,0,5,0,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
 R19)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
 0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--  
 R20)  
 0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,  
 0,--0,0,0,0,0,0,7,--  
 R21) 0,0,0,0,0,0,6,0,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
 R22)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,

0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9  
,--

R23)

0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
0,1,0,--0,1,0,--0,0,0,0,0,0,8,--

R24) 0,0,0,0,0,0,0,7,0,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,: 0,1,0,:

LEN=4) 0,0,0,0,: 0,0,0,3,: 0,0,2,0,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,: 0,0,0,3,0,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,: 0,0,0,0,4,0,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,: 0,0,0,0,0,5,0,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,6,0,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,7,0,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,8,0,:

Number new nodes in level n is given by : 1,2,3,3,3,3,3,3,3,3,

-----Class

1206-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][100][101][201][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->0,1,0,--0,1,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,1,0,--0,1,0,--0,0,2,--

R6) 0,1,0,-->

R7) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R8) 0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,3,--

R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R10) 0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,4,--

R11)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--

R12) 0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,5,--

R13)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R14)

0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,6,--

R15)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--

R16)

0,0,0,0,0,0,0,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,  
0,0,0,7,--





0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R21)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,  
4,--0,0,0,0,0,0,6,5,--0,1,0,--

R22)

0,0,0,0,0,5,0,-->0,0,2,0,1,--0,0,2,1,--0,0,0,0,4,0,3,--0,0,0,0,0,5,0,4,--0,1,0,--

R23) 0,0,0,0,0,5,4,-->0,0,0,0,0,5,0,4,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--

R24) 0,0,0,0,4,0,3,-->0,0,2,0,1,--0,0,2,1,--

R25)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R26)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,  
0,5,4,--0,0,0,0,0,0,6,5,--0,0,0,0,0,0,7,6,--0,1,0,--

R27)

0,0,0,0,0,0,6,0,-->0,0,2,0,1,--0,0,2,1,--0,0,0,0,4,0,3,--0,0,0,0,0,5,0,4,--0,0,0,0,  
0,0,6,0,5,--0,1,0,--

R28)

0,0,0,0,0,0,6,5,-->0,0,0,0,0,0,6,0,5,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,  
0,5,4,--

R29) 0,0,0,0,0,5,0,4,-->0,0,2,0,1,--0,0,2,1,--0,0,0,0,4,0,3,--

R30)

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,9,  
,--

R31)

0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,  
0,0,0,5,4,--0,0,0,0,0,0,6,5,--0,0,0,0,0,0,7,6,--0,0,0,0,0,0,8,7,--0,1,0,--

R32)

0,0,0,0,0,0,0,7,0,-->0,0,2,0,1,--0,0,2,1,--0,0,0,0,4,0,3,--0,0,0,0,0,5,0,4,--0,0,0,  
0,0,0,6,0,5,--0,0,0,0,0,0,7,0,6,--0,1,0,--

R33)

0,0,0,0,0,0,0,7,6,-->0,0,0,0,0,0,0,7,0,6,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,  
0,0,0,5,4,--0,0,0,0,0,0,6,5,--

R34) 0,0,0,0,0,0,6,0,5,-->0,0,2,0,1,--0,0,2,1,--0,0,0,0,4,0,3,--0,0,0,0,0,5,0,4,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,: 0,1,0,:

LEN=4) 0,0,0,0,: 0,0,0,3,: 0,0,2,0,: 0,0,2,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,: 0,0,0,3,0,: 0,0,0,3,2,: 0,0,2,0,1,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,: 0,0,0,0,4,0,: 0,0,0,0,4,3,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,: 0,0,0,0,0,5,0,: 0,0,0,0,0,5,4,:

0,0,0,0,4,0,3,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,6,0,: 0,0,0,0,0,0,6,5,:

0,0,0,0,0,5,0,4,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,7,0,:

0,0,0,0,0,0,7,6,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,8,0,:

0,0,0,0,0,0,0,0,8,7, : 0,0,0,0,0,0,0,7,0,6, :

Number new nodes in level n is given by : 1,2,3,4,5,4,5,5,5,5,

-----Class

1208-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][100][102][110][201]]$

-----  
--

Rules of  $T[L]$ :

R1) 0, -->0,0, --0,1, --

R2) 0,0, -->0,0,0, --0,1, --0,0,2, --

R3) 0,1, -->0,1,0, --0,1,0, --

R4) 0,0,0, -->0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --

R5) 0,0,2, -->0,1,0, --0,0,2,1, --0,1,0, --

R6) 0,1,0, -->0,1,0, --

R7) 0,0,0,0, -->0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --

R8) 0,0,0,3, -->0,1,0, --0,0,2,1, --0,0,0,3,2, --0,1,0, --

R9) 0,0,2,1, -->0,0,2,1,0, --

R10) 0,0,0,0,0, -->0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --

R11) 0,0,0,0,4, -->0,1,0, --0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --0,1,0, --

R12) 0,0,0,3,2, -->0,0,2,1,0, --0,0,2,1, --

R13) 0,0,2,1,0, -->

R14)

0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --

R15)

0,0,0,0,0,5, -->0,1,0, --0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,0,5,4, --0,1,0, --

R16) 0,0,0,0,4,3, -->0,0,2,1,0, --0,0,2,1, --0,0,0,3,2, --

R17)

0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --0,0,0,0,0,0,7, --

R18)

0,0,0,0,0,0,6, -->0,1,0, --0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,0,5,4, --0,0,0,0,0,6,5, --0,1,0, --

R19) 0,0,0,0,0,5,4, -->0,0,2,1,0, --0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --

R20)

0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --0,0,0,0,0,0,7, --0,0,0,0,0,0,0,8, --

R21)

0,0,0,0,0,0,7, -->0,1,0, --0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,0,5,4, --0,0,0,0,0,6,5, --0,0,0,0,0,0,7,6, --0,1,0, --

R22)

0,0,0,0,0,0,6,5, -->0,0,2,1,0, --0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,0,5,4, --

R23)

0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --0,0,0,0,0,0,7, --0,0,0,0,0,0,0,8, --0,0,0,0,0,0,0,9, --

R24)

0,0,0,0,0,0,0,8, -->0,1,0, --0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,0,5,4, --0,0,0,0,0,6,5, --0,0,0,0,0,0,7,6, --0,0,0,0,0,0,0,8,7, --0,1,0, --

R25)

0,0,0,0,0,0,0,7,6,-->0,0,2,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,  
--0,0,0,0,0,6,5,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,: 0,1,0,:

LEN=4) 0,0,0,0,: 0,0,0,3,: 0,0,2,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,: 0,0,0,3,2,: 0,0,2,1,0,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,: 0,0,0,0,4,3,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,: 0,0,0,0,0,5,4,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,6,5,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,7,6,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,8,7,:

Number new nodes in level n is given by : 1,2,3,3,4,3,3,3,3,3,

-----Class

1209-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][100][102][110][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->0,1,0,--0,1,0,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,0,2,0,--0,0,2,1,--0,1,0,--

R6) 0,1,0,-->0,1,0,--

R7) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R8) 0,0,0,3,-->0,0,0,3,0,--0,0,2,1,--0,0,2,1,--0,1,0,--

R9) 0,0,2,0,-->0,0,2,1,--0,1,0,--

R10) 0,0,2,1,-->

R11) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--

R12) 0,0,0,0,4,-->0,0,0,0,4,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,0,--

R13) 0,0,0,3,0,-->0,0,2,1,--0,0,2,1,--0,1,0,--

R14)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,

0,0,0,0,0,6,--

R15)

0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,0,--

R16) 0,0,0,0,4,0,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,0,--

R17)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,

--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R18)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,

--0,1,0,--

R19) 0,0,0,0,0,5,0,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,0,--

R20)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,

0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--  
R21)  
0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,7,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,  
2,1,--0,0,2,1,--0,1,0,--  
R22) 0,0,0,0,0,0,6,0,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,0,--  
R23)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--0,0,0,0,0,0,9  
,--  
R24)  
0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,8,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--  
0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,0,--  
R25)  
0,0,0,0,0,0,7,0,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,  
1,0,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,2, : 0,1,0, :  
LEN=4) 0,0,0,0, : 0,0,0,3, : 0,0,2,0, : 0,0,2,1, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,4, : 0,0,0,3,0, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, : 0,0,0,0,4,0, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,0, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,0, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,0, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,8,0, :  
Number new nodes in level n is given by : 1,2,3,4,3,3,3,3,3,3,

-----Class

1210-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][100][102][120][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,1,--0,0,2,--  
R3) 0,1,-->0,1,0,--0,1,--  
R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--  
R5) 0,0,2,-->0,1,0,--0,0,2,1,--0,0,2,--  
R6) 0,1,0,-->0,1,0,--  
R7) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--  
R8) 0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,3,--  
R9) 0,0,2,1,-->0,0,2,1,0,--  
R10) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--  
R11) 0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,4,--  
R12) 0,0,0,3,2,-->0,0,2,1,0,--0,0,2,1,--  
R13) 0,0,2,1,0,-->  
R14)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--

R15) 0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,5,--

R16) 0,0,0,0,4,3,-->0,0,2,1,0,--0,0,2,1,--0,0,0,3,2,--

R17) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R18) 0,0,0,0,0,0,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,6,5,--0,0,0,0,0,6,--

R19) 0,0,0,0,0,5,4,-->0,0,2,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--

R20) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R21) 0,0,0,0,0,0,0,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,6,5,--0,0,0,0,0,0,7,6,--0,0,0,0,0,0,7,--

R22) 0,0,0,0,0,0,6,5,-->0,0,2,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--

R23) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,9,--

R24) 0,0,0,0,0,0,0,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,6,5,--0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,8,7,--0,0,0,0,0,0,0,8,--

R25) 0,0,0,0,0,0,7,6,-->0,0,2,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,6,5,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,0, : 0,0,2, : 0,1,0, :

LEN=4) 0,0,0,0, : 0,0,0,3, : 0,0,2,1, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,4, : 0,0,0,3,2, : 0,0,2,1,0, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, : 0,0,0,0,4,3, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,4, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,5, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,6, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,8,7, :

Number new nodes in level n is given by : 1,2,3,3,4,3,3,3,3,3,

-----Class

1211-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][100][102][120][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->0,1,0,--0,1,--  
R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--  
R5) 0,0,2,-->0,0,2,0,--0,0,2,1,--0,0,2,--  
R6) 0,1,0,-->0,1,0,--  
R7) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--  
R8) 0,0,0,3,-->0,0,0,3,0,--0,0,2,1,--0,0,2,1,--0,0,0,3,--  
R9) 0,0,2,0,-->0,0,2,1,--0,0,2,0,--  
R10) 0,0,2,1,-->  
R11) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
R12) 0,0,0,0,4,-->0,0,0,0,4,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,4,--  
R13) 0,0,0,3,0,-->0,0,2,1,--0,0,2,1,--0,0,0,3,0,--  
R14)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--  
R15)  
0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,5,  
--  
R16) 0,0,0,0,4,0,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,4,0,--  
R17)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R18)  
0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,  
--0,0,0,0,0,6,--  
R19) 0,0,0,0,0,5,0,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,5,0,--  
R20)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--  
R21)  
0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,  
2,1,--0,0,2,1,--0,0,0,0,0,0,7,--  
R22)  
0,0,0,0,0,0,6,0,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,6,  
0,--  
R23)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,9,  
,--  
R24)  
0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--  
0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,8,--  
R25)  
0,0,0,0,0,0,7,0,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,  
0,0,0,0,0,7,0,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,2, : 0,1,0, :  
LEN=4) 0,0,0,0, : 0,0,0,3, : 0,0,2,0, : 0,0,2,1, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,4, : 0,0,0,3,0, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, : 0,0,0,0,4,0, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,0, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,0, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,0, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,8,0, :  
 Number new nodes in level n is given by : 1,2,3,4,3,3,3,3,3,3,

-----Class

1212-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][100][102][201][210]]$

-----

--

Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,0, --0,1, --0,0,2, --
- R3) 0,1, -->0,1,0, --0,1, --
- R4) 0,0,0, -->0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --
- R5) 0,0,2, -->0,1,0, --0,0,2,1, --0,0,2, --
- R6) 0,1,0, -->0,1,0, --
- R7) 0,0,0,0, -->0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --
- R8) 0,0,0,3, -->0,1,0, --0,0,2,1, --0,0,2,1, --0,0,0,3, --
- R9) 0,0,2,1, -->
- R10) 0,0,0,0,0, -->0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --
- R11) 0,0,0,0,4, -->0,1,0, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,0,0,4, --
- R12) 0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --
- R13) 0,0,0,0,0,5, -->0,1,0, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,0,0,0,5, --
- R14) 0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --
- R15) 0,0,0,0,0,0,6, -->0,1,0, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,0,0,0,6, --
- R16) 0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,0,8, --
- R17) 0,0,0,0,0,0,0,7, -->0,1,0, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,0,0,7, --
- R18) 0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,0,8, --0,0,0,0,0,0,0,0,0,9, --
- R19) 0,0,0,0,0,0,0,0,8, -->0,1,0, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,0,0,8, --

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,0, : 0,0,2, : 0,1,0, :  
 LEN=4) 0,0,0,0, : 0,0,0,3, : 0,0,2,1, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,4, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :  
 Number new nodes in level n is given by : 1,2,3,3,2,2,2,2,2,2,

-----Class

1213-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][100][110][120][201]]$

-----

--

Rules of  $T[L]$ :

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,0, --0,1, --0,0,2, --
- R3) 0,1, -->0,1,0, --0,1,0, --
- R4) 0,0,0, -->0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --
- R5) 0,0,2, -->0,1,0, --0,0,2,1, --0,1,0, --
- R6) 0,1,0, -->0,1,0, --
- R7) 0,0,0,0, -->0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --
- R8) 0,0,0,3, -->0,1,0, --0,0,2,1, --0,0,0,3,2, --0,1,0, --
- R9) 0,0,2,1, -->0,0,2,1,0, --
- R10) 0,0,0,0,0, -->0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --
- R11) 0,0,0,0,4, -->0,1,0, --0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --0,1,0, --
- R12) 0,0,0,3,2, -->0,0,2,1,0, --0,0,2,1, --
- R13) 0,0,2,1,0, -->
- R14)
- 0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --
- R15)
- 0,0,0,0,0,5, -->0,1,0, --0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,0,5,4, --0,1,0, --
- R16) 0,0,0,0,4,3, -->0,0,2,1,0, --0,0,2,1, --0,0,0,3,2, --
- R17)
- 0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --0,0,0,0,0,0,7, --
- R18)
- 0,0,0,0,0,0,6, -->0,1,0, --0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,0,5,4, --0,0,0,0,0,6,5, --0,1,0, --
- R19) 0,0,0,0,0,5,4, -->0,0,2,1,0, --0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --
- R20)
- 0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --0,0,0,0,0,0,7, --0,0,0,0,0,0,0,8, --
- R21)
- 0,0,0,0,0,0,0,7, -->0,1,0, --0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,0,5,4, --0,0,0,0,0,6,5, --0,0,0,0,0,0,7,6, --0,1,0, --
- R22)
- 0,0,0,0,0,0,6,5, -->0,0,2,1,0, --0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,0,5,4, --



R23)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
 0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,9  
 ,--  
 R24)  
 0,0,0,0,0,0,0,0,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,  
 0,0,0,0,0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,8,7,--0,1,0,--  
 R25)  
 0,0,0,0,0,0,0,7,6,-->0,0,2,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,  
 --0,0,0,0,0,6,5,--

List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,2, : 0,1,0, :  
 LEN=4) 0,0,0,0, : 0,0,0,3, : 0,0,2,1, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,4, : 0,0,0,3,2, : 0,0,2,1,0, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, : 0,0,0,0,4,3, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,4, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,5, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,6, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,8,7, :  
 Number new nodes in level n is given by : 1,2,3,3,4,3,3,3,3,3,

-----Class  
 1214-----  
 Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[012][100][110][120][210]]  
 -----

--  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,1,--0,0,2,--  
 R3) 0,1,-->0,1,0,--0,1,0,--  
 R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--  
 R5) 0,0,2,-->0,0,2,0,--0,0,2,1,--0,1,0,--  
 R6) 0,1,0,-->0,1,0,--  
 R7) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--  
 R8) 0,0,0,3,-->0,0,0,3,0,--0,0,2,1,--0,0,2,1,--0,1,0,--  
 R9) 0,0,2,0,-->0,0,2,1,--0,1,0,--  
 R10) 0,0,2,1,-->  
 R11) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
 R12) 0,0,0,0,4,-->0,0,0,0,4,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,0,--  
 R13) 0,0,0,3,0,-->0,0,2,1,--0,0,2,1,--0,1,0,--  
 R14)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
 0,0,0,0,0,6,--  
 R15)  
 0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,0,--  
 R16) 0,0,0,0,4,0,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,0,--  
 R17)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,

--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R18)  
0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--  
--0,1,0,--  
R19) 0,0,0,0,0,5,0,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,0,--  
R20)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--  
R21)  
0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,  
2,1,--0,0,2,1,--0,1,0,--  
R22) 0,0,0,0,0,0,6,0,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,0,--  
R23)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,  
0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--0,0,0,0,0,0,9,  
,--  
R24)  
0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,8,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--  
0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,0,--  
R25)  
0,0,0,0,0,0,0,7,0,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,  
1,0,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,2, : 0,1,0, :  
LEN=4) 0,0,0,0, : 0,0,0,3, : 0,0,2,0, : 0,0,2,1, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,4, : 0,0,0,3,0, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, : 0,0,0,0,4,0, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,0, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,0, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,0, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,8,0, :  
Number new nodes in level n is given by : 1,2,3,4,3,3,3,3,3,3,

-----Class

1215-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][100][110][201][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,1,--0,0,2,--  
R3) 0,1,-->0,1,0,--0,1,0,--  
R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--  
R5) 0,0,2,-->0,1,0,--0,0,2,1,--0,1,0,--  
R6) 0,1,0,-->0,1,0,--  
R7) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--  
R8) 0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,1,0,--  
R9) 0,0,2,1,-->

R10) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
R11) 0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,0,--  
R12) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--  
R13) 0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,0,--  
R14) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R15) 0,0,0,0,0,0,6,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,0,--  
R16) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--  
R17) 0,0,0,0,0,0,0,7,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,0,--  
R18) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--  
R19) 0,0,0,0,0,0,0,0,8,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,0,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,2, : 0,1,0, :  
LEN=4) 0,0,0,0, : 0,0,0,3, : 0,0,2,1, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,4, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :  
Number new nodes in level n is given by : 1,2,3,3,2,2,2,2,2,2,

-----Class

1216-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012]][100][120][201][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,1,--0,0,2,--  
R3) 0,1,-->0,1,0,--0,1,--  
R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--  
R5) 0,0,2,-->0,1,0,--0,0,2,1,--0,0,2,--  
R6) 0,1,0,-->0,1,0,--  
R7) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R8) 0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,0,3,--  
R9) 0,0,2,1,-->  
R10) 0,0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
R11) 0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,4,--  
R12)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--  
R13) 0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,5,--  
R14)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R15)  
0,0,0,0,0,0,6,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,  
0,0,6,--  
R16)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--  
R17)  
0,0,0,0,0,0,0,7,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,  
1,--0,0,0,0,0,0,7,--  
R18)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9  
,--  
R19)  
0,0,0,0,0,0,0,0,8,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,  
2,1,--0,0,2,1,--0,0,0,0,0,0,0,8,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,2, : 0,1,0, :  
LEN=4) 0,0,0,0, : 0,0,0,3, : 0,0,2,1, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,4, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :  
Number new nodes in level n is given by : 1,2,3,3,2,2,2,2,2,2,

-----Class

1217-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][101][102][110][120]]$

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
- R3) 0,1,-->0,1,0,--0,1,0,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,0,2,0,--0,1,--0,1,0,--  
R6) 0,1,0,-->0,1,0,--  
R7) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--  
R8) 0,0,0,3,-->0,0,0,3,0,--0,1,--0,0,2,--0,1,0,--  
R9) 0,0,2,0,-->0,0,2,0,--0,1,--  
R10) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
R11) 0,0,0,0,4,-->0,0,0,0,4,0,--0,1,--0,0,2,--0,0,0,3,--0,1,0,--  
R12) 0,0,0,3,0,-->0,0,0,3,0,--0,1,--0,0,2,--  
R13)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--  
R14) 0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,1,0,--  
R15) 0,0,0,0,4,0,-->0,0,0,0,4,0,--0,1,--0,0,2,--0,0,0,3,--  
R16)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R17)  
0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,1,0,--  
R18) 0,0,0,0,0,5,0,-->0,0,0,0,0,5,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--  
R19)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--  
R20)  
0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,6,--0,1,0,--  
R21)  
0,0,0,0,0,0,6,0,-->0,0,0,0,0,0,6,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,  
5,--  
R22)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,9,  
--  
R23)  
0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,8,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,1,0,--  
R24)  
0,0,0,0,0,0,0,7,0,-->0,0,0,0,0,0,0,7,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,  
0,0,5,--0,0,0,0,0,6,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,2, : 0,1,0, :  
LEN=4) 0,0,0,0, : 0,0,0,3, : 0,0,2,0, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,4, : 0,0,0,3,0, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, : 0,0,0,0,4,0, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,0, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,0, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,0, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,8,0, :

Number new nodes in level n is given by : 1,2,3,3,3,3,3,3,3,3,

-----Class

1218-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][101][102][110][201]]$

-----

--

Rules of  $T[L]$ :

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,0, --0,1, --0,0,2, --
- R3) 0,1, -->0,1,0, --0,1,0, --
- R4) 0,0,0, -->0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --
- R5) 0,0,2, -->0,1,0, --0,1, --0,1,0, --
- R6) 0,1,0, -->0,1,0, --
- R7) 0,0,0,0, -->0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --
- R8) 0,0,0,3, -->0,1,0, --0,1, --0,0,2, --0,1,0, --
- R9) 0,0,0,0,0, -->0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --
- R10) 0,0,0,0,4, -->0,1,0, --0,1, --0,0,2, --0,0,0,3, --0,1,0, --
- R11)  
0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,  
0,0,0,0,0,6, --
- R12) 0,0,0,0,0,5, -->0,1,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,1,0, --
- R13)  
0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5,  
--0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --
- R14)  
0,0,0,0,0,0,6, -->0,1,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,1,0, --
- R15)  
0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,  
0,5, --0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,8, --
- R16)  
0,0,0,0,0,0,0,7, -->0,1,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,  
0,0,0,6, --0,1,0, --
- R17)  
0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,  
0,0,0,5, --0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,8, --0,0,0,0,0,0,0,0,9  
, --
- R18)  
0,0,0,0,0,0,0,0,8, -->0,1,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,  
0,0,0,0,6, --0,0,0,0,0,0,0,7, --0,1,0, --

List of different nodes in  $T[L]$

- LEN=1) 0, :
- LEN=2) 0,0, : 0,1, :
- LEN=3) 0,0,0, : 0,0,2, : 0,1,0, :
- LEN=4) 0,0,0,0, : 0,0,0,3, :
- LEN=5) 0,0,0,0,0, : 0,0,0,0,4, :
- LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, :
- LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :
- LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :
- LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :

LEN=10) 0,0,0,0,0,0,0,0,0,0,0,0,0,9:  
Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

-----Class

1219-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][101][102][110][210]]$

-----  
--  
Rules of  $T[L]$ :  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,1,--0,0,2,--  
R3) 0,1,-->0,1,0,--0,1,0,--  
R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--  
R5) 0,0,2,-->0,0,2,0,--0,1,0,--0,1,0,--  
R6) 0,1,0,-->0,1,0,--  
R7) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--  
R8) 0,0,0,3,-->0,0,0,3,0,--0,1,0,--0,1,0,--0,1,0,--  
R9) 0,0,2,0,-->0,0,2,0,--0,1,0,--  
R10) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
R11) 0,0,0,0,4,-->0,0,0,0,4,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
R12) 0,0,0,3,0,-->0,0,0,3,0,--0,1,0,--0,1,0,--  
R13)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--  
R14) 0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
R15) 0,0,0,0,4,0,-->0,0,0,0,4,0,--0,1,0,--0,1,0,--0,1,0,--  
R16)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R17)  
0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
R18) 0,0,0,0,0,5,0,-->0,0,0,0,0,5,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
R19)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--  
R20)  
0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
R21) 0,0,0,0,0,0,6,0,-->0,0,0,0,0,0,6,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
R22)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--  
R23)  
0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
R24)  
0,0,0,0,0,0,0,7,0,-->0,0,0,0,0,0,0,7,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
List of different nodes in  $T[L]$

LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,2, : 0,1,0, :  
 LEN=4) 0,0,0,0, : 0,0,0,3, : 0,0,2,0, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,4, : 0,0,0,3,0, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, : 0,0,0,0,4,0, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,0, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,0, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,0, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,8,0, :  
 Number new nodes in level n is given by : 1,2,3,3,3,3,3,3,3,3,

-----Class

1220-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][101][102][120][201]]$

-----

--

Rules of T[L]:

R1) 0, -->0,0, --0,1, --

R2) 0,0, -->0,0,0, --0,1, --0,0,2, --

R3) 0,1, -->0,1,0, --0,1, --

R4) 0,0,0, -->0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --

R5) 0,0,2, -->0,1,0, --0,1, --0,0,2, --

R6) 0,1,0, -->0,1,0, --

R7) 0,0,0,0, -->0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --

R8) 0,0,0,3, -->0,1,0, --0,1, --0,0,2, --0,0,0,3, --

R9) 0,0,0,0,0, -->0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --

R10) 0,0,0,0,4, -->0,1,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --

R11)

0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --

R12) 0,0,0,0,0,5, -->0,1,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --

R13)

0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --0,0,0,0,0,0,7, --

R14)

0,0,0,0,0,0,6, -->0,1,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --

R15)

0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --0,0,0,0,0,0,7, --0,0,0,0,0,0,0,8, --

R16)

0,0,0,0,0,0,0,7, -->0,1,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --0,0,0,0,0,0,7, --

R17)

0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --0,0,0,0,0,0,7, --0,0,0,0,0,0,0,8, --0,0,0,0,0,0,0,9, --

R18)

0,0,0,0,0,0,0,0,8, -->0,1,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --



0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,: 0,1,0,:

LEN=4) 0,0,0,0,: 0,0,0,3,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

-----Class

1221-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][101][102][120][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->0,1,0,--0,1,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,0,2,0,--0,1,0,--0,0,2,--

R6) 0,1,0,-->0,1,0,--

R7) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R8) 0,0,0,3,-->0,0,0,3,0,--0,1,0,--0,1,0,--0,0,0,3,--

R9) 0,0,2,0,-->0,0,2,0,--0,1,0,--

R10) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R11) 0,0,0,0,4,-->0,0,0,0,4,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,4,--

R12) 0,0,0,3,0,-->0,0,0,3,0,--0,1,0,--0,1,0,--

R13)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--

R14) 0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,5,--

R15) 0,0,0,0,4,0,-->0,0,0,0,4,0,--0,1,0,--0,1,0,--0,1,0,--

R16)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R17)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,6,--

R18) 0,0,0,0,0,5,0,-->0,0,0,0,0,5,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--

R19)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R20)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,7,--

R21) 0,0,0,0,0,0,6,0,-->0,0,0,0,0,0,6,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
R22)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--0,0,0,0,0,0,9  
,--  
R23)  
0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,8,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
0,1,0,--0,1,0,--0,0,0,0,0,0,8,--  
R24)  
0,0,0,0,0,0,0,7,0,-->0,0,0,0,0,0,0,7,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,  
1,0,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,2, : 0,1,0, :  
LEN=4) 0,0,0,0, : 0,0,0,3, : 0,0,2,0, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,4, : 0,0,0,3,0, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, : 0,0,0,0,4,0, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,0, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,0, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,0, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,8,0, :  
Number new nodes in level n is given by : 1,2,3,3,3,3,3,3,3,3,

-----Class

1222-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][101][102][201][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,1,--0,0,2,--  
R3) 0,1,-->0,1,0,--0,1,--  
R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--  
R5) 0,0,2,-->0,1,0,--0,1,0,--0,0,2,--  
R6) 0,1,0,-->0,1,0,--  
R7) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--  
R8) 0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,3,--  
R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
R10) 0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,4,--  
R11)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--  
R12) 0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,5,--  
R13)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R14)  
0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,6,--  
R15)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--

R16)

0,0,0,0,0,0,0,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,  
0,0,0,7,--

R17)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--0,0,0,0,0,0,9,  
,--

R18)

0,0,0,0,0,0,0,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,  
--0,0,0,0,0,0,8,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,: 0,1,0,:

LEN=4) 0,0,0,0,: 0,0,0,3,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

-----Class

1223-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][101][110][120][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->0,1,0,--0,1,0,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,1,0,--0,1,--0,1,0,--

R6) 0,1,0,-->0,1,0,--

R7) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R8) 0,0,0,3,-->0,1,0,--0,1,--0,0,2,--0,1,0,--

R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R10) 0,0,0,0,4,-->0,1,0,--0,1,--0,0,2,--0,0,0,3,--0,1,0,--

R11)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--

R12) 0,0,0,0,0,5,-->0,1,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,1,0,--

R13)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R14)

0,0,0,0,0,0,6,-->0,1,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,1,0,--

R15)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--

R16)  
0,0,0,0,0,0,0,7,-->0,1,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--0,0,0,  
0,0,0,6,--0,1,0,--

R17)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--0,0,0,0,0,0,9,  
,--

R18)  
0,0,0,0,0,0,0,8,-->0,1,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--0,0,  
0,0,0,0,6,--0,0,0,0,0,0,7,--0,1,0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,: 0,1,0,:

LEN=4) 0,0,0,0,: 0,0,0,3,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

-----Class

1224-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][101][110][120][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->0,1,0,--0,1,0,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,0,2,0,--0,1,0,--0,1,0,--

R6) 0,1,0,-->0,1,0,--

R7) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R8) 0,0,0,3,-->0,0,0,3,0,--0,1,0,--0,1,0,--0,1,0,--

R9) 0,0,2,0,-->0,0,2,0,--0,1,0,--

R10) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--

R11) 0,0,0,0,4,-->0,0,0,0,4,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--

R12) 0,0,0,3,0,-->0,0,0,3,0,--0,1,0,--0,1,0,--

R13)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--0,  
0,0,0,0,6,--

R14) 0,0,0,0,5,-->0,0,0,0,5,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--

R15) 0,0,0,0,4,0,-->0,0,0,0,4,0,--0,1,0,--0,1,0,--0,1,0,--

R16)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R17)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
R18) 0,0,0,0,0,5,0,-->0,0,0,0,0,5,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--

R19)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--

R20)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,  
0,--0,1,0,--

R21) 0,0,0,0,0,0,6,0,-->0,0,0,0,0,0,6,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--

R22)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--0,0,0,0,0,0,9,  
--

R23)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,8,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
0,1,0,--0,1,0,--0,1,0,--

R24)

0,0,0,0,0,0,0,7,0,-->0,0,0,0,0,0,0,7,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,  
1,0,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,0, : 0,0,2, : 0,1,0, :

LEN=4) 0,0,0,0, : 0,0,0,3, : 0,0,2,0, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,4, : 0,0,0,3,0, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, : 0,0,0,0,4,0, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,0, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,0, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,0, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,8,0, :

Number new nodes in level n is given by : 1,2,3,3,3,3,3,3,3,3,

-----Class

1225-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][101][110][201][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->0,1,0,--0,1,0,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,1,0,--0,1,0,--0,1,0,--

R6) 0,1,0,-->0,1,0,--

R7) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R8) 0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--

R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--

R10) 0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
R11) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--  
R12) 0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
R13) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R14) 0,0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
R15) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--  
R16) 0,0,0,0,0,0,0,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
R17) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--  
R18) 0,0,0,0,0,0,0,0,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,2, : 0,1,0, :  
LEN=4) 0,0,0,0, : 0,0,0,3, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,4, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :  
Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

-----Class

1226-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][101][120][201][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,1,--0,0,2,--  
R3) 0,1,-->0,1,0,--0,1,--  
R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--  
R5) 0,0,2,-->0,1,0,--0,1,0,--0,0,2,--  
R6) 0,1,0,-->0,1,0,--  
R7) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--  
R8) 0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,3,--  
R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
R10) 0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,4,--

R11)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--

R12) 0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,5,--

R13)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
--0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R14)  
0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,6,--

R15)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--

R16)  
0,0,0,0,0,0,0,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,  
0,0,0,7,--

R17)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--0,0,0,0,0,0,9,  
,--

R18)  
0,0,0,0,0,0,0,0,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,  
--0,0,0,0,0,0,8,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,2,: 0,1,0,:

LEN=4) 0,0,0,0,: 0,0,0,3,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

-----Class

1227-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][102][110][120][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,0,2,--

R3) 0,1,-->0,1,--0,1,1,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--

R5) 0,0,2,-->0,1,--0,0,2,1,--0,1,1,--

R6) 0,1,1,-->0,1,1,--

R7) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--

R8) 0,0,0,3,-->0,1,--0,0,2,1,--0,0,0,3,2,--0,1,1,--

R9) 0,0,2,1,-->0,1,1,--0,1,1,--

R10) 0,0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--  
 R11) 0,0,0,0,4,-->0,1,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,1,--  
 R12) 0,0,0,3,2,-->0,1,1,--0,0,2,1,--0,1,1,--  
 R13)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,  
 0,0,0,0,0,6,--  
 R14)  
 0,0,0,0,0,5,-->0,1,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,1,1,--  
 R15) 0,0,0,0,4,3,-->0,1,1,--0,0,2,1,--0,0,0,3,2,--0,1,1,--  
 R16)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,  
 --0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
 R17)  
 0,0,0,0,0,0,6,-->0,1,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,  
 0,0,6,5,--0,1,1,--  
 R18) 0,0,0,0,0,5,4,-->0,1,1,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,1,--  
 R19)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,  
 0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--  
 R20)  
 0,0,0,0,0,0,7,-->0,1,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,  
 0,0,6,5,--0,0,0,0,0,0,7,6,--0,1,1,--  
 R21)  
 0,0,0,0,0,0,6,5,-->0,1,1,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,1,  
 1,--  
 R22)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,  
 0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--0,0,0,0,0,0,9,  
 ,--  
 R23)  
 0,0,0,0,0,0,0,8,-->0,1,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,  
 0,0,0,6,5,--0,0,0,0,0,0,7,6,--0,0,0,0,0,0,8,7,--0,1,1,--  
 R24)  
 0,0,0,0,0,0,7,6,-->0,1,1,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,  
 0,0,0,0,6,5,--0,1,1,--

List of different nodes in T[L]

LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,2, : 0,1,1, :  
 LEN=4) 0,0,0,0, : 0,0,0,3, : 0,0,2,1, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,4, : 0,0,0,3,2, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, : 0,0,0,0,4,3, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,4, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,6,5, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,6, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,8,7, :  
 Number new nodes in level n is given by : 1,2,3,3,3,3,3,3,3,3,



Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][102][110][120][210]]$

--

Rules of  $T[L]$ :

- R1) 0, -->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
- R3) 0,1,-->0,1,--0,1,1,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--
- R5) 0,0,2,-->0,0,2,--0,1,1,--0,1,1,--
- R6) 0,1,1,-->0,1,1,--
- R7) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R8) 0,0,0,3,-->0,0,0,3,--0,1,1,--0,1,1,--0,1,1,--
- R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
- R10) 0,0,0,0,4,-->0,0,0,0,4,--0,1,1,--0,1,1,--0,1,1,--0,1,1,--
- R11) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--
- R12) 0,0,0,0,0,5,-->0,0,0,0,0,5,--0,1,1,--0,1,1,--0,1,1,--0,1,1,--0,1,1,--
- R13) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--
- R14) 0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,--0,1,1,--0,1,1,--0,1,1,--0,1,1,--0,1,1,--0,1,1,--
- R15) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--
- R16) 0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,--0,1,1,--0,1,1,--0,1,1,--0,1,1,--0,1,1,--0,1,1,--0,1,1,--
- R17) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--
- R18) 0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,8,--0,1,1,--0,1,1,--0,1,1,--0,1,1,--0,1,1,--0,1,1,--0,1,1,--

List of different nodes in  $T[L]$

- LEN=1) 0, :
  - LEN=2) 0,0, : 0,1, :
  - LEN=3) 0,0,0, : 0,0,2, : 0,1,1, :
  - LEN=4) 0,0,0,0, : 0,0,0,3, :
  - LEN=5) 0,0,0,0,0, : 0,0,0,0,4, :
  - LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, :
  - LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :
  - LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :
  - LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :
  - LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :
- Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

-----Class

1229-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][102][110][201][210]]$

-----

--  
Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
- R3) 0,1,-->0,1,--0,1,1,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--
- R5) 0,0,2,-->0,1,--0,1,1,--0,1,1,--
- R6) 0,1,1,-->0,1,1,--
- R7) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R8) 0,0,0,3,-->0,1,--0,1,1,--0,1,1,--0,1,1,--
- R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
- R10) 0,0,0,0,4,-->0,1,--0,1,1,--0,1,1,--0,1,1,--0,1,1,--
- R11) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--
- R12) 0,0,0,0,0,5,-->0,1,--0,1,1,--0,1,1,--0,1,1,--0,1,1,--0,1,1,--
- R13) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--
- R14) 0,0,0,0,0,0,0,6,-->0,1,--0,1,1,--0,1,1,--0,1,1,--0,1,1,--0,1,1,--0,1,1,--
- R15) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--
- R16) 0,0,0,0,0,0,0,7,-->0,1,--0,1,1,--0,1,1,--0,1,1,--0,1,1,--0,1,1,--0,1,1,--0,1,1,--
- R17) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--
- R18) 0,0,0,0,0,0,0,0,8,-->0,1,--0,1,1,--0,1,1,--0,1,1,--0,1,1,--0,1,1,--0,1,1,--0,1,1,--0,1,1,--

List of different nodes in T[L]

- LEN=1) 0,:
  - LEN=2) 0,0,: 0,1,:
  - LEN=3) 0,0,0,: 0,0,2,: 0,1,1,:
  - LEN=4) 0,0,0,0,: 0,0,0,3,:
  - LEN=5) 0,0,0,0,0,: 0,0,0,0,4,:
  - LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,5,:
  - LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,6,:
  - LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,7,:
  - LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,8,:
  - LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,9,:
- Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,2,

-----Class

1230-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][102][120][201][210]]$

--

Rules of  $T[L]$ :

- R1) 0, -->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
- R3) 0,1,-->0,1,--0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--
- R5) 0,0,2,-->0,1,--0,0,2,1,--0,0,2,--
- R6) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--
- R7) 0,0,0,3,-->0,1,--0,0,2,1,--0,0,2,1,--0,0,0,3,--
- R8) 0,0,2,1,-->0,0,2,1,--
- R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--
- R10) 0,0,0,0,4,-->0,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,4,--
- R11) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--
- R12) 0,0,0,0,0,5,-->0,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,5,--
- R13) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--
- R14) 0,0,0,0,0,0,6,-->0,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,6,--
- R15) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--
- R16) 0,0,0,0,0,0,0,7,-->0,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,7,--
- R17) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,9,--
- R18) 0,0,0,0,0,0,0,0,8,-->0,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,8,--

List of different nodes in  $T[L]$

- LEN=1) 0, :
  - LEN=2) 0,0, : 0,1, :
  - LEN=3) 0,0,0, : 0,0,2, :
  - LEN=4) 0,0,0,0, : 0,0,0,3, : 0,0,2,1, :
  - LEN=5) 0,0,0,0,0, : 0,0,0,0,4, :
  - LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, :
  - LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :
  - LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :
  - LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :
  - LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :
- Number new nodes in level n is given by : 1,2,2,3,2,2,2,2,2,2,

-----Class

1231-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][110][120][201][210]]$

-----  
--

Rules of  $T[L]$ :

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,0, --0,1, --0,0,2, --
- R3) 0,1, -->0,1, --0,1,1, --
- R4) 0,0,0, -->0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --
- R5) 0,0,2, -->0,1, --0,1,1, --0,1,1, --
- R6) 0,1,1, -->0,1,1, --
- R7) 0,0,0,0, -->0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --
- R8) 0,0,0,3, -->0,1, --0,1,1, --0,1,1, --0,1,1, --
- R9) 0,0,0,0,0, -->0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --
- R10) 0,0,0,0,4, -->0,1, --0,1,1, --0,1,1, --0,1,1, --0,1,1, --
- R11)  
0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,  
0,0,0,0,0,6, --
- R12) 0,0,0,0,0,5, -->0,1, --0,1,1, --0,1,1, --0,1,1, --0,1,1, --0,1,1, --
- R13)  
0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5,  
--0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --
- R14) 0,0,0,0,0,0,6, -->0,1, --0,1,1, --0,1,1, --0,1,1, --0,1,1, --0,1,1, --0,1,1, --
- R15)  
0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,  
0,5, --0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,8, --
- R16)  
0,0,0,0,0,0,0,7, -->0,1, --0,1,1, --0,1,1, --0,1,1, --0,1,1, --0,1,1, --0,1,1, --0,1,1, --
- R17)  
0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,  
0,0,0,5, --0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,8, --0,0,0,0,0,0,0,9,  
, --
- R18)  
0,0,0,0,0,0,0,0,8, -->0,1, --0,1,1, --0,1,1, --0,1,1, --0,1,1, --0,1,1, --0,1,1, --0,1,1, --  
0,1,1, --

List of different nodes in  $T[L]$

- LEN=1) 0, :
  - LEN=2) 0,0, : 0,1, :
  - LEN=3) 0,0,0, : 0,0,2, : 0,1,1, :
  - LEN=4) 0,0,0,0, : 0,0,0,3, :
  - LEN=5) 0,0,0,0,0, : 0,0,0,0,4, :
  - LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,5, :
  - LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,6, :
  - LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,7, :
  - LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,8, :
  - LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :
- Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

-----Class

1232-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021][100][101][102][110]]$

-----  
--  
Rules of  $T[L]$ :  
R1)  $0,-->0,0,--0,1,--$   
R2)  $0,0,-->0,0,0,--0,0,1,--0,1,--$   
R3)  $0,1,-->0,1,0,--0,1,1,--0,1,--$   
R4)  $0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--$   
R5)  $0,0,1,-->0,1,0,--0,0,1,1,--0,0,1,--0,1,--$   
R6)  $0,1,0,-->$   
R7)  $0,1,1,-->0,0,1,1,--0,1,1,--0,1,1,3,--$   
R8)  $0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--$   
R9)  $0,0,0,1,-->0,1,0,--0,0,0,1,1,--0,0,0,1,--0,0,1,--0,1,--$   
R10)  $0,0,1,1,-->0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,1,3,--$   
R11)  $0,1,1,3,-->0,1,1,--0,1,1,3,--$   
R12)  $0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--$   
R13)  $0,0,0,0,1,-->0,1,0,--0,0,0,0,1,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--$   
R14)  $0,0,0,1,1,-->0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,1,3,--$   
R15)  
 $0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--$   
 $0,0,1,--0,1,--$   
R16)  
 $0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--$   
 $0,1,--$   
R17)  
 $0,0,0,0,1,1,-->0,0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,1,3,--$   
--  
R18)  
 $0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--$   
 $0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--$   
R19)  
 $0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--$   
 $--0,0,0,1,--0,0,1,--0,1,--$   
R20)  
 $0,0,0,0,0,1,1,-->0,0,0,0,0,0,1,1,--0,0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,--$   
 $1,--0,1,1,--0,1,1,3,--$   
R21)  
 $0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,--$   
 $0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--$   
R22)  
 $0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,--$   
 $0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--$   
R23)  
 $0,0,0,0,0,0,1,1,-->0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,1,--0,0,0,0,0,1,1,--0,0,0,0,1,--$   
 $1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,1,3,--$   
R24)  
 $0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--$   
 $--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,--$   
 $--$

R25)  
0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,  
0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--

R26)  
0,0,0,0,0,0,0,1,1,-->0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,1,--0,0,0,0,0,1,1,--0,  
0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,1,3,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, : 0,1,0, : 0,1,1, :  
LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,1,1, : 0,1,1,3, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,1,1, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,1,1, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,1,1, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,1,1, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,1,1, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,1,1, :  
Number new nodes in level n is given by : 1,2,4,4,3,3,3,3,3,3,

-----Class

1233-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021][100][101][102][120]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,0,1,--0,1,--  
R3) 0,1,-->0,1,0,--0,0,1,--0,1,2,--  
R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--  
R5) 0,0,1,-->0,1,0,--0,0,0,1,--0,0,1,2,--0,1,2,--  
R6) 0,1,0,-->  
R7) 0,1,2,-->0,0,1,2,--0,1,2,--  
R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R9) 0,0,0,1,-->0,1,0,--0,0,0,0,1,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R10) 0,0,1,2,-->0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R11) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R12)  
0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R13) 0,0,0,1,2,-->0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R14)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
0,0,1,--0,1,--  
R15)  
0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,  
0,1,2,--0,1,2,--  
R16) 0,0,0,0,1,2,-->0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--  
R17)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R18)

0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,  
0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R19)

0,0,0,0,0,1,2,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,  
2,--0,1,2,--

R20)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,  
0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R21)

0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,  
--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R22)

0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,  
2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R23)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,  
,--

R24)

0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,  
0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,  
2,--

R25)

0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,  
0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,1,0,: 0,1,2,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,1,2,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,1,2,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,1,2,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,1,2,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,1,2,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,1,2,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,1,2,:

Number new nodes in level n is given by : 1,2,4,3,3,3,3,3,3,3,

-----Class

1234-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021][100][101][102][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,1,--

R3) 0,1,-->0,1,0,--0,0,1,--0,1,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--

R5) 0,0,1,-->0,1,0,--0,0,0,1,--0,0,1,--0,1,--

R6) 0,1,0,-->

R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R8) 0,0,0,1,-->0,1,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--  
R10) 0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--  
R11) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
0,0,1,--0,1,--  
R12) 0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--  
0,1,--  
R13) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R14) 0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--  
--0,0,0,1,--0,0,1,--0,1,--  
R15) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,  
0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R16) 0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,  
0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R17) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
,--  
R18) 0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,  
0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

List of different nodes in T[L]

- LEN=1) 0, :
  - LEN=2) 0,0, : 0,1, :
  - LEN=3) 0,0,0, : 0,0,1, : 0,1,0, :
  - LEN=4) 0,0,0,0, : 0,0,0,1, :
  - LEN=5) 0,0,0,0,0, : 0,0,0,0,1, :
  - LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, :
  - LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, :
  - LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, :
  - LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, :
  - LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :
- Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

-----Class

1235-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[021][100][101][102][210]]

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,0,1,--0,1,--



R3) 0,1,-->0,1,0,--0,0,1,--0,1,--  
 R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--  
 R5) 0,0,1,-->0,1,0,--0,0,0,1,--0,0,1,--0,1,--  
 R6) 0,1,0,-->  
 R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R8) 0,0,0,1,-->0,1,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--  
 R10) 0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--  
 R11)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
 0,0,1,--0,1,--  
 R12)  
 0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--  
 0,1,--  
 R13)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
 0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R14)  
 0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--  
 --0,0,0,1,--0,0,1,--0,1,--  
 R15)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--  
 0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R16)  
 0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
 0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R17)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,--  
 --0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--  
 ,--  
 R18)  
 0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,--  
 0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, : 0,1, :
- LEN=3) 0,0,0, : 0,0,1, : 0,1,0, :
- LEN=4) 0,0,0,0, : 0,0,0,1, :
- LEN=5) 0,0,0,0,0, : 0,0,0,0,1, :
- LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, :
- LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, :
- LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, :
- LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, :
- LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :

Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

-----Class

1236-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021]][100][101][110][120]]$

-----



0,0,0,0,0,0,0,1,1,-->0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,1,--0,  
0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,1,0,: 0,1,1,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,1,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,1,1,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,1,1,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,1,1,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,1,1,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,1,1,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,1,1,:

Number new nodes in level n is given by : 1,2,4,3,3,3,3,3,3,3,

-----Class

1237-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[021][100][101][110][201]]

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,1,--

R3) 0,1,-->0,1,0,--0,1,1,--0,1,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--

R5) 0,0,1,-->0,1,1,--0,0,1,1,--0,0,1,--0,1,--

R6) 0,1,0,-->0,1,1,--0,1,0,--

R7) 0,1,1,-->0,0,1,1,--0,1,1,--0,1,0,--

R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R9) 0,0,0,1,-->0,0,1,1,--0,0,0,1,1,--0,0,0,1,--0,0,1,--0,1,--

R10) 0,0,1,1,-->0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,0,--

R11) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--

R12) 0,0,0,0,1,-->0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,0,1,--0,0,0,1,--0,1,--

R13) 0,0,0,1,1,-->0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,0,--

R14)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--

0,0,1,--0,1,--

R15)

0,0,0,0,0,1,-->0,0,0,0,1,1,--0,0,0,0,0,1,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,

0,1,--0,1,--

R16)

0,0,0,0,1,1,-->0,0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,0,--

R17)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--

0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R18)

0,0,0,0,0,0,1,-->0,0,0,0,0,1,1,--0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,

0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R19)

0,0,0,0,0,1,1,-->0,0,0,0,0,0,1,1,--0,0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,

1,--0,1,1,--0,1,0,--  
R20)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,  
0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R21)  
0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,1,--0,0,0,0,  
0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R22)  
0,0,0,0,0,0,1,1,-->0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,1,1,--0,0,0,0,0,1,1,--0,0,0,0,1,  
1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,0,--  
R23)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,  
--  
R24)  
0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,0,1,--  
0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,--  
-  
R25)  
0,0,0,0,0,0,0,1,1,-->0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,1,--0,  
0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, : 0,1,0, : 0,1,1, :  
LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,1,1, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,1,1, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,1,1, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,1,1, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,1,1, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,1,1, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,1,1, :  
Number new nodes in level n is given by : 1,2,4,3,3,3,3,3,3,3,

-----Class  
1238-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021][100][101][110][210]]$   
-----

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,0,1,--0,1,--  
R3) 0,1,-->0,1,0,--0,1,1,--0,1,--  
R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--  
R5) 0,0,1,-->0,1,1,--0,0,1,1,--0,0,1,--0,1,--  
R6) 0,1,0,-->0,1,1,--0,1,0,--  
R7) 0,1,1,-->0,0,1,1,--0,1,1,--0,1,0,--  
R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R9) 0,0,0,1,-->0,0,1,1,--0,0,0,1,1,--0,0,0,1,--0,0,1,--0,1,--  
R10) 0,0,1,1,-->0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,0,--

R11) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R12) 0,0,0,0,1,-->0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R13) 0,0,0,1,1,-->0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,0,--  
R14)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
0,0,1,--0,1,--  
R15)  
0,0,0,0,0,1,-->0,0,0,0,1,1,--0,0,0,0,0,1,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,  
0,1,--0,1,--  
R16)  
0,0,0,0,1,1,-->0,0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,0,--  
R17)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R18)  
0,0,0,0,0,0,1,-->0,0,0,0,0,1,1,--0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,  
0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R19)  
0,0,0,0,0,1,1,-->0,0,0,0,0,0,1,1,--0,0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,  
1,--0,1,1,--0,1,0,--  
R20)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,  
0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R21)  
0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,1,--0,0,0,0,  
0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R22)  
0,0,0,0,0,0,1,1,-->0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,1,--0,0,0,0,0,1,1,--0,0,0,0,1,  
1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,0,--  
R23)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,  
--  
R24)  
0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,0,1,--  
0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
-  
R25)  
0,0,0,0,0,0,0,1,1,-->0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,1,1,--0,  
0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,0,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, : 0,1,0, : 0,1,1, :  
LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,1,1, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,1,1, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,1,1, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,1,1, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,1,1, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,1,1, :



--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,--

R23)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--

R24)

0,0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,0, : 0,0,1, : 0,1,0, :

LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,1,0, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,1,0, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,1,0, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,1,0, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,1,0, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,1,0, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,1,0, :

Number new nodes in level n is given by : 1,2,3,3,3,3,3,3,3,3,

-----Class

1240-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021][100][101][120][210]]$

-----

--

Rules of T[L]:

R1) 0, -->0,0,--0,1,--

R2) 0,0, -->0,0,0,--0,0,1,--0,1,--

R3) 0,1, -->0,1,0,--0,0,1,--0,1,0,--

R4) 0,0,0, -->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--

R5) 0,0,1, -->0,0,1,0,--0,0,0,1,--0,0,1,0,--0,1,0,--

R6) 0,1,0, -->0,0,1,0,--0,1,0,--

R7) 0,0,0,0, -->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R8) 0,0,0,1, -->0,0,0,1,0,--0,0,0,0,1,--0,0,0,1,0,--0,0,1,0,--0,1,0,--

R9) 0,0,1,0, -->0,0,0,1,0,--0,0,1,0,--0,1,0,--

R10) 0,0,0,0,0, -->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R11)

0,0,0,0,1, -->0,0,0,0,1,0,--0,0,0,0,0,1,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--

--

R12) 0,0,0,1,0, -->0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--

R13)

0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,0,1,--

0,0,1,--0,1,--

R14)

0,0,0,0,0,1, -->0,0,0,0,0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,0,1,0,--0,1,0,--

R15) 0,0,0,0,1,0, -->0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--

R16)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--  
0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R17)

0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--  
0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--

R18)

0,0,0,0,0,1,0,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,  
0,--0,1,0,--

R19)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,  
0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R20)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,0,--0,0,  
0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--

R21)

0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,1,  
0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--

R22)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,  
,--

R23)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
0,--0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,1,0,--  
-0,0,1,0,--0,1,0,--

R24)

0,0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,  
0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--

List of different nodes in T[L]

- LEN=1) 0,:
  - LEN=2) 0,0,: 0,1,:
  - LEN=3) 0,0,0,: 0,0,1,: 0,1,0,:
  - LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,1,0,:
  - LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,1,0,:
  - LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,1,0,:
  - LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,1,0,:
  - LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,1,0,:
  - LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,1,0,:
  - LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,1,0,:
- Number new nodes in level n is given by : 1,2,3,3,3,3,3,3,3,3,

-----Class  
1241-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[021][100][101][201][210]]  
-----

- Rules of T[L]:
- R1) 0,-->0,0,--0,1,--
  - R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
  - R3) 0,1,-->0,1,0,--0,0,1,--0,1,--



R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--  
R5) 0,0,1,-->0,0,1,0,--0,0,0,1,--0,0,1,--0,1,--  
R6) 0,1,0,-->0,0,1,0,--0,1,0,--  
R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R8) 0,0,0,1,-->0,0,0,1,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R9) 0,0,1,0,-->0,0,0,1,0,--0,0,1,0,--0,1,0,--  
R10) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R11) 0,0,0,0,1,-->0,0,0,0,1,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R12) 0,0,0,1,0,-->0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--  
R13)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
0,0,1,--0,1,--  
R14)  
0,0,0,0,0,1,-->0,0,0,0,0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
0,0,1,--0,1,--  
R15) 0,0,0,0,1,0,-->0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--  
R16)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R17)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R18)  
0,0,0,0,0,1,0,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,  
0,--0,1,0,--  
R19)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,  
0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R20)  
0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,  
0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R21)  
0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,1,  
0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--  
R22)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
,--  
R23)  
0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
,--  
R24)  
0,0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,  
0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--

List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, : 0,1,0, :  
LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,1,0, :

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,1,0,:  
 LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,1,0,:  
 LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,1,0,:  
 LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,1,0,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,1,0,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,1,0,:  
 Number new nodes in level n is given by : 1,2,3,3,3,3,3,3,3,3,

-----Class

1242-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021][100][102][110][120]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- R3) 0,1,-->0,1,0,--0,1,1,--0,1,2,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
- R5) 0,0,1,-->0,1,0,--0,0,1,1,--0,1,1,--0,1,2,--
- R6) 0,1,0,-->0,1,0,--
- R7) 0,1,1,-->0,0,1,1,--0,1,1,--0,1,2,--
- R8) 0,1,2,-->0,1,1,--0,1,2,--
- R9) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R10) 0,0,0,1,-->0,1,0,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,2,--
- R11) 0,0,1,1,-->0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,2,--
- R12) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--
- R13) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,2,--
- R14) 0,0,0,1,1,-->0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,2,--
- R15) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--
- R16) 0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,2,--
- R17) 0,0,0,0,1,1,-->0,0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,2,--
- R18) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--
- R19) 0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,1,--0,0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,2,--
- R20) 0,0,0,0,0,1,1,-->0,0,0,0,0,0,1,1,--0,0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,2,--
- R21) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--
- R22) 0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,1,--0,0,0,0,0,1,1,--0,0,0,0,1,1,--0,

0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,2,--  
 R23)  
 0,0,0,0,0,0,1,1,-->0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,1,--0,0,0,0,0,1,1,--0,0,0,0,1,  
 1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,2,--  
 R24)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
 --0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,  
 ,--  
 R25)  
 0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,  
 1,1,--0,0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,2,--  
 R26)  
 0,0,0,0,0,0,0,1,1,-->0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,1,--0,  
 0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,2,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,1, : 0,1,0, : 0,1,1, : 0,1,2, :  
 LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,1,1, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,1,1, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,1,1, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,1,1, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,1,1, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,1,1, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,1,1, :  
 Number new nodes in level n is given by : 1,2,5,3,3,3,3,3,3,3,

-----Class

1243-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021][100][102][110][201]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- R3) 0,1,-->0,1,0,--0,1,1,--0,1,2,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
- R5) 0,0,1,-->0,1,0,--0,0,1,1,--0,0,1,2,--0,1,2,--
- R6) 0,1,0,-->0,1,0,--
- R7) 0,1,1,-->0,0,1,1,--0,1,1,--0,1,1,3,--
- R8) 0,1,2,-->0,1,2,0,--0,1,1,--0,1,2,--
- R9) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R10) 0,0,0,1,-->0,1,0,--0,0,0,1,1,--0,0,0,1,2,--0,0,1,2,--0,1,2,--
- R11) 0,0,1,1,-->0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,1,3,--
- R12) 0,0,1,2,-->0,1,2,0,--0,0,1,1,--0,0,1,2,--0,1,2,--
- R13) 0,1,1,3,-->0,1,1,--0,1,1,3,--
- R14) 0,1,2,0,-->
- R15) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R16)  
 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,1,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R17) 0,0,0,1,1,-->0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,1,3,--  
R18) 0,0,0,1,2,-->0,1,2,0,--0,0,0,1,1,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R19)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
0,0,1,--0,1,--  
R20)  
0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,1,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,  
0,1,2,--0,1,2,--  
R21)  
0,0,0,0,1,1,-->0,0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,1,3,  
--  
R22)  
0,0,0,0,1,2,-->0,1,2,0,--0,0,0,0,1,1,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R23)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R24)  
0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,  
0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R25)  
0,0,0,0,0,1,1,-->0,0,0,0,0,0,1,1,--0,0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,  
1,--0,1,1,--0,1,1,3,--  
R26)  
0,0,0,0,0,1,2,-->0,1,2,0,--0,0,0,0,0,1,1,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,  
--0,0,1,2,--0,1,2,--  
R27)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,  
0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R28)  
0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,  
--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R29)  
0,0,0,0,0,0,1,1,-->0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,1,--0,0,0,0,0,1,1,--0,0,0,0,1,  
1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,1,3,--  
R30)  
0,0,0,0,0,0,1,2,-->0,1,2,0,--0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,  
0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R31)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,  
--  
R32)  
0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,  
0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,  
2,--  
R33)  
0,0,0,0,0,0,0,1,1,-->0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,1,--0,  
0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,1,3,--  
R34)  
0,0,0,0,0,0,0,1,2,-->0,1,2,0,--0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,

1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,1,0,: 0,1,1,: 0,1,2,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,1,1,: 0,0,1,2,: 0,1,1,3,: 0,1,2,0,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,1,1,: 0,0,0,1,2,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,1,1,: 0,0,0,0,1,2,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,1,1,: 0,0,0,0,0,1,2,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,1,1,: 0,0,0,0,0,0,1,2,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,1,1,:

0,0,0,0,0,0,0,1,2,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,1,1,:

0,0,0,0,0,0,0,0,1,2,:

Number new nodes in level n is given by : 1,2,5,6,4,4,4,4,4,4,

-----Class

1244-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021][100][102][110][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,1,--

R3) 0,1,-->0,1,0,--0,1,1,--0,1,2,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--

R5) 0,0,1,-->0,1,0,--0,0,1,1,--0,0,1,2,--0,1,2,--

R6) 0,1,0,-->0,1,0,--

R7) 0,1,1,-->0,0,1,1,--0,1,1,--0,1,1,3,--

R8) 0,1,2,-->0,1,2,0,--0,1,1,--0,1,2,--

R9) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R10) 0,0,0,1,-->0,1,0,--0,0,0,1,1,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R11) 0,0,1,1,-->0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,1,3,--

R12) 0,0,1,2,-->0,1,2,0,--0,0,1,1,--0,0,1,2,--0,1,2,--

R13) 0,1,1,3,-->0,1,1,--0,1,1,3,--

R14) 0,1,2,0,-->

R15) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R16)

0,0,0,0,1,-->0,1,0,--0,0,0,0,1,1,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R17) 0,0,0,1,1,-->0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,3,--

R18) 0,0,0,1,2,-->0,1,2,0,--0,0,0,1,1,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R19)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--

0,0,1,--0,1,--

R20)

0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,1,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,

0,1,2,--0,1,2,--

R21)

0,0,0,0,1,1,-->0,0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,3,--

--

R22)

0,0,0,0,1,2,-->0,1,2,0,--0,0,0,0,1,1,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R23)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R24)

0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,  
0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R25)

0,0,0,0,0,1,1,-->0,0,0,0,0,0,1,1,--0,0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,  
1,--0,1,1,--0,1,1,3,--

R26)

0,0,0,0,0,1,2,-->0,1,2,0,--0,0,0,0,0,1,1,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,  
--0,0,1,2,--0,1,2,--

R27)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,  
0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R28)

0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,  
--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R29)

0,0,0,0,0,0,1,1,-->0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,1,--0,0,0,0,0,1,1,--0,0,0,0,1,  
1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,1,3,--

R30)

0,0,0,0,0,0,1,2,-->0,1,2,0,--0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,  
0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R31)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,  
,--

R32)

0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,  
0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,  
,2,--

R33)

0,0,0,0,0,0,0,1,1,-->0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,1,--0,  
0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,1,3,--

R34)

0,0,0,0,0,0,0,1,2,-->0,1,2,0,--0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,  
1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0, : 0,1,:

LEN=3) 0,0,0, : 0,0,1, : 0,1,0, : 0,1,1, : 0,1,2, :

LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,1,1, : 0,0,1,2, : 0,1,1,3, : 0,1,2,0, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,1,1, : 0,0,0,1,2, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,1,1, : 0,0,0,0,1,2, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,1,1, : 0,0,0,0,0,1,2, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,1,1, : 0,0,0,0,0,0,1,2, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,1,1, :

0,0,0,0,0,0,0,1,2, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,1,1, :  
 0,0,0,0,0,0,0,0,1,2, :  
 Number new nodes in level n is given by : 1,2,5,6,4,4,4,4,4,4,

-----Class

1245-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021][100][102][120][201]]$

-----

--

Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,0, --0,0,1, --0,1, --
- R3) 0,1, -->0,1,0, --0,0,1, --0,1,2, --
- R4) 0,0,0, -->0,0,0,0, --0,0,0,1, --0,0,1, --0,1, --
- R5) 0,0,1, -->0,1,0, --0,0,0,1, --0,0,1,2, --0,1,2, --
- R6) 0,1,0, -->0,1,0, --
- R7) 0,1,2, -->0,0,1,2, --0,1,2, --
- R8) 0,0,0,0, -->0,0,0,0,0, --0,0,0,0,1, --0,0,0,1, --0,0,1, --0,1, --
- R9) 0,0,0,1, -->0,1,0, --0,0,0,0,1, --0,0,0,1,2, --0,0,1,2, --0,1,2, --
- R10) 0,0,1,2, -->0,0,0,1,2, --0,0,1,2, --0,1,2, --
- R11) 0,0,0,0,0, -->0,0,0,0,0,0, --0,0,0,0,0,1, --0,0,0,0,1, --0,0,0,1, --0,0,1, --0,1, --
- R12) 0,0,0,0,1, -->0,1,0, --0,0,0,0,0,1, --0,0,0,0,1,2, --0,0,0,1,2, --0,0,1,2, --0,1,2, --
- R13) 0,0,0,1,2, -->0,0,0,0,1,2, --0,0,0,1,2, --0,0,1,2, --0,1,2, --
- R14) 0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,1, --0,0,0,1, --0,0,1, --
- R15) 0,0,0,0,0,1, -->0,1,0, --0,0,0,0,0,0,1, --0,0,0,0,0,1,2, --0,0,0,0,1,2, --0,0,0,1,2, --0,0,1,2, --
- R16) 0,0,0,0,1,2, -->0,0,0,0,0,1,2, --0,0,0,0,1,2, --0,0,0,1,2, --0,0,1,2, --0,1,2, --
- R17) 0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,1, --0,0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,1, --
- R18) 0,0,0,0,0,0,1, -->0,1,0, --0,0,0,0,0,0,0,1, --0,0,0,0,0,0,1,2, --0,0,0,0,0,1,2, --0,0,0,0,0,1,2, --0,0,1,2, --
- R19) 0,0,0,0,0,1,2, -->0,0,0,0,0,0,1,2, --0,0,0,0,0,1,2, --0,0,0,0,1,2, --0,0,0,1,2, --0,0,1,2, --
- R20) 0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0,1, --0,0,0,0,0,0,0,1, --0,0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,1, --0,0,0,0,1, --0,0,1, --
- R21) 0,0,0,0,0,0,0,1, -->0,1,0, --0,0,0,0,0,0,0,0,1, --0,0,0,0,0,0,0,1,2, --0,0,0,0,0,0,1,2, --0,0,0,0,0,1,2, --0,0,1,2, --0,1,2, --
- R22) 0,0,0,0,0,0,1,2, -->0,0,0,0,0,0,0,1,2, --0,0,0,0,0,0,1,2, --0,0,0,0,0,1,2, --0,0,0,0,0,1,2, --0,0,0,0,1,2, --0,0,1,2, --

R23)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,  
,--

R24)  
0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,  
0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,  
,2,--

R25)  
0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,  
0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,0, : 0,0,1, : 0,1,0, : 0,1,2, :

LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,1,2, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,1,2, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,1,2, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,1,2, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,1,2, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,1,2, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,1,2, :

Number new nodes in level n is given by : 1,2,4,3,3,3,3,3,3,3,3,

-----Class

1246-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021][100][102][120][210]]$

-----

--  
Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,1,--

R3) 0,1,-->0,1,0,--0,0,1,--0,1,2,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--

R5) 0,0,1,-->0,1,0,--0,0,0,1,--0,0,1,2,--0,1,2,--

R6) 0,1,0,-->0,1,0,--

R7) 0,1,2,-->0,0,1,2,--0,1,2,--

R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R9) 0,0,0,1,-->0,1,0,--0,0,0,0,1,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R10) 0,0,1,2,-->0,0,0,1,2,--0,0,1,2,--0,1,2,--

R11) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R12)

0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R13) 0,0,0,1,2,-->0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R14)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--

0,0,1,--0,1,--

R15)

0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,

0,1,2,--0,1,2,--



R16) 0,0,0,0,1,2,-->0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R17)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R18)  
0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,  
0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R19)  
0,0,0,0,0,1,2,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,  
2,--0,1,2,--  
R20)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,  
0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R21)  
0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,  
--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R22)  
0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,  
2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R23)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,  
,--  
R24)  
0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,  
0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,  
,2,--  
R25)  
0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,  
0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,1,2,--0,1,2,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, : 0,1,0, : 0,1,2, :  
LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,1,2, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,1,2, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,1,2, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,1,2, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,1,2, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,1,2, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,1,2, :  
Number new nodes in level n is given by : 1,2,4,3,3,3,3,3,3,3,3,

-----Class

1247-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[021][100][102][201][210]]

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,1,--  
R3) 0,1,-->0,1,0,--0,0,1,--0,1,2,--  
R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--  
R5) 0,0,1,-->0,1,0,--0,0,0,1,--0,0,1,2,--0,1,2,--  
R6) 0,1,0,-->0,1,0,--  
R7) 0,1,2,-->0,1,2,0,--0,0,1,2,--0,1,2,--  
R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R9) 0,0,0,1,-->0,1,0,--0,0,0,0,1,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R10) 0,0,1,2,-->0,1,2,0,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R11) 0,1,2,0,-->  
R12) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R13)  
0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R14) 0,0,0,1,2,-->0,1,2,0,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R15)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
0,0,1,--0,1,--  
R16)  
0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,  
0,1,2,--0,1,2,--  
R17)  
0,0,0,0,1,2,-->0,1,2,0,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,  
--  
R18)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R19)  
0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,  
0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R20)  
0,0,0,0,0,1,2,-->0,1,2,0,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,  
2,--0,0,1,2,--0,1,2,--  
R21)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,  
0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R22)  
0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,  
--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R23)  
0,0,0,0,0,0,1,2,-->0,1,2,0,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--  
0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R24)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,  
--  
R25)  
0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,  
0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,  
2,--  
R26)

0,0,0,0,0,0,0,1,2,-->0,1,2,0,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,  
0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

List of different nodes in T[L]

- LEN=1) 0, :
  - LEN=2) 0,0, : 0,1, :
  - LEN=3) 0,0,0, : 0,0,1, : 0,1,0, : 0,1,2, :
  - LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,1,2, : 0,1,2,0, :
  - LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,1,2, :
  - LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,1,2, :
  - LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,1,2, :
  - LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,1,2, :
  - LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,1,2, :
  - LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,1,2, :
- Number new nodes in level n is given by : 1,2,4,4,3,3,3,3,3,3,

-----Class

1248-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021][100][110][120][201]]$

-----

--

Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,0, --0,0,1, --0,1, --
- R3) 0,1, -->0,1,0, --0,1,0, --0,1,2, --
- R4) 0,0,0, -->0,0,0,0, --0,0,0,1, --0,0,1, --0,1, --
- R5) 0,0,1, -->0,0,1,0, --0,0,1,0, --0,1,0, --0,1,2, --
- R6) 0,1,0, -->0,0,1,0, --0,1,0, --0,1,2, --
- R7) 0,1,2, -->0,1,0, --0,1,2, --
- R8) 0,0,0,0, -->0,0,0,0,0, --0,0,0,0,1, --0,0,0,1, --0,0,1, --0,1, --
- R9) 0,0,0,1, -->0,0,0,1,0, --0,0,0,1,0, --0,0,1,0, --0,1,0, --0,1,2, --
- R10) 0,0,1,0, -->0,0,0,1,0, --0,0,1,0, --0,1,0, --0,1,2, --
- R11) 0,0,0,0,0, -->0,0,0,0,0,0, --0,0,0,0,0,1, --0,0,0,0,1, --0,0,0,1, --0,0,1, --0,1, --
- R12) 0,0,0,0,1, -->0,0,0,0,1,0, --0,0,0,0,1,0, --0,0,0,1,0, --0,0,1,0, --0,1,0, --0,1,2, --
- R13) 0,0,0,1,0, -->0,0,0,0,1,0, --0,0,0,1,0, --0,0,1,0, --0,1,0, --0,1,2, --
- R14) 0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,1, --0,0,0,1, --0,0,1, --0,1, --
- R15) 0,0,0,0,0,1, -->0,0,0,0,0,1,0, --0,0,0,0,0,1,0, --0,0,0,0,1,0, --0,0,0,1,0, --0,0,1,0, --0,0,1,0, --0,1,0, --0,1,2, --
- R16) 0,0,0,0,1,0, -->0,0,0,0,0,1,0, --0,0,0,0,1,0, --0,0,0,1,0, --0,0,1,0, --0,1,0, --0,1,2, --
- R17) 0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,1, --0,0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,1, --0,0,0,1, --0,1, --
- R18) 0,0,0,0,0,1, -->0,0,0,0,0,0,1,0, --0,0,0,0,0,0,1,0, --0,0,0,0,0,1,0, --0,0,0,0,1,0, --0,0,0,0,1,0, --0,0,0,1,0, --0,1,0, --0,1,2, --
- R19) 0,0,0,0,0,0,1, -->0,0,0,0,0,0,0,1,0, --0,0,0,0,0,0,0,1,0, --0,0,0,0,0,0,1,0, --0,0,0,0,0,1,0, --0,0,0,0,1,0, --0,0,0,1,0, --0,1,0, --0,1,2, --

0,0,0,0,0,1,0,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,  
0,--0,1,0,--0,1,2,--

R20)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,  
0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R21)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,  
0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--

R22)

0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,1,  
0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--

R23)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,0,1,--0,1,--0,1,  
,--

R24)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,0,  
--0,0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,0,--0,1,  
,2,--

R25)

0,0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,  
0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,1,0,: 0,1,2,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,1,0,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,1,0,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,1,0,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,1,0,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,1,0,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,1,0,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,1,0,:

Number new nodes in level n is given by : 1,2,4,3,3,3,3,3,3,3,

-----Class

1249-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021][100][110][120][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,1,--

R3) 0,1,-->0,1,0,--0,1,0,--0,1,2,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--

R5) 0,0,1,-->0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--

R6) 0,1,0,-->0,0,1,0,--0,1,0,--0,1,2,--

R7) 0,1,2,-->0,1,0,--0,1,2,--

R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R9) 0,0,0,1,-->0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--

R10) 0,0,1,0,-->0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--  
R11) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R12) 0,0,0,0,1,-->0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--  
R13) 0,0,0,1,0,-->0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--  
R14) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
0,0,1,--0,1,--  
R15) 0,0,0,0,0,1,-->0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--  
0,1,0,--0,1,2,--  
R16) 0,0,0,0,1,0,-->0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--  
R17) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R18) 0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,1,0,--  
0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--  
R19) 0,0,0,0,0,1,0,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,  
0,--0,1,0,--0,1,2,--  
R20) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,  
0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R21) 0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,  
0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--  
R22) 0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,1,  
0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--  
R23) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,  
,--  
R24) 0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,0,  
--0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,0,--0,1,  
,2,--  
R25) 0,0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,  
0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, : 0,1,0, : 0,1,2, :  
LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,1,0, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,1,0, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,1,0, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,1,0, :

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,1,0,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,1,0,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,1,0,:  
 Number new nodes in level n is given by : 1,2,4,3,3,3,3,3,3,3,

-----Class

1250-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021][100][110][201][210]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- R3) 0,1,-->0,1,0,--0,1,0,--0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
- R5) 0,0,1,-->0,0,1,0,--0,0,1,0,--0,0,1,--0,1,--
- R6) 0,1,0,-->0,0,1,0,--0,1,0,--0,1,0,3,--
- R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R8) 0,0,0,1,-->0,0,0,1,0,--0,0,0,1,0,--0,0,0,1,--0,0,1,--0,1,--
- R9) 0,0,1,0,-->0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,0,3,--
- R10) 0,1,0,3,-->0,1,0,--0,1,0,3,--
- R11) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--
- R12) 0,0,0,0,1,-->0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--
- R13) 0,0,0,1,0,-->0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,0,3,--
- R14) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--
- R15) 0,0,0,0,0,1,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--
- R16) 0,0,0,0,1,0,-->0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,0,3,--
- R17) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--
- R18) 0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,1,--
- R19) 0,0,0,0,0,1,0,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,3,--
- R20) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--
- R21) 0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--
- R22) 0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,0,1,--0,0,0,0,1,--

```

0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,0,3,--
R23)
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1
,--
R24)
0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1
,--
R25)
0,0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,
0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,0,3,--
List of different nodes in T[L]
LEN=1) 0,:
LEN=2) 0,0,: 0,1,:
LEN=3) 0,0,0,: 0,0,1,: 0,1,0,:
LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,1,0,: 0,1,0,3,:
LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,1,0,:
LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,1,0,:
LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,1,0,:
LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,1,0,:
LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,1,0,:
LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,1,0,:
Number new nodes in level n is given by : 1,2,3,4,3,3,3,3,3,3,

```

-----Class

1251-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021][100][120][201][210]]$

-----

--  
Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- R3) 0,1,-->0,1,0,--0,0,1,--0,1,2,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
- R5) 0,0,1,-->0,0,1,0,--0,0,0,1,--0,1,0,--0,1,2,--
- R6) 0,1,0,-->0,0,1,0,--0,1,0,--0,1,2,--
- R7) 0,1,2,-->0,1,0,--0,1,2,--
- R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R9) 0,0,0,1,-->0,0,0,1,0,--0,0,0,0,1,--0,0,1,0,--0,1,0,--0,1,2,--
- R10) 0,0,1,0,-->0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--
- R11) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R12)
  - 0,0,0,0,1,-->0,0,0,0,1,0,--0,0,0,0,0,1,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--
- R13) 0,0,0,1,0,-->0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--
- R14)
  - 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--
  - 0,0,1,--0,1,--
- R15)
  - 0,0,0,0,0,1,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--

0,1,0,--0,1,2,--  
 R16)  
 0,0,0,0,1,0,-->0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--  
 R17)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
 0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R18)  
 0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,0,--0,0,0,0,1,0,--  
 0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--  
 R19)  
 0,0,0,0,0,1,0,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,  
 0,--0,1,0,--0,1,2,--  
 R20)  
 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,  
 0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R21)  
 0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,0,--0,0,0,  
 0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--  
 R22)  
 0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,1,  
 0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--  
 R23)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
 --0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,  
 ,--  
 R24)  
 0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,0,  
 --0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,  
 ,2,--  
 R25)  
 0,0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,  
 0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,1, : 0,1,0, : 0,1,2, :  
 LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,1,0, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,1,0, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,1,0, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,1,0, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,1,0, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,1,0, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,1,0, :  
 Number new nodes in level n is given by : 1,2,4,3,3,3,3,3,3,3,3,

-----Class  
 1252-----  
 Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[021][101][102][110][120]]  
 -----  
 --





0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,2,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,0, : 0,0,1, : 0,1,0, : 0,1,1, : 0,1,2, :

LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,1,1, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,1,1, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,1,1, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,1,1, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,1,1, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,1,1, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,1,1, :

Number new nodes in level n is given by : 1,2,5,3,3,3,3,3,3,3,

-----Class

1253-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021][101][102][110][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,1,--

R3) 0,1,-->0,1,0,--0,1,1,--0,1,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--

R5) 0,0,1,-->0,1,0,--0,0,1,1,--0,0,1,--0,1,--

R6) 0,1,0,-->0,1,0,--

R7) 0,1,1,-->0,0,1,1,--0,1,1,--0,1,1,3,--

R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R9) 0,0,0,1,-->0,1,0,--0,0,0,1,1,--0,0,0,1,--0,0,1,--0,1,--

R10) 0,0,1,1,-->0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,1,3,--

R11) 0,1,1,3,-->0,1,1,--0,1,1,3,--

R12) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R13) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R14) 0,0,0,1,1,-->0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,1,3,--

R15)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--

0,0,1,--0,1,--

R16)

0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--

0,1,--

R17)

0,0,0,0,1,1,-->0,0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,1,3,--

--

R18)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--

0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R19)

0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--

--0,0,0,1,--0,0,1,--0,1,--

R20)

0,0,0,0,0,1,1,-->0,0,0,0,0,0,1,1,--0,0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,1,3,--

R21)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R22)

0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R23)

0,0,0,0,0,0,1,1,-->0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,1,--0,0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,3,--

R24)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R25)

0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--

R26)

0,0,0,0,0,0,0,1,1,-->0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,1,--0,0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,3,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,1,0,: 0,1,1,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,1,1,: 0,1,1,3,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,1,1,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,1,1,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,1,1,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,1,1,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,1,1,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,1,1,:

Number new nodes in level n is given by : 1,2,4,4,3,3,3,3,3,3,

-----Class

1254-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021][101][102][110][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,1,--

R3) 0,1,-->0,1,0,--0,1,1,--0,1,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--

R5) 0,0,1,-->0,1,0,--0,0,1,1,--0,0,1,--0,1,--

R6) 0,1,0,-->0,1,0,--

R7) 0,1,1,-->0,0,1,1,--0,1,1,--0,1,1,3,--

R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R9) 0,0,0,1,-->0,1,0,--0,0,0,1,1,--0,0,0,1,--0,0,1,--0,1,--

R10) 0,0,1,1,-->0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,1,3,--

R11) 0,1,1,3,-->0,1,1,--0,1,1,3,--  
R12) 0,0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--  
R13) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,1,--0,0,0,0,1,--0,0,0,1,--0,1,--  
R14) 0,0,0,1,1,-->0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,3,--  
R15)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
0,0,1,--0,1,--  
R16)  
0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
0,1,--  
R17)  
0,0,0,0,1,1,-->0,0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,3,  
--  
R18)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R19)  
0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,  
--0,0,0,1,--0,0,1,--0,1,--  
R20)  
0,0,0,0,0,1,1,-->0,0,0,0,0,0,1,1,--0,0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,  
1,--0,1,1,--0,1,1,3,--  
R21)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,  
0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R22)  
0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,  
0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R23)  
0,0,0,0,0,0,1,1,-->0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,1,--0,0,0,0,0,1,1,--0,0,0,0,1,  
1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,1,3,--  
R24)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,  
--  
R25)  
0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,  
0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R26)  
0,0,0,0,0,0,0,1,1,-->0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,1,--0,  
0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,1,3,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, : 0,1,0, : 0,1,1, :  
LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,1,1, : 0,1,1,3, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,1,1, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,1,1, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,1,1, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,1,1, :

LEN=9) 0,0,0,0,0,0,0,0,0,0: 0,0,0,0,0,0,0,0,0,1: 0,0,0,0,0,0,0,0,1,1,1:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,0: 0,0,0,0,0,0,0,0,0,0,1: 0,0,0,0,0,0,0,0,0,1,1,1,1:  
 Number new nodes in level n is given by : 1,2,4,4,3,3,3,3,3,3,

-----Class

1255-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021][101][102][120][201]]$

-----

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- R3) 0,1,-->0,1,0,--0,0,1,--0,1,2,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
- R5) 0,0,1,-->0,1,0,--0,0,0,1,--0,0,1,2,--0,1,2,--
- R6) 0,1,0,-->0,1,0,--
- R7) 0,1,2,-->0,0,1,2,--0,1,2,--
- R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R9) 0,0,0,1,-->0,1,0,--0,0,0,0,1,--0,0,0,1,2,--0,0,1,2,--0,1,2,--
- R10) 0,0,1,2,-->0,0,0,1,2,--0,0,1,2,--0,1,2,--
- R11) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R12) 0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--
- R13) 0,0,0,1,2,-->0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--
- R14) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R15) 0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--
- R16) 0,0,0,0,1,2,-->0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--
- R17) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R18) 0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--
- R19) 0,0,0,0,0,1,2,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--
- R20) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R21) 0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--
- R22) 0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--
- R23) 0,0,0,0,0,1,2,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

0,0,0,0,0,0,0,0,0,0,-->0,1,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--0,1,  
,--

R24)

0,0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,  
0,0,1,2,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,  
,2,--

R25)

0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,  
0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,1,2,--0,1,2,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,1,0,: 0,1,2,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,1,2,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,1,2,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,1,2,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,1,2,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,1,2,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,1,2,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,1,2,:

Number new nodes in level n is given by : 1,2,4,3,3,3,3,3,3,3,3,

-----Class

1256-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding L=[[021][101][102][120][210]]

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,1,--

R3) 0,1,-->0,1,0,--0,0,1,--0,1,2,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--

R5) 0,0,1,-->0,1,0,--0,0,0,1,--0,0,1,2,--0,1,2,--

R6) 0,1,0,-->0,1,0,--

R7) 0,1,2,-->0,0,1,2,--0,1,2,--

R8) 0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R9) 0,0,0,1,-->0,1,0,--0,0,0,0,1,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R10) 0,0,1,2,-->0,0,0,1,2,--0,0,1,2,--0,1,2,--

R11) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R12)

0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R13) 0,0,0,1,2,-->0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R14)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
0,0,1,--0,1,--

R15)

0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,  
0,1,2,--0,1,2,--

R16) 0,0,0,0,1,2,-->0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R17)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R18)  
0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,  
0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R19)  
0,0,0,0,0,1,2,-->0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,  
2,--0,1,2,--

R20)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,  
0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R21)  
0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--  
--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R22)  
0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,  
2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R23)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,  
--

R24)  
0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,  
0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,  
2,--

R25)  
0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,  
0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,0, : 0,0,1, : 0,1,0, : 0,1,2, :

LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,1,2, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,1,2, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,1,2, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,1,2, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,1,2, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,1,2, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,1,2, :

Number new nodes in level n is given by : 1,2,4,3,3,3,3,3,3,3,3,

-----Class

1257-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021][101][102][201][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,1,--

- R3) 0,1,-->0,1,0,--0,0,1,--0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
- R5) 0,0,1,-->0,1,0,--0,0,0,1,--0,0,1,--0,1,--
- R6) 0,1,0,-->0,1,0,--
- R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R8) 0,0,0,1,-->0,1,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R9) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R10) 0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R11) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R12) 0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R13) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R14) 0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R15) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R16) 0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R17) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R18) 0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, : 0,1, :
- LEN=3) 0,0,0, : 0,0,1, : 0,1,0, :
- LEN=4) 0,0,0,0, : 0,0,0,1, :
- LEN=5) 0,0,0,0,0, : 0,0,0,0,1, :
- LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, :
- LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, :
- LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, :
- LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, :
- LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :

Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

-----Class

1258-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021]][101][110][120][201]]$

-----





R25)

0,0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,  
0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,1,0,: 0,1,2,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,1,0,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,1,0,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,1,0,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,1,0,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,1,0,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,1,0,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,1,0,:

Number new nodes in level n is given by : 1,2,4,3,3,3,3,3,3,3,3,

-----Class

1259-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[021][101][110][120][210]]

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,1,--

R3) 0,1,-->0,1,0,--0,1,0,--0,1,2,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--

R5) 0,0,1,-->0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--

R6) 0,1,0,-->0,0,1,0,--0,1,0,--0,1,2,--

R7) 0,1,2,-->0,1,0,--0,1,2,--

R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R9) 0,0,0,1,-->0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--

R10) 0,0,1,0,-->0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--

R11) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R12)

0,0,0,0,1,-->0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--

R13) 0,0,0,1,0,-->0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--

R14)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--

0,0,1,--0,1,--

R15)

0,0,0,0,0,1,-->0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--

0,1,0,--0,1,2,--

R16)

0,0,0,0,1,0,-->0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--

R17)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--

0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R18)

0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,1,0,--

0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--

R19)  
0,0,0,0,0,1,0,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,  
0,--0,1,0,--0,1,2,--

R20)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,  
0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R21)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,  
0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--

R22)  
0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,1,  
0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--

R23)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,--0,1,  
,--

R24)  
0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,0,  
--0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,  
,2,--

R25)  
0,0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,  
0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--

List of different nodes in T[L]

- LEN=1) 0,:
  - LEN=2) 0,0,: 0,1,:
  - LEN=3) 0,0,0,: 0,0,1,: 0,1,0,: 0,1,2,:
  - LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,1,0,:
  - LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,1,0,:
  - LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,1,0,:
  - LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,1,0,:
  - LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,1,0,:
  - LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,1,0,:
  - LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,1,0,:
- Number new nodes in level n is given by : 1,2,4,3,3,3,3,3,3,3,

-----Class  
1260-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021][101][110][201][210]]$   
-----

- 
- Rules of T[L]:
- R1) 0,-->0,0,--0,1,--
  - R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
  - R3) 0,1,-->0,0,--0,1,1,--0,1,--
  - R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
  - R5) 0,0,1,-->0,0,0,--0,0,1,1,--0,0,1,--0,1,--
  - R6) 0,1,1,-->0,0,1,1,--0,1,1,--0,1,1,3,--
  - R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
  - R8) 0,0,0,1,-->0,0,0,0,--0,0,0,1,1,--0,0,0,1,--0,0,1,--0,1,--

R9) 0,0,1,1,-->0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,1,3,--  
R10) 0,1,1,3,-->0,1,1,--0,1,1,3,--  
R11) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R12) 0,0,0,0,1,-->0,0,0,0,0,--0,0,0,0,1,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R13) 0,0,0,1,1,-->0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,1,3,--  
R14)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
0,0,1,--0,1,--  
R15)  
0,0,0,0,0,1,-->0,0,0,0,0,0,0,--0,0,0,0,0,1,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,  
0,1,--0,1,--  
R16)  
0,0,0,0,1,1,-->0,0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,1,3,  
--  
R17)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R18)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,  
0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R19)  
0,0,0,0,0,1,1,-->0,0,0,0,0,0,1,1,--0,0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,  
1,--0,1,1,--0,1,1,3,--  
R20)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,  
0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R21)  
0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,1,--0,0,0,0,  
0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R22)  
0,0,0,0,0,0,1,1,-->0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,1,--0,0,0,0,0,1,1,--0,0,0,0,1,  
1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,1,3,--  
R23)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,  
--  
R24)  
0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,0,1,--  
0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
-  
R25)  
0,0,0,0,0,0,0,1,1,-->0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,1,--0,  
0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,1,3,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, : 0,1,1, :  
LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,1,1, : 0,1,1,3, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,1,1, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,1,1, :

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,1,1,:  
 LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,1,1,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,1,1,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,1,1,:  
 Number new nodes in level n is given by : 1,2,3,4,3,3,3,3,3,3,

-----Class

1261-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021][101][120][201][210]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- R3) 0,1,-->0,1,0,--0,0,1,--0,1,2,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
- R5) 0,0,1,-->0,0,1,0,--0,0,0,1,--0,1,0,--0,1,2,--
- R6) 0,1,0,-->0,0,1,0,--0,1,0,--0,1,2,--
- R7) 0,1,2,-->0,1,0,--0,1,2,--
- R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R9) 0,0,0,1,-->0,0,0,1,0,--0,0,0,0,1,--0,0,1,0,--0,1,0,--0,1,2,--
- R10) 0,0,1,0,-->0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--
- R11) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R12) 0,0,0,0,1,-->0,0,0,0,1,0,--0,0,0,0,0,1,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--
- R13) 0,0,0,1,0,-->0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--
- R14) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R15) 0,0,0,0,0,1,-->0,0,0,0,0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--
- R16) 0,0,0,0,1,0,-->0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--
- R17) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--
- R18) 0,0,0,0,0,1,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--
- R19) 0,0,0,0,0,1,0,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--
- R20) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
- R21) 0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--
- R22) 0,0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--

0,0,0,0,0,1,0,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,1,  
0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--

R23)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,  
,--

R24)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,0,  
--0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,1,0,--0,0,1,0,--0,1,0,--0,1,  
,2,--

R25)

0,0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,  
0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,2,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,1,0,: 0,1,2,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,1,0,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,1,0,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,1,0,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,1,0,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,1,0,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,1,0,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,1,0,:

Number new nodes in level n is given by : 1,2,4,3,3,3,3,3,3,3,3,

-----Class

1262-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021][102][110][120][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,1,--

R3) 0,1,-->0,1,0,--0,1,1,--0,1,2,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--

R5) 0,0,1,-->0,1,0,--0,0,1,1,--0,1,1,--0,1,2,--

R6) 0,1,0,-->0,1,0,--0,1,0,1,--

R7) 0,1,1,-->0,0,1,1,--0,1,1,--0,1,2,--

R8) 0,1,2,-->0,1,1,--0,1,2,--

R9) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R10) 0,0,0,1,-->0,1,0,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,2,--

R11) 0,0,1,1,-->0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,2,--

R12) 0,1,0,1,-->0,1,0,1,--

R13) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R14) 0,0,0,0,1,-->0,1,0,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,2,--

R15) 0,0,0,1,1,-->0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,2,--

R16)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
0,0,1,--0,1,--

R17)  
0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--  
0,1,2,--

R18)  
0,0,0,0,1,1,-->0,0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,2,--

R19)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R20)  
0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,1,--0,0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,  
--0,0,1,1,--0,1,1,--0,1,2,--

R21)  
0,0,0,0,0,1,1,-->0,0,0,0,0,0,1,1,--0,0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,  
1,--0,1,1,--0,1,2,--

R22)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,  
0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R23)  
0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,1,--0,0,0,0,0,1,1,--0,  
0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,2,--

R24)  
0,0,0,0,0,0,1,1,-->0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,1,--0,0,0,0,0,1,1,--0,0,0,0,1,  
1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,2,--

R25)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,  
,--

R26)  
0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,  
1,1,--0,0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,2,--

R27)  
0,0,0,0,0,0,0,1,1,-->0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,1,--0,  
0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,2,--

List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, : 0,1,0, : 0,1,1, : 0,1,2, :  
LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,1,1, : 0,1,0,1, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,1,1, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,1,1, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,1,1, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,1,1, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,1,1, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,1,1, :  
Number new nodes in level n is given by : 1,2,5,4,3,3,3,3,3,3,

-----Class  
1263-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021]][102]][110]][120]][210]]$   
-----





R27)

0,0,0,0,0,0,0,1,1,-->0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,1,--0,  
0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,2,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,1,0,: 0,1,1,: 0,1,2,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,1,1,: 0,1,0,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,1,1,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,1,1,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,1,1,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,1,1,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,1,1,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,1,1,:

Number new nodes in level n is given by : 1,2,5,4,3,3,3,3,3,3,

-----Class

1264-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[021][102][110][201][210]]

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,1,--

R3) 0,1,-->0,1,0,--0,1,1,--0,1,2,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--

R5) 0,0,1,-->0,1,0,--0,0,1,1,--0,0,1,2,--0,1,2,--

R6) 0,1,0,-->0,1,0,--0,1,0,1,--

R7) 0,1,1,-->0,0,1,1,--0,1,1,--0,1,1,3,--

R8) 0,1,2,-->0,1,0,1,--0,1,1,--0,1,2,--

R9) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R10) 0,0,0,1,-->0,1,0,--0,0,0,1,1,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R11) 0,0,1,1,-->0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,1,3,--

R12) 0,0,1,2,-->0,1,0,1,--0,0,1,1,--0,0,1,2,--0,1,2,--

R13) 0,1,0,1,-->0,1,0,1,--

R14) 0,1,1,3,-->0,1,1,--0,1,1,3,--

R15) 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R16)

0,0,0,0,1,-->0,1,0,--0,0,0,0,1,1,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R17) 0,0,0,1,1,-->0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,3,--

R18) 0,0,0,1,2,-->0,1,0,1,--0,0,0,1,1,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R19)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--

0,0,1,--0,1,--

R20)

0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,1,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,

0,1,2,--0,1,2,--

R21)

0,0,0,0,1,1,-->0,0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,1,3,

--

R22)  
0,0,0,0,1,2,-->0,1,0,1,--0,0,0,0,1,1,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R23)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--  
0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R24)  
0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,  
0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R25)  
0,0,0,0,0,1,1,-->0,0,0,0,0,0,1,1,--0,0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,  
1,--0,1,1,--0,1,1,3,--

R26)  
0,0,0,0,0,1,2,-->0,1,0,1,--0,0,0,0,0,1,1,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,  
--0,0,1,2,--0,1,2,--

R27)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,  
0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R28)  
0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,  
--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R29)  
0,0,0,0,0,0,1,1,-->0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,1,--0,0,0,0,0,1,1,--0,0,0,0,1,  
1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,1,3,--

R30)  
0,0,0,0,0,0,1,2,-->0,1,0,1,--0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,  
0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

R31)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,  
--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,  
--

R32)  
0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,  
0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,  
2,--

R33)  
0,0,0,0,0,0,0,1,1,-->0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,1,1,--0,  
0,0,0,0,1,1,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,1,3,--

R34)  
0,0,0,0,0,0,0,1,2,-->0,1,0,1,--0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,  
1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,1,0,: 0,1,1,: 0,1,2,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,1,1,: 0,0,1,2,: 0,1,0,1,: 0,1,1,3,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,1,1,: 0,0,0,1,2,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,1,1,: 0,0,0,0,1,2,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,1,1,: 0,0,0,0,0,1,2,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,1,1,: 0,0,0,0,0,0,1,2,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,1,1,:







0,0,0,0,1,-->0,1,0,--0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R15) 0,0,0,0,2,-->0,0,2,0,--0,0,2,0,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R16) 0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,--0,0,1,--0,0,2,--  
R17)  
0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--0,0,--0,1,--  
R18) 0,0,0,3,0,-->0,0,2,0,--0,0,2,0,--  
R19) 0,0,0,3,1,-->0,1,0,--0,1,0,--  
R20)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R21)  
0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,  
0,0,0,4,--0,0,0,0,0,5,--  
R22)  
0,0,0,0,0,2,-->0,0,2,0,--0,0,2,0,--0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--  
0,0,0,0,4,--  
R23)  
0,0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,  
0,0,3,--  
R24)  
0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--0,0,0,--0,0,  
1,--0,0,2,--  
R25)  
0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,0,  
0,0,0,5,0,--0,0,--0,1,--  
R26) 0,0,0,0,4,0,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--  
R27) 0,0,0,0,4,1,-->0,1,0,--0,0,2,0,--0,0,2,0,--  
R28) 0,0,0,0,4,2,-->0,0,2,0,--0,0,2,0,--0,1,0,--  
R29)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R30)  
0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,  
0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R31)  
0,0,0,0,0,0,2,-->0,0,2,0,--0,0,2,0,--0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,  
0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R32)  
0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,0,0,--0,0,0,0,1,--0,0,0,  
0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R33)  
0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--0,0,0,0,--  
0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R34)  
0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,--0,  
0,0,0,0,5,0,--0,0,0,--0,0,1,--0,0,2,--  
R35)  
0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,  
6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,0,--0,0,--0,1,--  
R36) 0,0,0,0,0,5,0,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--



-0,0,0,0,0,0,0,7,--  
 R56)  
 0,0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,0,0,0,0,--0,0,0,0,0,  
 0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6  
 ,--  
 R57)  
 0,0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--0,0,0,  
 0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
 R58)  
 0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,  
 --0,0,0,0,0,5,0,--0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
 R59)  
 0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,  
 0,0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,0,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3  
 ,--  
 R60)  
 0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,7,2,--0,  
 0,0,0,0,0,0,7,3,--0,0,0,0,0,0,7,4,--0,0,0,0,0,0,7,5,--0,0,0,0,0,0,7,0,--0,0,0,  
 ,--0,0,1,--0,0,2,--  
 R61)  
 0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,0,--0,0,0,0,0,0,0,8,1,--0,0,0,0,0,0,0,8,  
 2,--0,0,0,0,0,0,0,8,3,--0,0,0,0,0,0,0,8,4,--0,0,0,0,0,0,0,8,5,--0,0,0,0,0,0,0,  
 ,0,8,6,--0,0,0,0,0,0,0,8,0,--0,0,--0,1,--  
 R62)  
 0,0,0,0,0,0,0,7,0,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,  
 0,0,6,3,--0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,0,--  
 R63)  
 0,0,0,0,0,0,0,7,1,-->0,1,0,--0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,  
 0,0,5,3,--0,0,0,0,0,5,0,--  
 R64)  
 0,0,0,0,0,0,0,7,2,-->0,0,2,0,--0,0,2,0,--0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--  
 0,0,0,0,4,0,--  
 R65)  
 0,0,0,0,0,0,0,7,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,3,0,--0,0,0,3,1,--0,  
 0,0,3,0,--  
 R66)  
 0,0,0,0,0,0,0,7,4,-->0,0,0,0,4,0,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,0,--0,0,2,  
 0,--0,0,2,0,--  
 R67)  
 0,0,0,0,0,0,0,7,5,-->0,0,0,0,0,5,0,--0,0,0,0,0,5,1,--0,0,0,0,0,5,2,--0,0,0,0,0,5,3,  
 --0,0,0,0,0,5,0,--0,1,0,--  
 List of different nodes in T[L]  
 LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,1, : 0,0,2, : 0,1,0, :  
 LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,2, : 0,0,0,3, : 0,0,2,0, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,3,0, :  
 0,0,0,3,1, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, :  
 0,0,0,0,0,5, : 0,0,0,0,4,0, : 0,0,0,0,4,1, : 0,0,0,0,4,2, :



LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,:  
 0,0,0,0,0,0,4,: 0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,: 0,0,0,0,0,5,0,: 0,0,0,0,0,5,1,:  
 0,0,0,0,0,5,2,: 0,0,0,0,0,5,3,:  
 LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,:  
 0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:  
 0,0,0,0,0,0,6,0,: 0,0,0,0,0,0,6,1,: 0,0,0,0,0,0,6,2,: 0,0,0,0,0,0,6,3,:  
 0,0,0,0,0,0,6,4,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:  
 0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,:  
 0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,7,0,: 0,0,0,0,0,0,0,7,1,:  
 0,0,0,0,0,0,0,7,2,: 0,0,0,0,0,0,0,7,3,: 0,0,0,0,0,0,0,7,4,: 0,0,0,0,0,0,0,7,5,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,2,:  
 0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,:  
 0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,:  
 0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,8,0,: 0,0,0,0,0,0,0,8,1,:  
 0,0,0,0,0,0,0,8,2,: 0,0,0,0,0,0,0,8,3,: 0,0,0,0,0,0,0,8,4,:  
 0,0,0,0,0,0,0,8,5,: 0,0,0,0,0,0,0,8,6,:  
 Number new nodes in level n is given by : 1,2,4,5,7,9,11,13,15,17,

-----Class

1268-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[100][101][102][110][201]]$

- 
- Rules of T[L]:
- R1) 0, -->0,0, --0,1, --
  - R2) 0,0, -->0,0,0, --0,0,1, --0,0,2, --
  - R3) 0,1, -->0,1,0, --0,0, --0,1,2, --
  - R4) 0,0,0, -->0,0,0,0, --0,0,0,1, --0,0,0,2, --0,0,0,3, --
  - R5) 0,0,1, -->0,1,0, --0,0,0, --0,0,1,2, --0,0,1,3, --
  - R6) 0,0,2, -->0,1,0, --0,0,2,1, --0,0, --0,0,2,3, --
  - R7) 0,1,0, -->
  - R8) 0,1,2, -->0,1,0, --0,1,0, --0,0, --0,1,2,3, --
  - R9) 0,0,0,0, -->0,0,0,0,0, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --
  - R10) 0,0,0,1, -->0,1,0, --0,0,0,0, --0,0,0,1,2, --0,0,0,1,3, --0,0,0,1,4, --
  - R11) 0,0,0,2, -->0,1,0, --0,0,2,1, --0,0,0, --0,0,0,2,3, --0,0,0,2,4, --
  - R12) 0,0,0,3, -->0,1,0, --0,0,2,1, --0,0,0,3,2, --0,0, --0,0,0,3,4, --
  - R13) 0,0,1,2, -->0,1,0, --0,1,0, --0,0,0, --0,0,1,2,3, --0,0,1,2,4, --
  - R14) 0,0,1,3, -->0,1,0, --0,1,0, --0,0,1,3,2, --0,0, --0,0,1,3,4, --
  - R15) 0,0,2,1, -->0,1,0, --
  - R16) 0,0,2,3, -->0,1,0, --0,0,2,1, --0,1,0, --0,0, --0,0,2,3,4, --
  - R17) 0,1,2,3, -->0,1,0, --0,1,0, --0,1,0, --0,0, --0,1,2,3,4, --
  - R18)
  - 0,0,0,0,0, -->0,0,0,0,0,0, --0,0,0,0,0,1, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --
  - 0,0,0,0,0,5, --
  - R19)
  - 0,0,0,0,1, -->0,1,0, --0,0,0,0,0, --0,0,0,0,1,2, --0,0,0,0,1,3, --0,0,0,0,1,4, --0,0,0,0,
  - 1,5, --
  - R20)
  - 0,0,0,0,2, -->0,1,0, --0,0,2,1, --0,0,0,0, --0,0,0,0,2,3, --0,0,0,0,2,4, --0,0,0,0,2,5, --

R21)

0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,--0,0,0,0,3,4,--0,0,0,0,3,5,--

R22) 0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,--0,0,0,0,4,5,--

R23)

0,0,0,1,2,-->0,1,0,--0,1,0,--0,0,0,0,--0,0,0,1,2,3,--0,0,0,1,2,4,--0,0,0,1,2,5,--

R24) 0,0,0,1,3,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,--0,0,0,1,3,4,--0,0,0,1,3,5,--

R25) 0,0,0,1,4,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,0,--0,0,0,1,4,5,--

R26) 0,0,0,2,3,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,--0,0,0,2,3,4,--0,0,0,2,3,5,--

R27) 0,0,0,2,4,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,0,--0,0,0,2,4,5,--

R28) 0,0,0,3,2,-->0,1,0,--0,0,2,1,--

R29) 0,0,0,3,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,0,--0,0,0,3,4,5,--

R30) 0,0,1,2,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,0,1,2,3,4,--0,0,1,2,3,5,--

R31) 0,0,1,2,4,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,--0,0,1,2,4,5,--

R32) 0,0,1,3,2,-->0,1,0,--0,1,0,--

R33) 0,0,1,3,4,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,0,--0,0,1,3,4,5,--

R34) 0,0,2,3,4,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,--0,0,2,3,4,5,--

R35) 0,1,2,3,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,--

R36)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R37)

0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--

R38)

0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,2,3,--0,0,0,0,0,2,4,--0,0,0,0,0,2,5,--0,0,0,0,0,2,6,--

R39)

0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,--0,0,0,0,0,3,4,--0,0,0,0,0,3,5,--0,0,0,0,0,3,6,--

R40)

0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,--0,0,0,0,0,4,5,--0,0,0,0,0,4,6,--

R41)

0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,--0,0,0,0,0,5,6,--

R42)

0,0,0,0,1,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,1,2,3,--0,0,0,0,1,2,4,--0,0,0,0,1,2,5,--0,0,0,0,1,2,6,--

R43)

0,0,0,0,1,3,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,0,--0,0,0,0,1,3,4,--0,0,0,0,1,3,5,--0,0,0,0,1,3,6,--

R44)

0,0,0,0,1,4,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,--0,0,0,0,1,4,5,--0,0,0,0,1,4,6,--

R45)

0,0,0,0,1,5,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,--0,0,0,0,1,5,6,--

R46)

0,0,0,0,2,3,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,0,--0,0,0,0,2,3,4,--0,0,0,0,2,3,5,--0,0,0,0,2,3,6,--

R47)

0,0,0,0,2,4,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,0,0,--0,0,0,0,2,4,5,--0,0,0,0,2,4,6,--

R48)

0,0,0,0,2,5,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,0,0,0,2,5,4,--0,0,--0,0,0,0,2,5,6,--

R49)

0,0,0,0,3,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,0,0,--0,0,0,0,3,4,5,--0,0,0,0,3,4,6,--

R50)

0,0,0,0,3,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,0,0,0,3,5,4,--0,0,--0,0,0,0,3,5,6,--

R51) 0,0,0,0,4,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--

R52)

0,0,0,0,4,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,0,--0,0,--0,0,0,0,4,5,6,--

R53)

0,0,0,1,2,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,1,2,3,4,--0,0,0,1,2,3,5,--0,0,0,1,2,3,6,--

R54)

0,0,0,1,2,4,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,0,--0,0,0,1,2,4,5,--0,0,0,1,2,4,6,--

R55)

0,0,0,1,2,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,0,1,2,5,4,--0,0,--0,0,0,1,2,5,6,--

R56)

0,0,0,1,3,4,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,0,0,--0,0,0,1,3,4,5,--0,0,0,1,3,4,6,--

R57)

0,0,0,1,3,5,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,0,0,1,3,5,4,--0,0,--0,0,0,1,3,5,6,--

R58) 0,0,0,1,4,3,-->0,1,0,--0,1,0,--0,0,1,3,2,--

R59)

0,0,0,1,4,5,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,1,0,--0,0,--0,0,0,1,4,5,6,--

R60)

0,0,0,2,3,4,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,0,--0,0,0,2,3,4,5,--0,0,0,2,3,4,6,--

R61)

0,0,0,2,3,5,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,0,2,3,5,4,--0,0,--0,0,0,2,3,5,6,--

R62) 0,0,0,2,4,3,-->0,1,0,--0,0,2,1,--0,1,0,--

R63)

0,0,0,2,4,5,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,1,0,--0,0,--0,0,0,2,4,5,6,--

R64)

0,0,0,3,4,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,1,0,--0,0,--0,0,0,3,4,5,6,--

R65)

0,0,1,2,3,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,0,1,2,3,4,5,--0,0,1,2,3,4,6,--

R66)

0,0,1,2,3,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,0,--0,0,1,2,3,5,6,  
--

R67) 0,0,1,2,4,3,-->0,1,0,--0,1,0,--0,1,0,--

R68)

0,0,1,2,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,0,--0,0,1,2,4,5,6,--

R69)

0,0,1,3,4,5,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,0,--0,0,1,3,4,5,6,--

R70)

0,0,2,3,4,5,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,2,3,4,5,6,--

R71) 0,1,2,3,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,6,--

R72)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R73)

0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,  
0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--

R74)

0,0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,0,2,3,--0,0,0,0,0,0,2,4,  
--0,0,0,0,0,0,2,5,--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,2,7,--

R75)

0,0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,--0,0,0,0,0,0,3,4,--0,0,0,  
0,0,0,3,5,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,7,--

R76)

0,0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,--0,0,0,0,0,0,  
4,5,--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,7,--

R77)

0,0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,  
--0,0,0,0,0,0,5,6,--0,0,0,0,0,0,5,7,--

R78)

0,0,0,0,0,0,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,  
0,0,0,6,5,--0,0,--0,0,0,0,0,6,7,--

R79)

0,0,0,0,0,1,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,1,2,3,--0,0,0,0,0,1,2,4,--  
0,0,0,0,0,1,2,5,--0,0,0,0,0,1,2,6,--0,0,0,0,0,1,2,7,--

R80)

0,0,0,0,0,1,3,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,0,0,--0,0,0,0,0,1,3,4,--0,0,0,0,  
0,1,3,5,--0,0,0,0,0,1,3,6,--0,0,0,0,0,1,3,7,--

R81)

0,0,0,0,0,1,4,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,--0,0,0,0,0,1,4,  
5,--0,0,0,0,0,1,4,6,--0,0,0,0,0,1,4,7,--

R82)

0,0,0,0,0,1,5,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,0,--  
0,0,0,0,0,1,5,6,--0,0,0,0,0,1,5,7,--

R83)

0,0,0,0,0,1,6,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,0,0,  
0,1,6,5,--0,0,--0,0,0,0,0,1,6,7,--

R84)

0,0,0,0,0,2,3,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,0,0,--0,0,0,0,0,2,3,4,--0,0,0,0,0,  
2,3,5,--0,0,0,0,0,2,3,6,--0,0,0,0,0,2,3,7,--

R85)

0,0,0,0,0,2,4,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,0,0,0,--0,0,0,0,0,2,4,5,  
--0,0,0,0,0,2,4,6,--0,0,0,0,0,2,4,7,--

R86)

0,0,0,0,0,2,5,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,0,0,0,2,5,4,--0,0,0,--0,  
0,0,0,0,2,5,6,--0,0,0,0,0,2,5,7,--

R87)

0,0,0,0,0,2,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,0,0,0,2,5,4,--0,0,0,0,0,  
2,6,5,--0,0,--0,0,0,0,0,2,6,7,--

R88)

0,0,0,0,0,3,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,0,0,0,--0,0,0,0,0,3,4,5,--  
0,0,0,0,0,3,4,6,--0,0,0,0,0,3,4,7,--

R89)

0,0,0,0,0,3,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,0,0,0,3,5,4,--0,0,0,--0,0,  
0,0,0,3,5,6,--0,0,0,0,0,3,5,7,--

R90)

0,0,0,0,0,3,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,0,0,0,3,5,4,--0,0,0,0,0,3,  
6,5,--0,0,--0,0,0,0,0,3,6,7,--

R91)

0,0,0,0,0,4,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,0,--0,0,0,--0,0,0,  
0,0,4,5,6,--0,0,0,0,0,4,5,7,--

R92)

0,0,0,0,0,4,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,0,--0,0,0,0,0,4,6,  
5,--0,0,--0,0,0,0,0,4,6,7,--

R93) 0,0,0,0,0,5,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--

R94)

0,0,0,0,0,5,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,1,0,  
--0,0,--0,0,0,0,0,5,6,7,--

R95)

0,0,0,0,1,2,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,1,2,3,4,--0,0,0,0,1,2,  
3,5,--0,0,0,0,1,2,3,6,--0,0,0,0,1,2,3,7,--

R96)

0,0,0,0,1,2,4,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,0,0,--0,0,0,0,1,2,4,5,--  
0,0,0,0,1,2,4,6,--0,0,0,0,1,2,4,7,--

R97)

0,0,0,0,1,2,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,0,1,2,5,4,--0,0,0,--0,0,  
0,0,1,2,5,6,--0,0,0,0,1,2,5,7,--

R98)

0,0,0,0,1,2,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,0,1,2,5,4,--0,0,0,0,1,2,  
6,5,--0,0,--0,0,0,0,1,2,6,7,--

R99)

0,0,0,0,1,3,4,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,0,0,0,--0,0,0,0,1,3,4,5,--0,  
0,0,0,1,3,4,6,--0,0,0,0,1,3,4,7,--

R100)

0,0,0,0,1,3,5,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,0,0,1,3,5,4,--0,0,0,--0,0,0,  
0,1,3,5,6,--0,0,0,0,1,3,5,7,--

R101)

0,0,0,0,1,3,6,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,0,0,1,3,5,4,--0,0,0,0,1,3,6,  
5,--0,0,--0,0,0,0,1,3,6,7,--

R102)

0,0,0,0,1,4,5,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,1,0,--0,0,0,--0,0,0,0,  
1,4,5,6,--0,0,0,0,1,4,5,7,--

R103)

0,0,0,0,1,4,6,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,1,0,--0,0,0,0,1,4,6,5,  
--0,0,--0,0,0,0,1,4,6,7,--

R104) 0,0,0,0,1,5,4,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--

R105)

0,0,0,0,1,5,6,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,1,0,--  
0,0,--0,0,0,0,1,5,6,7,--

R106)

0,0,0,0,2,3,4,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,0,2,3,4,5,--0,0,  
0,0,2,3,4,6,--0,0,0,0,2,3,4,7,--

R107)

0,0,0,0,2,3,5,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,0,2,3,5,4,--0,0,0,--0,0,0,0,  
2,3,5,6,--0,0,0,0,2,3,5,7,--

R108)

0,0,0,0,2,3,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,0,2,3,5,4,--0,0,0,0,2,3,6,5,  
--0,0,--0,0,0,0,2,3,6,7,--

R109)

0,0,0,0,2,4,5,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,1,0,--0,0,0,--0,0,0,0,2,  
4,5,6,--0,0,0,0,2,4,5,7,--

R110)

0,0,0,0,2,4,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,1,0,--0,0,0,0,2,4,6,5,--  
0,0,--0,0,0,0,2,4,6,7,--

R111) 0,0,0,0,2,5,4,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--

R112)

0,0,0,0,2,5,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,0,0,0,2,5,4,--0,1,0,--0,  
0,--0,0,0,0,2,5,6,7,--

R113)

0,0,0,0,3,4,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,1,0,--0,0,0,--0,0,0,0,3,4,  
5,6,--0,0,0,0,3,4,5,7,--

R114)

0,0,0,0,3,4,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,1,0,--0,0,0,0,3,4,6,5,--0,  
0,--0,0,0,0,3,4,6,7,--

R115) 0,0,0,0,3,5,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--

R116)

0,0,0,0,3,5,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,0,0,0,3,5,4,--0,1,0,--0,0,  
--0,0,0,0,3,5,6,7,--

R117)

0,0,0,0,4,5,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,0,--0,1,0,--0,0,--  
0,0,0,0,4,5,6,7,--

R118)

0,0,0,1,2,3,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,1,2,3,4,5,--0,0,0,  
1,2,3,4,6,--0,0,0,1,2,3,4,7,--

R119)

0,0,0,1,2,3,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,0,0,--0,0,0,1,2,  
3,5,6,--0,0,0,1,2,3,5,7,--

R120)

0,0,0,1,2,3,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,0,0,1,2,3,6,5,--  
0,0,--0,0,0,1,2,3,6,7,--

R121)

0,0,0,1,2,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,0,0,--0,0,0,1,2,4,5,6,--0,0,0,1,2,4,5,7,--

R122)

0,0,0,1,2,4,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,0,0,1,2,4,6,5,--0,0,--0,0,0,1,2,4,6,7,--

R123) 0,0,0,1,2,5,4,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--

R124)

0,0,0,1,2,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,0,1,2,5,4,--0,1,0,--0,0,--0,0,0,1,2,5,6,7,--

R125)

0,0,0,1,3,4,5,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,0,0,--0,0,0,1,3,4,5,6,--0,0,0,1,3,4,5,7,--

R126)

0,0,0,1,3,4,6,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,0,0,1,3,4,6,5,--0,0,--0,0,0,1,3,4,6,7,--

R127) 0,0,0,1,3,5,4,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--

R128)

0,0,0,1,3,5,6,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,0,0,1,3,5,4,--0,1,0,--0,0,--0,0,0,1,3,5,6,7,--

R129)

0,0,0,1,4,5,6,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,1,0,--0,1,0,--0,0,--0,0,0,1,4,5,6,7,--

R130)

0,0,0,2,3,4,5,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,0,0,2,3,4,5,6,--0,0,0,2,3,4,5,7,--

R131)

0,0,0,2,3,4,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,0,2,3,4,6,5,--0,0,--0,0,0,2,3,4,6,7,--

R132) 0,0,0,2,3,5,4,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--

R133)

0,0,0,2,3,5,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,0,2,3,5,4,--0,1,0,--0,0,--0,0,0,2,3,5,6,7,--

R134)

0,0,0,2,4,5,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,1,0,--0,1,0,--0,0,--0,0,0,2,4,5,6,7,--

R135)

0,0,0,3,4,5,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,0,3,4,5,6,7,--

R136)

0,0,1,2,3,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,0,1,2,3,4,5,6,--0,0,1,2,3,4,5,7,--

R137)

0,0,1,2,3,4,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,6,5,--0,0,--0,0,1,2,3,4,6,7,--

R138) 0,0,1,2,3,5,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--

R139)

0,0,1,2,3,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,1,0,--0,0,--0,0,1,2,3,5,6,7,--

R140)

0,0,1,2,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,1,0,--0,0,--0,0,1,  
2,4,5,6,7,--

R141)

0,0,1,3,4,5,6,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,1,3,  
4,5,6,7,--

R142)

0,0,2,3,4,5,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,2,3,4,  
5,6,7,--

R143)

0,1,2,3,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,  
6,7,--

R144)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R145)

0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,1,3,  
--0,0,0,0,0,0,0,1,4,--0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,1,7,--0,  
,0,0,0,0,0,0,1,8,--

R146)

0,0,0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,3,--0,0,0,0,0,  
0,0,2,4,--0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,  
,2,8,--

R147)

0,0,0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,3,4,--  
0,0,0,0,0,0,0,3,5,--0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,3,8,--

R148)

0,0,0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,--0,0,0,0,  
0,0,0,4,5,--0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,4,8,--

R149)

0,0,0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,  
0,0,--0,0,0,0,0,0,5,6,--0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,5,8,--

R150)

0,0,0,0,0,0,0,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,  
0,0,0,0,6,5,--0,0,0,--0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,6,8,--

R151)

0,0,0,0,0,0,0,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,  
0,0,0,0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,--0,0,0,0,0,0,7,8,--

R152)

0,0,0,0,0,0,1,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,2,3,--0,0,0,0,0,0,  
1,2,4,--0,0,0,0,0,0,1,2,5,--0,0,0,0,0,0,1,2,6,--0,0,0,0,0,0,1,2,7,--0,0,0,0,0,0,1,2,  
,8,--

R153)

0,0,0,0,0,0,1,3,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,3,4,--0,  
0,0,0,0,0,1,3,5,--0,0,0,0,0,0,1,3,6,--0,0,0,0,0,0,1,3,7,--0,0,0,0,0,0,1,3,8,--

R154)

0,0,0,0,0,0,1,4,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,0,--0,0,0,0,0,  
0,1,4,5,--0,0,0,0,0,0,1,4,6,--0,0,0,0,0,0,1,4,7,--0,0,0,0,0,0,1,4,8,--

R155)

0,0,0,0,0,0,1,5,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,0,



0,--0,0,0,0,0,0,1,5,6,--0,0,0,0,0,0,1,5,7,--0,0,0,0,0,0,1,5,8,--  
R156)  
0,0,0,0,0,0,1,6,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,0,  
0,0,1,6,5,--0,0,0,--0,0,0,0,0,1,6,7,--0,0,0,0,0,1,6,8,--  
R157)  
0,0,0,0,0,0,1,7,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,0,  
0,0,1,6,5,--0,0,0,0,0,1,7,6,--0,0,--0,0,0,0,0,1,7,8,--  
R158)  
0,0,0,0,0,0,2,3,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,2,3,4,--0,0,  
0,0,0,0,2,3,5,--0,0,0,0,0,2,3,6,--0,0,0,0,0,2,3,7,--0,0,0,0,0,2,3,8,--  
R159)  
0,0,0,0,0,0,2,4,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,0,0,0,0,--0,0,0,0,0,0,  
2,4,5,--0,0,0,0,0,2,4,6,--0,0,0,0,0,2,4,7,--0,0,0,0,0,2,4,8,--  
R160)  
0,0,0,0,0,0,2,5,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,0,0,0,2,5,4,--0,0,0,0,  
--0,0,0,0,0,2,5,6,--0,0,0,0,0,2,5,7,--0,0,0,0,0,2,5,8,--  
R161)  
0,0,0,0,0,0,2,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,0,0,0,2,5,4,--0,0,0,0,  
0,2,6,5,--0,0,0,--0,0,0,0,0,2,6,7,--0,0,0,0,0,2,6,8,--  
R162)  
0,0,0,0,0,0,2,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,0,0,0,2,5,4,--0,0,0,0,  
0,2,6,5,--0,0,0,0,0,2,7,6,--0,0,--0,0,0,0,0,2,7,8,--  
R163)  
0,0,0,0,0,0,3,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,0,0,0,0,--0,0,0,0,0,0,3,  
4,5,--0,0,0,0,0,3,4,6,--0,0,0,0,0,3,4,7,--0,0,0,0,0,3,4,8,--  
R164)  
0,0,0,0,0,0,3,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,0,0,0,3,5,4,--0,0,0,0,--  
0,0,0,0,0,3,5,6,--0,0,0,0,0,3,5,7,--0,0,0,0,0,3,5,8,--  
R165)  
0,0,0,0,0,0,3,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,0,0,0,3,5,4,--0,0,0,0,0,  
3,6,5,--0,0,0,--0,0,0,0,0,3,6,7,--0,0,0,0,0,3,6,8,--  
R166)  
0,0,0,0,0,0,3,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,0,0,0,3,5,4,--0,0,0,0,0,  
3,6,5,--0,0,0,0,0,3,7,6,--0,0,--0,0,0,0,0,3,7,8,--  
R167)  
0,0,0,0,0,0,4,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,0,--0,0,0,0,--0,  
0,0,0,0,0,4,5,6,--0,0,0,0,0,4,5,7,--0,0,0,0,0,4,5,8,--  
R168)  
0,0,0,0,0,0,4,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,0,--0,0,0,0,0,4,  
6,5,--0,0,0,--0,0,0,0,0,4,6,7,--0,0,0,0,0,4,6,8,--  
R169)  
0,0,0,0,0,0,4,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,0,--0,0,0,0,0,4,  
6,5,--0,0,0,0,0,4,7,6,--0,0,--0,0,0,0,0,4,7,8,--  
R170)  
0,0,0,0,0,0,5,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,1,  
0,--0,0,0,--0,0,0,0,0,5,6,7,--0,0,0,0,0,5,6,8,--  
R171)  
0,0,0,0,0,0,5,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,1,  
0,--0,0,0,0,0,5,7,6,--0,0,--0,0,0,0,0,5,7,8,--  
R172)

0,0,0,0,0,0,6,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--  
R173)  
0,0,0,0,0,0,6,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,  
0,0,0,0,6,5,--0,1,0,--0,0,--0,0,0,0,0,6,7,8,--  
R174)  
0,0,0,0,0,1,2,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,1,2,3,4,--0,0,0,  
0,0,1,2,3,5,--0,0,0,0,0,1,2,3,6,--0,0,0,0,0,1,2,3,7,--0,0,0,0,0,1,2,3,8,--  
R175)  
0,0,0,0,0,1,2,4,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,0,0,0,--0,0,0,0,0,1,2,  
4,5,--0,0,0,0,0,1,2,4,6,--0,0,0,0,0,1,2,4,7,--0,0,0,0,0,1,2,4,8,--  
R176)  
0,0,0,0,0,1,2,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,0,1,2,5,4,--0,0,0,0,--  
0,0,0,0,0,1,2,5,6,--0,0,0,0,0,1,2,5,7,--0,0,0,0,0,1,2,5,8,--  
R177)  
0,0,0,0,0,1,2,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,0,1,2,5,4,--0,0,0,0,1,  
2,6,5,--0,0,0,--0,0,0,0,0,1,2,6,7,--0,0,0,0,0,1,2,6,8,--  
R178)  
0,0,0,0,0,1,2,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,0,1,2,5,4,--0,0,0,0,1,  
2,6,5,--0,0,0,0,0,1,2,7,6,--0,0,--0,0,0,0,0,1,2,7,8,--  
R179)  
0,0,0,0,0,1,3,4,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,0,0,0,0,--0,0,0,0,0,1,3,4,  
5,--0,0,0,0,0,1,3,4,6,--0,0,0,0,0,1,3,4,7,--0,0,0,0,0,1,3,4,8,--  
R180)  
0,0,0,0,0,1,3,5,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,0,0,1,3,5,4,--0,0,0,0,--0,  
0,0,0,0,1,3,5,6,--0,0,0,0,0,1,3,5,7,--0,0,0,0,0,1,3,5,8,--  
R181)  
0,0,0,0,0,1,3,6,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,0,0,1,3,5,4,--0,0,0,0,1,3,  
6,5,--0,0,0,--0,0,0,0,0,1,3,6,7,--0,0,0,0,0,1,3,6,8,--  
R182)  
0,0,0,0,0,1,3,7,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,0,0,1,3,5,4,--0,0,0,0,1,3,  
6,5,--0,0,0,0,0,1,3,7,6,--0,0,--0,0,0,0,0,1,3,7,8,--  
R183)  
0,0,0,0,0,1,4,5,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,1,0,--0,0,0,0,--0,0,  
0,0,0,1,4,5,6,--0,0,0,0,0,1,4,5,7,--0,0,0,0,0,1,4,5,8,--  
R184)  
0,0,0,0,0,1,4,6,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,1,0,--0,0,0,0,1,4,6,  
5,--0,0,0,--0,0,0,0,0,1,4,6,7,--0,0,0,0,0,1,4,6,8,--  
R185)  
0,0,0,0,0,1,4,7,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,1,0,--0,0,0,0,1,4,6,  
5,--0,0,0,0,0,1,4,7,6,--0,0,--0,0,0,0,0,1,4,7,8,--  
R186)  
0,0,0,0,0,1,5,6,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,1,0,  
--0,0,0,--0,0,0,0,0,1,5,6,7,--0,0,0,0,0,1,5,6,8,--  
R187)  
0,0,0,0,0,1,5,7,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,1,0,  
--0,0,0,0,0,1,5,7,6,--0,0,--0,0,0,0,0,1,5,7,8,--  
R188) 0,0,0,0,0,1,6,5,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--  
R189)  
0,0,0,0,0,1,6,7,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,0,  
0,0,1,6,5,--0,1,0,--0,0,--0,0,0,0,0,1,6,7,8,--

R190)

0,0,0,0,0,2,3,4,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,0,2,3,4,5,  
--0,0,0,0,0,2,3,4,6,--0,0,0,0,0,2,3,4,7,--0,0,0,0,0,2,3,4,8,--

R191)

0,0,0,0,0,2,3,5,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,0,2,3,5,4,--0,0,0,0,--0,0,  
0,0,0,2,3,5,6,--0,0,0,0,0,2,3,5,7,--0,0,0,0,0,2,3,5,8,--

R192)

0,0,0,0,0,2,3,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,0,2,3,5,4,--0,0,0,0,2,3,6,  
5,--0,0,0,0,--0,0,0,0,0,2,3,6,7,--0,0,0,0,0,2,3,6,8,--

R193)

0,0,0,0,0,2,3,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,0,2,3,5,4,--0,0,0,0,2,3,6,  
5,--0,0,0,0,0,2,3,7,6,--0,0,0,--0,0,0,0,0,2,3,7,8,--

R194)

0,0,0,0,0,2,4,5,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,1,0,--0,0,0,0,--0,0,0,  
0,0,2,4,5,6,--0,0,0,0,0,2,4,5,7,--0,0,0,0,0,2,4,5,8,--

R195)

0,0,0,0,0,2,4,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,1,0,--0,0,0,0,2,4,6,5,  
--0,0,0,0,--0,0,0,0,0,2,4,6,7,--0,0,0,0,0,2,4,6,8,--

R196)

0,0,0,0,0,2,4,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,1,0,--0,0,0,0,2,4,6,5,  
--0,0,0,0,0,2,4,7,6,--0,0,0,--0,0,0,0,0,2,4,7,8,--

R197)

0,0,0,0,0,2,5,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,0,0,0,2,5,4,--0,1,0,--  
0,0,0,0,--0,0,0,0,0,2,5,6,7,--0,0,0,0,0,2,5,6,8,--

R198)

0,0,0,0,0,2,5,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,0,0,0,2,5,4,--0,1,0,--  
0,0,0,0,0,2,5,7,6,--0,0,0,--0,0,0,0,0,2,5,7,8,--

R199) 0,0,0,0,0,2,6,5,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,0,0,0,2,5,4,--

R200)

0,0,0,0,0,2,6,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,0,0,0,2,5,4,--0,0,0,0,  
0,2,6,5,--0,1,0,--0,0,0,--0,0,0,0,0,2,6,7,8,--

R201)

0,0,0,0,0,3,4,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,0,  
0,3,4,5,6,--0,0,0,0,0,3,4,5,7,--0,0,0,0,0,3,4,5,8,--

R202)

0,0,0,0,0,3,4,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,1,0,--0,0,0,0,3,4,6,5,--  
0,0,0,0,--0,0,0,0,0,3,4,6,7,--0,0,0,0,0,3,4,6,8,--

R203)

0,0,0,0,0,3,4,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,1,0,--0,0,0,0,3,4,6,5,--  
0,0,0,0,0,3,4,7,6,--0,0,0,--0,0,0,0,0,3,4,7,8,--

R204)

0,0,0,0,0,3,5,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,0,0,0,3,5,4,--0,1,0,--0,  
0,0,--0,0,0,0,0,3,5,6,7,--0,0,0,0,0,3,5,6,8,--

R205)

0,0,0,0,0,3,5,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,0,0,0,3,5,4,--0,1,0,--0,  
0,0,0,0,3,5,7,6,--0,0,0,--0,0,0,0,0,3,5,7,8,--

R206) 0,0,0,0,0,3,6,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,0,0,0,3,5,4,--

R207)

0,0,0,0,0,3,6,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,0,0,0,3,5,4,--0,0,0,0,0,  
3,6,5,--0,1,0,--0,0,0,--0,0,0,0,0,3,6,7,8,--

R208)

0,0,0,0,0,4,5,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,0,--0,1,0,--0,0,  
0,--0,0,0,0,0,4,5,6,7,--0,0,0,0,0,4,5,6,8,--

R209)

0,0,0,0,0,4,5,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,0,--0,1,0,--0,0,  
0,0,0,4,5,7,6,--0,0,--0,0,0,0,0,4,5,7,8,--

R210) 0,0,0,0,0,4,6,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,0,--

R211)

0,0,0,0,0,4,6,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,0,--0,0,0,0,0,4,  
6,5,--0,1,0,--0,0,--0,0,0,0,0,4,6,7,8,--

R212)

0,0,0,0,0,5,6,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,1,  
0,--0,1,0,--0,0,--0,0,0,0,0,5,6,7,8,--

R213)

0,0,0,0,1,2,3,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,1,2,3,4,5,--  
0,0,0,0,1,2,3,4,6,--0,0,0,0,1,2,3,4,7,--0,0,0,0,1,2,3,4,8,--

R214)

0,0,0,0,1,2,3,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,0,0,0,--0,0,0,  
0,1,2,3,5,6,--0,0,0,0,1,2,3,5,7,--0,0,0,0,1,2,3,5,8,--

R215)

0,0,0,0,1,2,3,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,0,0,1,2,3,6,5,  
--0,0,0,--0,0,0,0,1,2,3,6,7,--0,0,0,0,1,2,3,6,8,--

R216)

0,0,0,0,1,2,3,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,0,0,1,2,3,6,5,  
--0,0,0,0,1,2,3,7,6,--0,0,--0,0,0,0,1,2,3,7,8,--

R217)

0,0,0,0,1,2,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,0,0,0,--0,0,0,0,  
1,2,4,5,6,--0,0,0,0,1,2,4,5,7,--0,0,0,0,1,2,4,5,8,--

R218)

0,0,0,0,1,2,4,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,0,0,1,2,4,6,5,--  
0,0,0,--0,0,0,0,1,2,4,6,7,--0,0,0,0,1,2,4,6,8,--

R219)

0,0,0,0,1,2,4,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,0,0,1,2,4,6,5,--  
0,0,0,0,1,2,4,7,6,--0,0,--0,0,0,0,1,2,4,7,8,--

R220)

0,0,0,0,1,2,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,0,1,2,5,4,--0,1,0,--0,  
0,0,--0,0,0,0,1,2,5,6,7,--0,0,0,0,1,2,5,6,8,--

R221)

0,0,0,0,1,2,5,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,0,1,2,5,4,--0,1,0,--0,  
0,0,0,1,2,5,7,6,--0,0,--0,0,0,0,1,2,5,7,8,--

R222) 0,0,0,0,1,2,6,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,0,1,2,5,4,--

R223)

0,0,0,0,1,2,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,0,1,2,5,4,--0,0,0,0,1,  
2,6,5,--0,1,0,--0,0,--0,0,0,0,1,2,6,7,8,--

R224)

0,0,0,0,1,3,4,5,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,0,1,  
3,4,5,6,--0,0,0,0,1,3,4,5,7,--0,0,0,0,1,3,4,5,8,--

R225)

0,0,0,0,1,3,4,6,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,0,0,1,3,4,6,5,--0,  
0,0,--0,0,0,0,1,3,4,6,7,--0,0,0,0,1,3,4,6,8,--

R226)

0,0,0,0,1,3,4,7,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,0,0,1,3,4,6,5,--0,  
0,0,0,1,3,4,7,6,--0,0,--0,0,0,0,1,3,4,7,8,--

R227)

0,0,0,0,1,3,5,6,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,0,0,1,3,5,4,--0,1,0,--0,0,  
0,--0,0,0,0,1,3,5,6,7,--0,0,0,0,1,3,5,6,8,--

R228)

0,0,0,0,1,3,5,7,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,0,0,1,3,5,4,--0,1,0,--0,0,  
0,0,1,3,5,7,6,--0,0,--0,0,0,0,1,3,5,7,8,--

R229) 0,0,0,0,1,3,6,5,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,0,0,1,3,5,4,--

R230)

0,0,0,0,1,3,6,7,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,0,0,1,3,5,4,--0,0,0,0,1,3,  
6,5,--0,1,0,--0,0,--0,0,0,0,1,3,6,7,8,--

R231)

0,0,0,0,1,4,5,6,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,1,0,--0,1,0,--0,0,0,  
--0,0,0,0,1,4,5,6,7,--0,0,0,0,1,4,5,6,8,--

R232)

0,0,0,0,1,4,5,7,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,1,0,--0,1,0,--0,0,0,  
0,1,4,5,7,6,--0,0,--0,0,0,0,1,4,5,7,8,--

R233) 0,0,0,0,1,4,6,5,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,1,0,--

R234)

0,0,0,0,1,4,6,7,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,1,0,--0,0,0,0,1,4,6,  
5,--0,1,0,--0,0,--0,0,0,0,1,4,6,7,8,--

R235)

0,0,0,0,1,5,6,7,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,1,0,  
--0,1,0,--0,0,--0,0,0,0,1,5,6,7,8,--

R236)

0,0,0,0,2,3,4,5,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,0,2,3,  
4,5,6,--0,0,0,0,2,3,4,5,7,--0,0,0,0,2,3,4,5,8,--

R237)

0,0,0,0,2,3,4,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,2,3,4,6,5,--0,0,  
0,--0,0,0,0,2,3,4,6,7,--0,0,0,0,2,3,4,6,8,--

R238)

0,0,0,0,2,3,4,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,2,3,4,6,5,--0,0,  
0,0,2,3,4,7,6,--0,0,--0,0,0,0,2,3,4,7,8,--

R239)

0,0,0,0,2,3,5,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,0,2,3,5,4,--0,1,0,--0,0,0,  
--0,0,0,0,2,3,5,6,7,--0,0,0,0,2,3,5,6,8,--

R240)

0,0,0,0,2,3,5,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,0,2,3,5,4,--0,1,0,--0,0,0,  
0,2,3,5,7,6,--0,0,--0,0,0,0,2,3,5,7,8,--

R241) 0,0,0,0,2,3,6,5,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,0,2,3,5,4,--

R242)

0,0,0,0,2,3,6,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,0,2,3,5,4,--0,0,0,0,2,3,6,  
5,--0,1,0,--0,0,--0,0,0,0,2,3,6,7,8,--

R243)

0,0,0,0,2,4,5,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,1,0,--0,1,0,--0,0,0,--  
0,0,0,0,2,4,5,6,7,--0,0,0,0,2,4,5,6,8,--

R244)

0,0,0,0,2,4,5,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,1,0,--0,1,0,--0,0,0,0,

2,4,5,7,6,--0,0,--0,0,0,0,2,4,5,7,8,--  
R245) 0,0,0,0,2,4,6,5,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,1,0,--  
R246)  
0,0,0,0,2,4,6,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,1,0,--0,0,0,0,2,4,6,5,  
--0,1,0,--0,0,--0,0,0,0,2,4,6,7,8,--  
R247)  
0,0,0,0,2,5,6,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,0,0,0,2,5,4,--0,1,0,--  
0,1,0,--0,0,--0,0,0,0,2,5,6,7,8,--  
R248)  
0,0,0,0,3,4,5,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,  
0,0,0,3,4,5,6,7,--0,0,0,0,3,4,5,6,8,--  
R249)  
0,0,0,0,3,4,5,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,3,  
4,5,7,6,--0,0,--0,0,0,0,3,4,5,7,8,--  
R250) 0,0,0,0,3,4,6,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,1,0,--  
R251)  
0,0,0,0,3,4,6,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,1,0,--0,0,0,0,3,4,6,5,--  
0,1,0,--0,0,--0,0,0,0,3,4,6,7,8,--  
R252)  
0,0,0,0,3,5,6,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,0,0,0,3,5,4,--0,1,0,--0,  
1,0,--0,0,--0,0,0,0,3,5,6,7,8,--  
R253)  
0,0,0,0,4,5,6,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,0,--0,1,0,--0,1,  
0,--0,0,--0,0,0,0,4,5,6,7,8,--  
R254)  
0,0,0,1,2,3,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,1,2,3,4,  
5,6,--0,0,0,1,2,3,4,5,7,--0,0,0,1,2,3,4,5,8,--  
R255)  
0,0,0,1,2,3,4,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,6,5,--0,0,0,  
--0,0,0,1,2,3,4,6,7,--0,0,0,1,2,3,4,6,8,--  
R256)  
0,0,0,1,2,3,4,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,6,5,--0,0,0,  
1,2,3,4,7,6,--0,0,--0,0,0,1,2,3,4,7,8,--  
R257)  
0,0,0,1,2,3,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,1,0,--0,0,0,--  
0,0,0,1,2,3,5,6,7,--0,0,0,1,2,3,5,6,8,--  
R258)  
0,0,0,1,2,3,5,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,1,0,--0,0,0,1,  
2,3,5,7,6,--0,0,--0,0,0,1,2,3,5,7,8,--  
R259) 0,0,0,1,2,3,6,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--  
R260)  
0,0,0,1,2,3,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,0,0,1,2,3,6,5,  
--0,1,0,--0,0,--0,0,0,1,2,3,6,7,8,--  
R261)  
0,0,0,1,2,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,1,0,--0,0,0,--0,  
0,0,1,2,4,5,6,7,--0,0,0,1,2,4,5,6,8,--  
R262)  
0,0,0,1,2,4,5,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,1,0,--0,0,0,1,2,  
4,5,7,6,--0,0,--0,0,0,1,2,4,5,7,8,--  
R263) 0,0,0,1,2,4,6,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--

R264)

0,0,0,1,2,4,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,0,0,1,2,4,6,5,--  
0,1,0,--0,0,--0,0,0,1,2,4,6,7,8,--

R265)

0,0,0,1,2,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,0,1,2,5,4,--0,1,0,--0,  
1,0,--0,0,--0,0,0,1,2,5,6,7,8,--

R266)

0,0,0,1,3,4,5,6,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,0,  
0,1,3,4,5,6,7,--0,0,0,1,3,4,5,6,8,--

R267)

0,0,0,1,3,4,5,7,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,1,0,--0,0,0,1,3,4,  
5,7,6,--0,0,--0,0,0,1,3,4,5,7,8,--

R268) 0,0,0,1,3,4,6,5,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--

R269)

0,0,0,1,3,4,6,7,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,0,0,1,3,4,6,5,--0,  
1,0,--0,0,--0,0,0,1,3,4,6,7,8,--

R270)

0,0,0,1,3,5,6,7,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,0,0,1,3,5,4,--0,1,0,--0,1,  
0,--0,0,--0,0,0,1,3,5,6,7,8,--

R271)

0,0,0,1,4,5,6,7,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,1,0,--0,1,0,--0,1,0,  
--0,0,--0,0,0,1,4,5,6,7,8,--

R272)

0,0,0,2,3,4,5,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,0,0,  
2,3,4,5,6,7,--0,0,0,2,3,4,5,6,8,--

R273)

0,0,0,2,3,4,5,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,2,3,4,5,  
7,6,--0,0,--0,0,0,2,3,4,5,7,8,--

R274) 0,0,0,2,3,4,6,5,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--

R275)

0,0,0,2,3,4,6,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,0,2,3,4,6,5,--0,1,  
0,--0,0,--0,0,0,2,3,4,6,7,8,--

R276)

0,0,0,2,3,5,6,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,0,2,3,5,4,--0,1,0,--0,1,0,  
--0,0,--0,0,0,2,3,5,6,7,8,--

R277)

0,0,0,2,4,5,6,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,1,0,--0,1,0,--0,1,0,--  
0,0,--0,0,0,2,4,5,6,7,8,--

R278)

0,0,0,3,4,5,6,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,  
0,--0,0,0,3,4,5,6,7,8,--

R279)

0,0,1,2,3,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,0,1,2,  
3,4,5,6,7,--0,0,1,2,3,4,5,6,8,--

R280)

0,0,1,2,3,4,5,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,5,7,  
6,--0,0,--0,0,1,2,3,4,5,7,8,--

R281) 0,0,1,2,3,4,6,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--

R282)

0,0,1,2,3,4,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,6,5,--0,1,0,

--0,0,--0,0,1,2,3,4,6,7,8,--  
R283)  
0,0,1,2,3,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,1,0,--0,1,0,--  
0,0,--0,0,1,2,3,5,6,7,8,--  
R284)  
0,0,1,2,4,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,1,0,--0,1,0,--0,  
0,--0,0,1,2,4,5,6,7,8,--  
R285)  
0,0,1,3,4,5,6,7,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,  
--0,0,1,3,4,5,6,7,8,--  
R286)  
0,0,2,3,4,5,6,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--  
0,0,2,3,4,5,6,7,8,--  
R287)  
0,1,2,3,4,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,  
1,2,3,4,5,6,7,8,--  
R288)  
0,0,0,0,0,0,0,0,0,-->0,  
2,--0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
0,0,6,--0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,9,--  
R289)  
0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,  
0,0,1,3,--0,0,0,0,0,0,0,0,0,1,4,--0,0,0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,0,0,1,6,--0,0,0,0,  
0,0,0,0,1,7,--0,0,0,0,0,0,0,0,0,1,8,--0,0,0,0,0,0,0,0,0,1,9,--  
R290)  
0,0,0,0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,2,3,--0,0,  
0,0,0,0,0,0,2,4,--0,0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,0,2,7,--  
-0,0,0,0,0,0,0,0,2,8,--0,0,0,0,0,0,0,0,2,9,--  
R291)  
0,0,0,0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,  
3,4,--0,0,0,0,0,0,0,0,3,5,--0,0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,  
0,0,3,8,--0,0,0,0,0,0,0,0,3,9,--  
R292)  
0,0,0,0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,--0,0,  
0,0,0,0,0,0,4,5,--0,0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,0,4,8,--  
-0,0,0,0,0,0,0,0,4,9,--  
R293)  
0,0,0,0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,  
0,0,0,0,--0,0,0,0,0,0,0,0,5,6,--0,0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,0,5,8,--0,0,0,0,  
0,0,0,0,5,9,--  
R294)  
0,0,0,0,0,0,0,0,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,  
0,0,0,0,0,6,5,--0,0,0,0,--0,0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,  
0,6,9,--  
R295)  
0,0,0,0,0,0,0,0,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,  
0,0,0,0,0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,0,--0,0,0,0,0,0,0,7,8,--0,0,0,0,0,0,0,0,7,  
9,--  
R296)  
0,0,0,0,0,0,0,0,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,



0,0,0,0,0,6,5,--0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,8,7,--0,0,--0,0,0,0,0,0,0,8,9  
,--

R297)

0,0,0,0,0,0,1,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,2,3,--0,0,0,  
0,0,0,0,1,2,4,--0,0,0,0,0,0,1,2,5,--0,0,0,0,0,0,1,2,6,--0,0,0,0,0,0,1,2,7,--0  
,0,0,0,0,0,1,2,8,--0,0,0,0,0,0,1,2,9,--

R298)

0,0,0,0,0,0,1,3,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,3,  
4,--0,0,0,0,0,0,1,3,5,--0,0,0,0,0,0,1,3,6,--0,0,0,0,0,0,1,3,7,--0,0,0,0,0,0,0  
,1,3,8,--0,0,0,0,0,0,1,3,9,--

R299)

0,0,0,0,0,0,1,4,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,0,0,--0,0,0,  
0,0,0,0,1,4,5,--0,0,0,0,0,0,1,4,6,--0,0,0,0,0,0,1,4,7,--0,0,0,0,0,0,1,4,8,--0  
,0,0,0,0,0,1,4,9,--

R300)

0,0,0,0,0,0,1,5,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,  
0,0,0,--0,0,0,0,0,0,1,5,6,--0,0,0,0,0,0,1,5,7,--0,0,0,0,0,0,1,5,8,--0,0,0,0,0  
,0,0,1,5,9,--

R301)

0,0,0,0,0,0,1,6,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,  
0,0,0,1,6,5,--0,0,0,0,--0,0,0,0,0,0,1,6,7,--0,0,0,0,0,0,1,6,8,--0,0,0,0,0,0,1  
,6,9,--

R302)

0,0,0,0,0,0,1,7,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,  
0,0,0,1,6,5,--0,0,0,0,0,0,1,7,6,--0,0,0,--0,0,0,0,0,0,1,7,8,--0,0,0,0,0,0,1,7,9  
,--

R303)

0,0,0,0,0,0,1,8,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,  
0,0,0,1,6,5,--0,0,0,0,0,0,1,7,6,--0,0,0,0,0,0,1,8,7,--0,0,--0,0,0,0,0,0,1,8,9,-  
-

R304)

0,0,0,0,0,0,2,3,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,2,3,4,  
--0,0,0,0,0,0,2,3,5,--0,0,0,0,0,0,2,3,6,--0,0,0,0,0,0,2,3,7,--0,0,0,0,0,0,2  
,3,8,--0,0,0,0,0,0,2,3,9,--

R305)

0,0,0,0,0,0,2,4,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,0,0,0,0,0,--0,0,0,0,  
0,0,0,2,4,5,--0,0,0,0,0,0,2,4,6,--0,0,0,0,0,0,2,4,7,--0,0,0,0,0,0,2,4,8,--0,0  
,0,0,0,0,2,4,9,--

R306)

0,0,0,0,0,0,2,5,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,0,0,0,2,5,4,--0,0,0,  
0,0,--0,0,0,0,0,0,2,5,6,--0,0,0,0,0,0,2,5,7,--0,0,0,0,0,0,2,5,8,--0,0,0,0,0,0  
,0,2,5,9,--

R307)

0,0,0,0,0,0,2,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,0,0,0,2,5,4,--0,0,0,  
0,0,2,6,5,--0,0,0,0,--0,0,0,0,0,0,2,6,7,--0,0,0,0,0,0,2,6,8,--0,0,0,0,0,0,2,6  
,9,--

R308)

0,0,0,0,0,0,2,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,0,0,0,2,5,4,--0,0,0,  
0,0,2,6,5,--0,0,0,0,0,0,2,7,6,--0,0,0,--0,0,0,0,0,0,2,7,8,--0,0,0,0,0,0,2,7,9,-  
-

R309)

0,0,0,0,0,0,0,2,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,0,0,0,2,5,4,--0,0,0,  
0,0,2,6,5,--0,0,0,0,0,0,2,7,6,--0,0,0,0,0,0,2,8,7,--0,0,--0,0,0,0,0,0,2,8,9,--

R310)

0,0,0,0,0,0,0,3,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,  
0,0,3,4,5,--0,0,0,0,0,0,3,4,6,--0,0,0,0,0,0,3,4,7,--0,0,0,0,0,0,3,4,8,--0,0,0,  
,0,0,0,0,3,4,9,--

R311)

0,0,0,0,0,0,0,3,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,0,0,0,3,5,4,--0,0,0,0,  
0,--0,0,0,0,0,0,3,5,6,--0,0,0,0,0,0,3,5,7,--0,0,0,0,0,0,3,5,8,--0,0,0,0,0,0,  
,3,5,9,--

R312)

0,0,0,0,0,0,0,3,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,0,0,0,3,5,4,--0,0,0,0,  
0,3,6,5,--0,0,0,0,--0,0,0,0,0,0,3,6,7,--0,0,0,0,0,0,3,6,8,--0,0,0,0,0,0,3,6,9,  
,--

R313)

0,0,0,0,0,0,0,3,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,0,0,0,3,5,4,--0,0,0,0,  
0,3,6,5,--0,0,0,0,0,0,3,7,6,--0,0,0,--0,0,0,0,0,0,3,7,8,--0,0,0,0,0,0,3,7,9,--

R314)

0,0,0,0,0,0,0,3,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,0,0,0,3,5,4,--0,0,0,0,  
0,3,6,5,--0,0,0,0,0,0,3,7,6,--0,0,0,0,0,0,3,8,7,--0,0,--0,0,0,0,0,0,3,8,9,--

R315)

0,0,0,0,0,0,0,4,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,0,--0,0,0,0,0,  
--0,0,0,0,0,0,4,5,6,--0,0,0,0,0,0,4,5,7,--0,0,0,0,0,0,4,5,8,--0,0,0,0,0,0,4,  
,5,9,--

R316)

0,0,0,0,0,0,0,4,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,0,--0,0,0,0,0,  
4,6,5,--0,0,0,0,--0,0,0,0,0,0,4,6,7,--0,0,0,0,0,0,4,6,8,--0,0,0,0,0,0,4,6,9,--  
-

R317)

0,0,0,0,0,0,0,4,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,0,--0,0,0,0,0,  
4,6,5,--0,0,0,0,0,0,4,7,6,--0,0,0,--0,0,0,0,0,0,4,7,8,--0,0,0,0,0,0,4,7,9,--

R318)

0,0,0,0,0,0,0,4,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,0,--0,0,0,0,0,  
4,6,5,--0,0,0,0,0,0,4,7,6,--0,0,0,0,0,0,4,8,7,--0,0,--0,0,0,0,0,0,4,8,9,--

R319)

0,0,0,0,0,0,0,5,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,  
1,0,--0,0,0,0,--0,0,0,0,0,0,5,6,7,--0,0,0,0,0,0,5,6,8,--0,0,0,0,0,0,5,6,9,--

R320)

0,0,0,0,0,0,0,5,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,  
1,0,--0,0,0,0,0,0,5,7,6,--0,0,0,--0,0,0,0,0,0,5,7,8,--0,0,0,0,0,0,5,7,9,--

R321)

0,0,0,0,0,0,0,5,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,  
1,0,--0,0,0,0,0,0,5,7,6,--0,0,0,0,0,0,5,8,7,--0,0,--0,0,0,0,0,0,5,8,9,--

R322)

0,0,0,0,0,0,0,6,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,  
0,0,0,0,0,6,5,--0,1,0,--0,0,0,--0,0,0,0,0,0,6,7,8,--0,0,0,0,0,0,6,7,9,--

R323)

0,0,0,0,0,0,0,6,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,  
0,0,0,0,0,6,5,--0,1,0,--0,0,0,0,0,0,6,8,7,--0,0,--0,0,0,0,0,0,6,8,9,--

R324)

0,0,0,0,0,0,0,7,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,6,5,--

R325)

0,0,0,0,0,0,0,7,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,6,5,--0,0,0,0,0,0,7,6,--0,1,0,--0,0,--0,0,0,0,0,0,7,8,9,--

R326)

0,0,0,0,0,0,1,2,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,1,2,3,4,--0,0,0,0,0,0,1,2,3,5,--0,0,0,0,0,0,1,2,3,6,--0,0,0,0,0,0,1,2,3,7,--0,0,0,0,0,0,1,2,3,8,--0,0,0,0,0,0,1,2,3,9,--

R327)

0,0,0,0,0,0,1,2,4,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,0,0,0,0,--0,0,0,0,0,0,1,2,4,5,--0,0,0,0,0,0,1,2,4,6,--0,0,0,0,0,0,1,2,4,7,--0,0,0,0,0,0,1,2,4,8,--0,0,0,0,0,0,1,2,4,9,--

R328)

0,0,0,0,0,0,1,2,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,0,1,2,5,4,--0,0,0,0,0,--0,0,0,0,0,0,1,2,5,6,--0,0,0,0,0,0,1,2,5,7,--0,0,0,0,0,0,1,2,5,8,--0,0,0,0,0,0,1,2,5,9,--

R329)

0,0,0,0,0,0,1,2,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,0,1,2,5,4,--0,0,0,0,0,1,2,6,5,--0,0,0,0,--0,0,0,0,0,0,1,2,6,7,--0,0,0,0,0,0,1,2,6,8,--0,0,0,0,0,0,1,2,6,9,--

R330)

0,0,0,0,0,0,1,2,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,0,1,2,5,4,--0,0,0,0,0,1,2,6,5,--0,0,0,0,0,0,1,2,7,6,--0,0,0,--0,0,0,0,0,0,1,2,7,8,--0,0,0,0,0,0,1,2,7,9,--

R331)

0,0,0,0,0,0,1,2,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,0,1,2,5,4,--0,0,0,0,0,1,2,6,5,--0,0,0,0,0,0,1,2,7,6,--0,0,0,0,0,0,1,2,8,7,--0,0,--0,0,0,0,0,0,1,2,8,9,--

R332)

0,0,0,0,0,0,1,3,4,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,0,0,1,3,4,5,--0,0,0,0,0,0,1,3,4,6,--0,0,0,0,0,0,1,3,4,7,--0,0,0,0,0,0,1,3,4,8,--0,0,0,0,0,0,1,3,4,9,--

R333)

0,0,0,0,0,0,1,3,5,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,0,0,1,3,5,4,--0,0,0,0,0,0,--0,0,0,0,0,0,1,3,5,6,--0,0,0,0,0,0,1,3,5,7,--0,0,0,0,0,0,1,3,5,8,--0,0,0,0,0,0,1,3,5,9,--

R334)

0,0,0,0,0,0,1,3,6,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,0,0,1,3,5,4,--0,0,0,0,0,1,3,6,5,--0,0,0,0,--0,0,0,0,0,0,1,3,6,7,--0,0,0,0,0,0,1,3,6,8,--0,0,0,0,0,0,1,3,6,9,--

R335)

0,0,0,0,0,0,1,3,7,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,0,0,1,3,5,4,--0,0,0,0,0,1,3,6,5,--0,0,0,0,0,0,1,3,7,6,--0,0,0,--0,0,0,0,0,0,1,3,7,8,--0,0,0,0,0,0,1,3,7,9,--

R336)

0,0,0,0,0,0,1,3,8,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,0,0,1,3,5,4,--0,0,0,0,0,1,3,6,5,--0,0,0,0,0,0,1,3,7,6,--0,0,0,0,0,0,1,3,8,7,--0,0,--0,0,0,0,0,0,1,3,8,9,--

R337)

0,0,0,0,0,0,1,4,5,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,1,0,--0,0,0,0,0,--0,0,0,0,0,0,1,4,5,6,--0,0,0,0,0,0,0,1,4,5,7,--0,0,0,0,0,0,0,1,4,5,8,--0,0,0,0,0,0,0,1,4,5,9,--

R338)

0,0,0,0,0,0,1,4,6,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,1,0,--0,0,0,0,1,4,6,5,--0,0,0,0,--0,0,0,0,0,1,4,6,7,--0,0,0,0,0,1,4,6,8,--0,0,0,0,0,1,4,6,9,--

R339)

0,0,0,0,0,0,1,4,7,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,1,0,--0,0,0,0,1,4,6,5,--0,0,0,0,0,1,4,7,6,--0,0,0,--0,0,0,0,0,1,4,7,8,--0,0,0,0,0,1,4,7,9,--

R340)

0,0,0,0,0,0,1,4,8,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,1,0,--0,0,0,0,1,4,6,5,--0,0,0,0,0,1,4,7,6,--0,0,0,0,0,1,4,8,7,--0,0,--0,0,0,0,0,1,4,8,9,--

R341)

0,0,0,0,0,0,1,5,6,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,1,0,--0,0,0,0,--0,0,0,0,0,1,5,6,7,--0,0,0,0,0,1,5,6,8,--0,0,0,0,0,1,5,6,9,--

R342)

0,0,0,0,0,0,1,5,7,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,1,0,--0,0,0,0,0,1,5,7,6,--0,0,0,--0,0,0,0,0,1,5,7,8,--0,0,0,0,0,1,5,7,9,--

R343)

0,0,0,0,0,0,1,5,8,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,1,0,--0,0,0,0,0,1,5,7,6,--0,0,0,0,0,1,5,8,7,--0,0,--0,0,0,0,0,1,5,8,9,--

R344)

0,0,0,0,0,0,1,6,7,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,0,0,0,1,6,5,--0,1,0,--0,0,0,--0,0,0,0,0,1,6,7,8,--0,0,0,0,0,1,6,7,9,--

R345)

0,0,0,0,0,0,1,6,8,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,0,0,0,1,6,5,--0,1,0,--0,0,0,0,0,1,6,8,7,--0,0,--0,0,0,0,0,1,6,8,9,--

R346)

0,0,0,0,0,0,1,7,6,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,0,0,0,1,6,5,--

R347)

0,0,0,0,0,0,1,7,8,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,0,0,0,1,6,5,--0,0,0,0,0,1,7,6,--0,1,0,--0,0,--0,0,0,0,0,1,7,8,9,--

R348)

0,0,0,0,0,0,2,3,4,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,3,4,5,--0,0,0,0,0,0,2,3,4,6,--0,0,0,0,0,0,2,3,4,7,--0,0,0,0,0,0,2,3,4,8,--0,0,0,0,0,0,0,2,3,4,9,--

R349)

0,0,0,0,0,0,2,3,5,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,0,2,3,5,4,--0,0,0,0,0,0,--0,0,0,0,0,0,2,3,5,6,--0,0,0,0,0,0,2,3,5,7,--0,0,0,0,0,0,2,3,5,8,--0,0,0,0,0,0,2,3,5,9,--

R350)

0,0,0,0,0,0,2,3,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,0,2,3,5,4,--0,0,0,0,0,2,3,6,5,--0,0,0,0,--0,0,0,0,0,0,2,3,6,7,--0,0,0,0,0,0,2,3,6,8,--0,0,0,0,0,0,2,3,6,9,--

R351)

0,0,0,0,0,0,2,3,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,0,2,3,5,4,--0,0,0,0,0,2,3,6,5,--0,0,0,0,0,0,2,3,7,6,--0,0,0,--0,0,0,0,0,0,2,3,7,8,--0,0,0,0,0,0,2,3,7,9,--

R352)

0,0,0,0,0,0,2,3,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,0,2,3,5,4,--0,0,0,0,0,2,3,6,5,--0,0,0,0,0,0,2,3,7,6,--0,0,0,0,0,0,2,3,8,7,--0,0,--0,0,0,0,0,0,2,3,8,9,--

R353)

0,0,0,0,0,0,2,4,5,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,1,0,--0,0,0,0,0,--0,0,0,0,0,0,2,4,5,6,--0,0,0,0,0,0,2,4,5,7,--0,0,0,0,0,0,2,4,5,8,--0,0,0,0,0,0,2,4,5,9

,--

R354)

0,0,0,0,0,0,2,4,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,1,0,--0,0,0,0,2,4,6,  
5,--0,0,0,0,--0,0,0,0,0,0,2,4,6,7,--0,0,0,0,0,0,2,4,6,8,--0,0,0,0,0,0,2,4,6,9,--

R355)

0,0,0,0,0,0,2,4,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,1,0,--0,0,0,0,2,4,6,  
5,--0,0,0,0,0,2,4,7,6,--0,0,0,--0,0,0,0,0,0,2,4,7,8,--0,0,0,0,0,0,2,4,7,9,--

R356)

0,0,0,0,0,0,2,4,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,1,0,--0,0,0,0,2,4,6,  
5,--0,0,0,0,0,2,4,7,6,--0,0,0,0,0,0,2,4,8,7,--0,0,--0,0,0,0,0,0,2,4,8,9,--

R357)

0,0,0,0,0,0,2,5,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,0,0,0,2,5,4,--0,1,0,  
--0,0,0,0,--0,0,0,0,0,0,2,5,6,7,--0,0,0,0,0,0,2,5,6,8,--0,0,0,0,0,0,2,5,6,9,--

R358)

0,0,0,0,0,0,2,5,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,0,0,0,2,5,4,--0,1,0,  
--0,0,0,0,0,2,5,7,6,--0,0,0,--0,0,0,0,0,0,2,5,7,8,--0,0,0,0,0,0,2,5,7,9,--

R359)

0,0,0,0,0,0,2,5,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,0,0,0,2,5,4,--0,1,0,  
--0,0,0,0,0,2,5,7,6,--0,0,0,0,0,0,2,5,8,7,--0,0,--0,0,0,0,0,0,2,5,8,9,--

R360)

0,0,0,0,0,0,2,6,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,0,0,0,2,5,4,--0,0,0,  
0,0,2,6,5,--0,1,0,--0,0,0,--0,0,0,0,0,0,2,6,7,8,--0,0,0,0,0,0,2,6,7,9,--

R361)

0,0,0,0,0,0,2,6,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,0,0,0,2,5,4,--0,0,0,  
0,0,2,6,5,--0,1,0,--0,0,0,0,0,0,2,6,8,7,--0,0,--0,0,0,0,0,0,2,6,8,9,--

R362)

0,0,0,0,0,0,2,7,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,0,0,0,2,5,4,--0,0,0,  
0,0,2,6,5,--

R363)

0,0,0,0,0,0,2,7,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,0,0,0,2,5,4,--0,0,0,  
0,0,2,6,5,--0,0,0,0,0,0,2,7,6,--0,1,0,--0,0,--0,0,0,0,0,0,2,7,8,9,--

R364)

0,0,0,0,0,0,3,4,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,1,0,--0,0,0,0,0,--0,0,  
0,0,0,0,3,4,5,6,--0,0,0,0,0,0,3,4,5,7,--0,0,0,0,0,0,3,4,5,8,--0,0,0,0,0,0,3,4,5,9,--

-

R365)

0,0,0,0,0,0,3,4,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,1,0,--0,0,0,0,3,4,6,5,  
--0,0,0,0,--0,0,0,0,0,0,3,4,6,7,--0,0,0,0,0,0,3,4,6,8,--0,0,0,0,0,0,3,4,6,9,--

R366)

0,0,0,0,0,0,3,4,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,1,0,--0,0,0,0,3,4,6,5,  
--0,0,0,0,0,3,4,7,6,--0,0,0,--0,0,0,0,0,0,3,4,7,8,--0,0,0,0,0,0,3,4,7,9,--

R367)

0,0,0,0,0,0,3,4,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,1,0,--0,0,0,0,3,4,6,5,  
--0,0,0,0,0,3,4,7,6,--0,0,0,0,0,0,3,4,8,7,--0,0,--0,0,0,0,0,0,3,4,8,9,--

R368)

0,0,0,0,0,0,3,5,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,0,0,0,3,5,4,--0,1,0,--  
0,0,0,0,--0,0,0,0,0,0,3,5,6,7,--0,0,0,0,0,0,3,5,6,8,--0,0,0,0,0,0,3,5,6,9,--

R369)

0,0,0,0,0,0,3,5,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,0,0,0,3,5,4,--0,1,0,--  
0,0,0,0,0,3,5,7,6,--0,0,0,--0,0,0,0,0,0,3,5,7,8,--0,0,0,0,0,0,3,5,7,9,--

R370)

0,0,0,0,0,0,3,5,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,0,0,0,3,5,4,--0,1,0,--  
0,0,0,0,0,3,5,7,6,--0,0,0,0,0,3,5,8,7,--0,0,--0,0,0,0,0,3,5,8,9,--

R371)

0,0,0,0,0,0,3,6,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,0,0,0,3,5,4,--0,0,0,0,  
0,3,6,5,--0,1,0,--0,0,0,--0,0,0,0,0,3,6,7,8,--0,0,0,0,0,3,6,7,9,--

R372)

0,0,0,0,0,0,3,6,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,0,0,0,3,5,4,--0,0,0,0,  
0,3,6,5,--0,1,0,--0,0,0,0,0,3,6,8,7,--0,0,--0,0,0,0,0,3,6,8,9,--

R373)

0,0,0,0,0,0,3,7,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,0,0,0,3,5,4,--0,0,0,0,  
0,3,6,5,--

R374)

0,0,0,0,0,0,3,7,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,0,0,0,3,5,4,--0,0,0,0,  
0,3,6,5,--0,0,0,0,0,3,7,6,--0,1,0,--0,0,--0,0,0,0,0,3,7,8,9,--

R375)

0,0,0,0,0,0,4,5,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,0,--0,1,0,--0,  
0,0,0,--0,0,0,0,0,4,5,6,7,--0,0,0,0,0,4,5,6,8,--0,0,0,0,0,4,5,6,9,--

R376)

0,0,0,0,0,0,4,5,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,0,--0,1,0,--0,  
0,0,0,0,4,5,7,6,--0,0,0,--0,0,0,0,0,4,5,7,8,--0,0,0,0,0,4,5,7,9,--

R377)

0,0,0,0,0,0,4,5,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,0,--0,1,0,--0,  
0,0,0,0,4,5,7,6,--0,0,0,0,0,4,5,8,7,--0,0,--0,0,0,0,0,4,5,8,9,--

R378)

0,0,0,0,0,0,4,6,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,0,--0,0,0,0,0,  
4,6,5,--0,1,0,--0,0,0,--0,0,0,0,0,4,6,7,8,--0,0,0,0,0,4,6,7,9,--

R379)

0,0,0,0,0,0,4,6,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,0,--0,0,0,0,0,  
4,6,5,--0,1,0,--0,0,0,0,0,4,6,8,7,--0,0,--0,0,0,0,0,4,6,8,9,--

R380)

0,0,0,0,0,0,4,7,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,0,--0,0,0,0,0,  
4,6,5,--

R381)

0,0,0,0,0,0,4,7,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,0,--0,0,0,0,0,  
4,6,5,--0,0,0,0,0,0,4,7,6,--0,1,0,--0,0,--0,0,0,0,0,0,4,7,8,9,--

R382)

0,0,0,0,0,0,5,6,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,  
1,0,--0,1,0,--0,0,0,--0,0,0,0,0,5,6,7,8,--0,0,0,0,0,5,6,7,9,--

R383)

0,0,0,0,0,0,5,6,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,  
1,0,--0,1,0,--0,0,0,0,0,5,6,8,7,--0,0,--0,0,0,0,0,5,6,8,9,--

R384)

0,0,0,0,0,0,5,7,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,  
1,0,--

R385)

0,0,0,0,0,0,5,7,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,  
1,0,--0,0,0,0,0,0,5,7,6,--0,1,0,--0,0,--0,0,0,0,0,0,5,7,8,9,--

R386)

0,0,0,0,0,0,6,7,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,

0,0,0,0,0,6,5,--0,1,0,--0,1,0,--0,0,--0,0,0,0,0,0,6,7,8,9,--  
R387)  
0,0,0,0,0,1,2,3,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,1,2,3,  
4,5,--0,0,0,0,0,1,2,3,4,6,--0,0,0,0,0,1,2,3,4,7,--0,0,0,0,0,1,2,3,4,8,--0,0,0,0,0,1  
,2,3,4,9,--  
R388)  
0,0,0,0,0,1,2,3,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,0,0,0,0,--0,  
0,0,0,0,1,2,3,5,6,--0,0,0,0,0,1,2,3,5,7,--0,0,0,0,0,1,2,3,5,8,--0,0,0,0,0,1,2,3,5,9  
,--  
R389)  
0,0,0,0,0,1,2,3,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,0,0,1,2,3,6,  
5,--0,0,0,0,--0,0,0,0,0,1,2,3,6,7,--0,0,0,0,0,1,2,3,6,8,--0,0,0,0,0,1,2,3,6,9,--  
R390)  
0,0,0,0,0,1,2,3,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,0,0,1,2,3,6,  
5,--0,0,0,0,1,2,3,7,6,--0,0,0,--0,0,0,0,0,1,2,3,7,8,--0,0,0,0,0,1,2,3,7,9,--  
R391)  
0,0,0,0,0,1,2,3,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,0,0,1,2,3,6,  
5,--0,0,0,0,1,2,3,7,6,--0,0,0,0,0,1,2,3,8,7,--0,0,--0,0,0,0,0,1,2,3,8,9,--  
R392)  
0,0,0,0,0,1,2,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,0,0,0,0,--0,0,  
0,0,0,1,2,4,5,6,--0,0,0,0,0,1,2,4,5,7,--0,0,0,0,0,1,2,4,5,8,--0,0,0,0,0,1,2,4,5,9,-  
-  
R393)  
0,0,0,0,0,1,2,4,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,0,0,1,2,4,6,5,  
--0,0,0,0,--0,0,0,0,0,1,2,4,6,7,--0,0,0,0,0,1,2,4,6,8,--0,0,0,0,0,1,2,4,6,9,--  
R394)  
0,0,0,0,0,1,2,4,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,0,0,1,2,4,6,5,  
--0,0,0,0,1,2,4,7,6,--0,0,0,--0,0,0,0,0,1,2,4,7,8,--0,0,0,0,0,1,2,4,7,9,--  
R395)  
0,0,0,0,0,1,2,4,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,0,0,1,2,4,6,5,  
--0,0,0,0,1,2,4,7,6,--0,0,0,0,0,1,2,4,8,7,--0,0,--0,0,0,0,0,1,2,4,8,9,--  
R396)  
0,0,0,0,0,1,2,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,0,1,2,5,4,--0,1,0,--  
0,0,0,0,--0,0,0,0,0,1,2,5,6,7,--0,0,0,0,0,1,2,5,6,8,--0,0,0,0,0,1,2,5,6,9,--  
R397)  
0,0,0,0,0,1,2,5,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,0,1,2,5,4,--0,1,0,--  
0,0,0,0,1,2,5,7,6,--0,0,0,--0,0,0,0,0,1,2,5,7,8,--0,0,0,0,0,1,2,5,7,9,--  
R398)  
0,0,0,0,0,1,2,5,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,0,1,2,5,4,--0,1,0,--  
0,0,0,0,1,2,5,7,6,--0,0,0,0,0,1,2,5,8,7,--0,0,--0,0,0,0,0,1,2,5,8,9,--  
R399)  
0,0,0,0,0,1,2,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,0,1,2,5,4,--0,0,0,0,  
1,2,6,5,--0,1,0,--0,0,0,--0,0,0,0,0,1,2,6,7,8,--0,0,0,0,0,1,2,6,7,9,--  
R400)  
0,0,0,0,0,1,2,6,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,0,1,2,5,4,--0,0,0,0,  
1,2,6,5,--0,1,0,--0,0,0,0,0,1,2,6,8,7,--0,0,--0,0,0,0,0,1,2,6,8,9,--  
R401)  
0,0,0,0,0,1,2,7,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,0,1,2,5,4,--0,0,0,0,  
1,2,6,5,--  
R402)

0,0,0,0,0,1,2,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,0,1,2,5,4,--0,0,0,0,  
1,2,6,5,--0,0,0,0,0,1,2,7,6,--0,1,0,--0,0,--0,0,0,0,0,1,2,7,8,9,--

R403)

0,0,0,0,0,1,3,4,5,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,0,0,0,0,--0,0,0,  
0,0,1,3,4,5,6,--0,0,0,0,0,1,3,4,5,7,--0,0,0,0,0,1,3,4,5,8,--0,0,0,0,0,1,3,4,5,9,--

R404)

0,0,0,0,0,1,3,4,6,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,0,0,1,3,4,6,5,--  
0,0,0,0,--0,0,0,0,0,1,3,4,6,7,--0,0,0,0,0,1,3,4,6,8,--0,0,0,0,0,1,3,4,6,9,--

R405)

0,0,0,0,0,1,3,4,7,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,0,0,1,3,4,6,5,--  
0,0,0,0,1,3,4,7,6,--0,0,0,--0,0,0,0,0,1,3,4,7,8,--0,0,0,0,0,1,3,4,7,9,--

R406)

0,0,0,0,0,1,3,4,8,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,0,0,1,3,4,6,5,--  
0,0,0,0,1,3,4,7,6,--0,0,0,0,0,1,3,4,8,7,--0,0,--0,0,0,0,0,1,3,4,8,9,--

R407)

0,0,0,0,0,1,3,5,6,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,0,0,1,3,5,4,--0,1,0,--0,  
0,0,0,--0,0,0,0,0,1,3,5,6,7,--0,0,0,0,0,1,3,5,6,8,--0,0,0,0,0,1,3,5,6,9,--

R408)

0,0,0,0,0,1,3,5,7,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,0,0,1,3,5,4,--0,1,0,--0,  
0,0,0,1,3,5,7,6,--0,0,0,--0,0,0,0,0,1,3,5,7,8,--0,0,0,0,0,1,3,5,7,9,--

R409)

0,0,0,0,0,1,3,5,8,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,0,0,1,3,5,4,--0,1,0,--0,  
0,0,0,1,3,5,7,6,--0,0,0,0,0,1,3,5,8,7,--0,0,--0,0,0,0,0,1,3,5,8,9,--

R410)

0,0,0,0,0,1,3,6,7,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,0,0,1,3,5,4,--0,0,0,0,1,  
3,6,5,--0,1,0,--0,0,0,--0,0,0,0,0,1,3,6,7,8,--0,0,0,0,0,1,3,6,7,9,--

R411)

0,0,0,0,0,1,3,6,8,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,0,0,1,3,5,4,--0,0,0,0,1,  
3,6,5,--0,1,0,--0,0,0,0,0,1,3,6,8,7,--0,0,--0,0,0,0,0,1,3,6,8,9,--

R412)

0,0,0,0,0,1,3,7,6,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,0,0,1,3,5,4,--0,0,0,0,1,  
3,6,5,--

R413)

0,0,0,0,0,1,3,7,8,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,0,0,1,3,5,4,--0,0,0,0,1,  
3,6,5,--0,0,0,0,0,1,3,7,6,--0,1,0,--0,0,--0,0,0,0,0,1,3,7,8,9,--

R414)

0,0,0,0,0,1,4,5,6,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,1,0,--0,1,0,--0,0,  
0,0,--0,0,0,0,0,1,4,5,6,7,--0,0,0,0,0,1,4,5,6,8,--0,0,0,0,0,1,4,5,6,9,--

R415)

0,0,0,0,0,1,4,5,7,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,1,0,--0,1,0,--0,0,  
0,0,1,4,5,7,6,--0,0,0,--0,0,0,0,0,1,4,5,7,8,--0,0,0,0,0,1,4,5,7,9,--

R416)

0,0,0,0,0,1,4,5,8,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,1,0,--0,1,0,--0,0,  
0,0,1,4,5,7,6,--0,0,0,0,0,1,4,5,8,7,--0,0,--0,0,0,0,0,1,4,5,8,9,--

R417)

0,0,0,0,0,1,4,6,7,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,1,0,--0,0,0,0,1,4,  
6,5,--0,1,0,--0,0,0,--0,0,0,0,0,1,4,6,7,8,--0,0,0,0,0,1,4,6,7,9,--

R418)

0,0,0,0,0,1,4,6,8,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,1,0,--0,0,0,0,1,4,  
6,5,--0,1,0,--0,0,0,0,0,1,4,6,8,7,--0,0,--0,0,0,0,0,1,4,6,8,9,--



R419)

0,0,0,0,0,1,4,7,6,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,1,0,--0,0,0,0,1,4,6,5,--

R420)

0,0,0,0,0,1,4,7,8,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,1,0,--0,0,0,0,1,4,6,5,--0,0,0,0,0,1,4,7,6,--0,1,0,--0,0,--0,0,0,0,0,1,4,7,8,9,--

R421)

0,0,0,0,0,1,5,6,7,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,1,0,--0,1,0,--0,0,0,--0,0,0,0,0,1,5,6,7,8,--0,0,0,0,0,1,5,6,7,9,--

R422)

0,0,0,0,0,1,5,6,8,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,1,0,--0,1,0,--0,0,0,0,0,1,5,6,8,7,--0,0,--0,0,0,0,0,1,5,6,8,9,--

R423)

0,0,0,0,0,1,5,7,6,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,1,0,--

R424)

0,0,0,0,0,1,5,7,8,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,1,0,--0,0,0,0,0,1,5,7,6,--0,1,0,--0,0,--0,0,0,0,0,1,5,7,8,9,--

R425)

0,0,0,0,0,1,6,7,8,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,0,0,0,0,1,6,5,--0,1,0,--0,1,0,--0,0,--0,0,0,0,0,1,6,7,8,9,--

R426)

0,0,0,0,0,2,3,4,5,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,0,2,3,4,5,6,--0,0,0,0,0,2,3,4,5,7,--0,0,0,0,0,2,3,4,5,8,--0,0,0,0,0,2,3,4,5,9,--

R427)

0,0,0,0,0,2,3,4,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,0,2,3,4,6,5,--0,0,0,0,--0,0,0,0,0,2,3,4,6,7,--0,0,0,0,0,2,3,4,6,8,--0,0,0,0,0,2,3,4,6,9,--

R428)

0,0,0,0,0,2,3,4,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,0,2,3,4,6,5,--0,0,0,0,0,2,3,4,7,6,--0,0,0,--0,0,0,0,0,2,3,4,7,8,--0,0,0,0,0,2,3,4,7,9,--

R429)

0,0,0,0,0,2,3,4,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,0,2,3,4,6,5,--0,0,0,0,0,2,3,4,7,6,--0,0,0,0,0,2,3,4,8,7,--0,0,--0,0,0,0,0,2,3,4,8,9,--

R430)

0,0,0,0,0,2,3,5,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,0,2,3,5,4,--0,1,0,--0,0,0,0,--0,0,0,0,0,2,3,5,6,7,--0,0,0,0,0,2,3,5,6,8,--0,0,0,0,0,2,3,5,6,9,--

R431)

0,0,0,0,0,2,3,5,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,0,2,3,5,4,--0,1,0,--0,0,0,0,2,3,5,7,6,--0,0,0,--0,0,0,0,0,2,3,5,7,8,--0,0,0,0,0,2,3,5,7,9,--

R432)

0,0,0,0,0,2,3,5,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,0,2,3,5,4,--0,1,0,--0,0,0,0,2,3,5,7,6,--0,0,0,0,0,2,3,5,8,7,--0,0,--0,0,0,0,0,2,3,5,8,9,--

R433)

0,0,0,0,0,2,3,6,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,0,2,3,5,4,--0,0,0,0,0,2,3,6,5,--0,1,0,--0,0,0,--0,0,0,0,0,2,3,6,7,8,--0,0,0,0,0,2,3,6,7,9,--

R434)

0,0,0,0,0,2,3,6,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,0,2,3,5,4,--0,0,0,0,0,2,3,6,5,--0,1,0,--0,0,0,0,0,2,3,6,8,7,--0,0,--0,0,0,0,0,2,3,6,8,9,--

R435)

0,0,0,0,0,2,3,7,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,0,2,3,5,4,--0,0,0,0,0,2,3,

6,5,--

R436)

0,0,0,0,0,2,3,7,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,0,2,3,5,4,--0,0,0,0,2,3,  
6,5,--0,0,0,0,0,2,3,7,6,--0,1,0,--0,0,--0,0,0,0,0,2,3,7,8,9,--

R437)

0,0,0,0,0,2,4,5,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,1,0,--0,1,0,--0,0,0,  
0,--0,0,0,0,0,2,4,5,6,7,--0,0,0,0,0,2,4,5,6,8,--0,0,0,0,0,2,4,5,6,9,--

R438)

0,0,0,0,0,2,4,5,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,1,0,--0,1,0,--0,0,0,  
0,2,4,5,7,6,--0,0,0,--0,0,0,0,0,2,4,5,7,8,--0,0,0,0,0,2,4,5,7,9,--

R439)

0,0,0,0,0,2,4,5,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,1,0,--0,1,0,--0,0,0,  
0,2,4,5,7,6,--0,0,0,0,0,2,4,5,8,7,--0,0,--0,0,0,0,0,2,4,5,8,9,--

R440)

0,0,0,0,0,2,4,6,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,1,0,--0,0,0,0,2,4,6,  
5,--0,1,0,--0,0,0,--0,0,0,0,0,2,4,6,7,8,--0,0,0,0,0,2,4,6,7,9,--

R441)

0,0,0,0,0,2,4,6,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,1,0,--0,0,0,0,2,4,6,  
5,--0,1,0,--0,0,0,0,0,2,4,6,8,7,--0,0,--0,0,0,0,0,2,4,6,8,9,--

R442)

0,0,0,0,0,2,4,7,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,1,0,--0,0,0,0,2,4,6,  
5,--

R443)

0,0,0,0,0,2,4,7,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,1,0,--0,0,0,0,2,4,6,  
5,--0,0,0,0,0,2,4,7,6,--0,1,0,--0,0,--0,0,0,0,0,2,4,7,8,9,--

R444)

0,0,0,0,0,2,5,6,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,0,0,0,2,5,4,--0,1,0,  
--0,1,0,--0,0,0,--0,0,0,0,0,2,5,6,7,8,--0,0,0,0,0,2,5,6,7,9,--

R445)

0,0,0,0,0,2,5,6,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,0,0,0,2,5,4,--0,1,0,  
--0,1,0,--0,0,0,0,0,2,5,6,8,7,--0,0,--0,0,0,0,0,2,5,6,8,9,--

R446)

0,0,0,0,0,2,5,7,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,0,0,0,2,5,4,--0,1,0,  
--

R447)

0,0,0,0,0,2,5,7,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,0,0,0,2,5,4,--0,1,0,  
--0,0,0,0,0,2,5,7,6,--0,1,0,--0,0,--0,0,0,0,0,2,5,7,8,9,--

R448)

0,0,0,0,0,2,6,7,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,0,0,0,2,5,4,--0,0,0,  
0,0,2,6,5,--0,1,0,--0,1,0,--0,0,--0,0,0,0,0,2,6,7,8,9,--

R449)

0,0,0,0,0,3,4,5,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,  
--0,0,0,0,0,3,4,5,6,7,--0,0,0,0,0,3,4,5,6,8,--0,0,0,0,0,3,4,5,6,9,--

R450)

0,0,0,0,0,3,4,5,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,  
3,4,5,7,6,--0,0,0,--0,0,0,0,0,3,4,5,7,8,--0,0,0,0,0,3,4,5,7,9,--

R451)

0,0,0,0,0,3,4,5,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,  
3,4,5,7,6,--0,0,0,0,0,3,4,5,8,7,--0,0,--0,0,0,0,0,3,4,5,8,9,--

R452)

0,0,0,0,0,3,4,6,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,1,0,--0,0,0,0,3,4,6,5,  
--0,1,0,--0,0,0,--0,0,0,0,0,3,4,6,7,8,--0,0,0,0,0,3,4,6,7,9,--

R453)

0,0,0,0,0,3,4,6,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,1,0,--0,0,0,0,3,4,6,5,  
--0,1,0,--0,0,0,0,0,3,4,6,8,7,--0,0,--0,0,0,0,0,3,4,6,8,9,--

R454)

0,0,0,0,0,3,4,7,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,1,0,--0,0,0,0,3,4,6,5,  
--

R455)

0,0,0,0,0,3,4,7,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,1,0,--0,0,0,0,3,4,6,5,  
--0,0,0,0,0,3,4,7,6,--0,1,0,--0,0,--0,0,0,0,0,3,4,7,8,9,--

R456)

0,0,0,0,0,3,5,6,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,0,0,0,3,5,4,--0,1,0,--  
0,1,0,--0,0,0,--0,0,0,0,0,3,5,6,7,8,--0,0,0,0,0,3,5,6,7,9,--

R457)

0,0,0,0,0,3,5,6,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,0,0,0,3,5,4,--0,1,0,--  
0,1,0,--0,0,0,0,0,3,5,6,8,7,--0,0,--0,0,0,0,0,3,5,6,8,9,--

R458)

0,0,0,0,0,3,5,7,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,0,0,0,3,5,4,--0,1,0,--

R459)

0,0,0,0,0,3,5,7,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,0,0,0,3,5,4,--0,1,0,--  
0,0,0,0,0,3,5,7,6,--0,1,0,--0,0,--0,0,0,0,0,3,5,7,8,9,--

R460)

0,0,0,0,0,3,6,7,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,0,0,0,3,5,4,--0,0,0,0,  
0,3,6,5,--0,1,0,--0,1,0,--0,0,--0,0,0,0,0,3,6,7,8,9,--

R461)

0,0,0,0,0,4,5,6,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,0,--0,1,0,--0,  
1,0,--0,0,0,--0,0,0,0,0,4,5,6,7,8,--0,0,0,0,0,4,5,6,7,9,--

R462)

0,0,0,0,0,4,5,6,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,0,--0,1,0,--0,  
1,0,--0,0,0,0,0,4,5,6,8,7,--0,0,--0,0,0,0,0,4,5,6,8,9,--

R463)

0,0,0,0,0,4,5,7,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,0,--0,1,0,--

R464)

0,0,0,0,0,4,5,7,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,0,--0,1,0,--0,  
0,0,0,0,4,5,7,6,--0,1,0,--0,0,--0,0,0,0,0,4,5,7,8,9,--

R465)

0,0,0,0,0,4,6,7,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,0,--0,0,0,0,0,  
4,6,5,--0,1,0,--0,1,0,--0,0,--0,0,0,0,0,4,6,7,8,9,--

R466)

0,0,0,0,0,5,6,7,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,  
1,0,--0,1,0,--0,1,0,--0,0,--0,0,0,0,0,5,6,7,8,9,--

R467)

0,0,0,0,1,2,3,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,1,  
2,3,4,5,6,--0,0,0,0,1,2,3,4,5,7,--0,0,0,0,1,2,3,4,5,8,--0,0,0,0,1,2,3,4,5,9,--

R468)

0,0,0,0,1,2,3,4,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,6,5,--0,0,  
0,0,--0,0,0,0,1,2,3,4,6,7,--0,0,0,0,1,2,3,4,6,8,--0,0,0,0,1,2,3,4,6,9,--

R469)

0,0,0,0,1,2,3,4,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,6,5,--0,0,

0,1,2,3,4,7,6,--0,0,0,--0,0,0,0,1,2,3,4,7,8,--0,0,0,0,1,2,3,4,7,9,--  
R470)  
0,0,0,0,1,2,3,4,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,6,5,--0,0,  
0,1,2,3,4,7,6,--0,0,0,0,1,2,3,4,8,7,--0,0,--0,0,0,0,1,2,3,4,8,9,--  
R471)  
0,0,0,0,1,2,3,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,1,0,--0,0,0,  
0,--0,0,0,0,1,2,3,5,6,7,--0,0,0,0,1,2,3,5,6,8,--0,0,0,0,1,2,3,5,6,9,--  
R472)  
0,0,0,0,1,2,3,5,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,1,0,--0,0,0,  
1,2,3,5,7,6,--0,0,0,--0,0,0,0,1,2,3,5,7,8,--0,0,0,0,1,2,3,5,7,9,--  
R473)  
0,0,0,0,1,2,3,5,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,1,0,--0,0,0,  
1,2,3,5,7,6,--0,0,0,0,1,2,3,5,8,7,--0,0,--0,0,0,0,1,2,3,5,8,9,--  
R474)  
0,0,0,0,1,2,3,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,0,0,1,2,3,6,  
5,--0,1,0,--0,0,0,--0,0,0,0,1,2,3,6,7,8,--0,0,0,0,1,2,3,6,7,9,--  
R475)  
0,0,0,0,1,2,3,6,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,0,0,1,2,3,6,  
5,--0,1,0,--0,0,0,0,1,2,3,6,8,7,--0,0,--0,0,0,0,1,2,3,6,8,9,--  
R476)  
0,0,0,0,1,2,3,7,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,0,0,1,2,3,6,  
5,--  
R477)  
0,0,0,0,1,2,3,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,0,0,1,2,3,6,  
5,--0,0,0,0,1,2,3,7,6,--0,1,0,--0,0,--0,0,0,0,1,2,3,7,8,9,--  
R478)  
0,0,0,0,1,2,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,1,0,--0,0,0,0,  
--0,0,0,0,1,2,4,5,6,7,--0,0,0,0,1,2,4,5,6,8,--0,0,0,0,1,2,4,5,6,9,--  
R479)  
0,0,0,0,1,2,4,5,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,1,0,--0,0,0,1,  
2,4,5,7,6,--0,0,0,--0,0,0,0,1,2,4,5,7,8,--0,0,0,0,1,2,4,5,7,9,--  
R480)  
0,0,0,0,1,2,4,5,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,1,0,--0,0,0,1,  
2,4,5,7,6,--0,0,0,0,1,2,4,5,8,7,--0,0,--0,0,0,0,1,2,4,5,8,9,--  
R481)  
0,0,0,0,1,2,4,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,0,0,1,2,4,6,5,  
--0,1,0,--0,0,0,--0,0,0,0,1,2,4,6,7,8,--0,0,0,0,1,2,4,6,7,9,--  
R482)  
0,0,0,0,1,2,4,6,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,0,0,1,2,4,6,5,  
--0,1,0,--0,0,0,0,1,2,4,6,8,7,--0,0,--0,0,0,0,1,2,4,6,8,9,--  
R483)  
0,0,0,0,1,2,4,7,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,0,0,1,2,4,6,5,  
--  
R484)  
0,0,0,0,1,2,4,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,0,0,1,2,4,6,5,  
--0,0,0,0,1,2,4,7,6,--0,1,0,--0,0,--0,0,0,0,1,2,4,7,8,9,--  
R485)  
0,0,0,0,1,2,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,0,1,2,5,4,--0,1,0,--  
0,1,0,--0,0,0,--0,0,0,0,1,2,5,6,7,8,--0,0,0,0,1,2,5,6,7,9,--  
R486)

0,0,0,0,1,2,5,6,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,0,1,2,5,4,--0,1,0,--  
0,1,0,--0,0,0,0,1,2,5,6,8,7,--0,0,--0,0,0,0,1,2,5,6,8,9,--

R487)

0,0,0,0,1,2,5,7,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,0,1,2,5,4,--0,1,0,--  
R488)

0,0,0,0,1,2,5,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,0,1,2,5,4,--0,1,0,--  
0,0,0,0,1,2,5,7,6,--0,1,0,--0,0,--0,0,0,0,1,2,5,7,8,9,--

R489)

0,0,0,0,1,2,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,0,1,2,5,4,--0,0,0,0,  
1,2,6,5,--0,1,0,--0,1,0,--0,0,--0,0,0,0,1,2,6,7,8,9,--

R490)

0,0,0,0,1,3,4,5,6,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,--  
0,0,0,0,1,3,4,5,6,7,--0,0,0,0,1,3,4,5,6,8,--0,0,0,0,1,3,4,5,6,9,--

R491)

0,0,0,0,1,3,4,5,7,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,1,0,--0,0,0,1,3,  
4,5,7,6,--0,0,0,--0,0,0,0,1,3,4,5,7,8,--0,0,0,0,1,3,4,5,7,9,--

R492)

0,0,0,0,1,3,4,5,8,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,1,0,--0,0,0,1,3,  
4,5,7,6,--0,0,0,0,1,3,4,5,8,7,--0,0,--0,0,0,0,1,3,4,5,8,9,--

R493)

0,0,0,0,1,3,4,6,7,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,0,0,1,3,4,6,5,--  
0,1,0,--0,0,0,--0,0,0,0,1,3,4,6,7,8,--0,0,0,0,1,3,4,6,7,9,--

R494)

0,0,0,0,1,3,4,6,8,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,0,0,1,3,4,6,5,--  
0,1,0,--0,0,0,0,1,3,4,6,8,7,--0,0,--0,0,0,0,1,3,4,6,8,9,--

R495)

0,0,0,0,1,3,4,7,6,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,0,0,1,3,4,6,5,--  
R496)

0,0,0,0,1,3,4,7,8,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,0,0,1,3,4,6,5,--  
0,0,0,0,1,3,4,7,6,--0,1,0,--0,0,--0,0,0,0,1,3,4,7,8,9,--

R497)

0,0,0,0,1,3,5,6,7,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,0,0,1,3,5,4,--0,1,0,--0,  
1,0,--0,0,0,--0,0,0,0,1,3,5,6,7,8,--0,0,0,0,1,3,5,6,7,9,--

R498)

0,0,0,0,1,3,5,6,8,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,0,0,1,3,5,4,--0,1,0,--0,  
1,0,--0,0,0,0,1,3,5,6,8,7,--0,0,--0,0,0,0,1,3,5,6,8,9,--

R499)

0,0,0,0,1,3,5,7,6,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,0,0,1,3,5,4,--0,1,0,--  
R500)

0,0,0,0,1,3,5,7,8,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,0,0,1,3,5,4,--0,1,0,--0,  
0,0,0,1,3,5,7,6,--0,1,0,--0,0,--0,0,0,0,1,3,5,7,8,9,--

R501)

0,0,0,0,1,3,6,7,8,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,0,0,1,3,5,4,--0,0,0,0,1,  
3,6,5,--0,1,0,--0,1,0,--0,0,--0,0,0,0,1,3,6,7,8,9,--

R502)

0,0,0,0,1,4,5,6,7,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,1,0,--0,1,0,--0,1,  
0,--0,0,0,--0,0,0,0,1,4,5,6,7,8,--0,0,0,0,1,4,5,6,7,9,--

R503)

0,0,0,0,1,4,5,6,8,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,1,0,--0,1,0,--0,1,  
0,--0,0,0,0,1,4,5,6,8,7,--0,0,--0,0,0,0,1,4,5,6,8,9,--

R504)

0,0,0,0,1,4,5,7,6,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,1,0,--0,1,0,--

R505)

0,0,0,0,1,4,5,7,8,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,1,0,--0,1,0,--0,0,  
0,0,1,4,5,7,6,--0,1,0,--0,0,--0,0,0,0,1,4,5,7,8,9,--

R506)

0,0,0,0,1,4,6,7,8,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,1,0,--0,0,0,0,1,4,  
6,5,--0,1,0,--0,1,0,--0,0,--0,0,0,0,1,4,6,7,8,9,--

R507)

0,0,0,0,1,5,6,7,8,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,1,5,4,--0,1,  
0,--0,1,0,--0,1,0,--0,0,--0,0,0,0,1,5,6,7,8,9,--

R508)

0,0,0,0,2,3,4,5,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,--0,  
0,0,0,2,3,4,5,6,7,--0,0,0,0,2,3,4,5,6,8,--0,0,0,0,2,3,4,5,6,9,--

R509)

0,0,0,0,2,3,4,5,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,2,3,4,  
5,7,6,--0,0,0,--0,0,0,0,2,3,4,5,7,8,--0,0,0,0,2,3,4,5,7,9,--

R510)

0,0,0,0,2,3,4,5,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,2,3,4,  
5,7,6,--0,0,0,0,2,3,4,5,8,7,--0,0,--0,0,0,0,2,3,4,5,8,9,--

R511)

0,0,0,0,2,3,4,6,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,0,2,3,4,6,5,--0,  
1,0,--0,0,0,--0,0,0,0,2,3,4,6,7,8,--0,0,0,0,2,3,4,6,7,9,--

R512)

0,0,0,0,2,3,4,6,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,0,2,3,4,6,5,--0,  
1,0,--0,0,0,0,2,3,4,6,8,7,--0,0,--0,0,0,0,2,3,4,6,8,9,--

R513)

0,0,0,0,2,3,4,7,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,0,2,3,4,6,5,--

R514)

0,0,0,0,2,3,4,7,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,0,2,3,4,6,5,--0,  
0,0,0,2,3,4,7,6,--0,1,0,--0,0,--0,0,0,0,2,3,4,7,8,9,--

R515)

0,0,0,0,2,3,5,6,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,0,2,3,5,4,--0,1,0,--0,1,  
0,--0,0,0,--0,0,0,0,2,3,5,6,7,8,--0,0,0,0,2,3,5,6,7,9,--

R516)

0,0,0,0,2,3,5,6,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,0,2,3,5,4,--0,1,0,--0,1,  
0,--0,0,0,0,2,3,5,6,8,7,--0,0,--0,0,0,0,2,3,5,6,8,9,--

R517)

0,0,0,0,2,3,5,7,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,0,2,3,5,4,--0,1,0,--

R518)

0,0,0,0,2,3,5,7,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,0,2,3,5,4,--0,1,0,--0,0,  
0,0,2,3,5,7,6,--0,1,0,--0,0,--0,0,0,0,2,3,5,7,8,9,--

R519)

0,0,0,0,2,3,6,7,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,0,2,3,5,4,--0,0,0,0,2,3,  
6,5,--0,1,0,--0,1,0,--0,0,--0,0,0,0,2,3,6,7,8,9,--

R520)

0,0,0,0,2,4,5,6,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,1,0,--0,1,0,--0,1,0,  
--0,0,0,--0,0,0,0,2,4,5,6,7,8,--0,0,0,0,2,4,5,6,7,9,--

R521)

0,0,0,0,2,4,5,6,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,1,0,--0,1,0,--0,1,0,

--0,0,0,0,2,4,5,6,8,7,--0,0,--0,0,0,0,2,4,5,6,8,9,--  
R522) 0,0,0,0,2,4,5,7,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,1,0,--0,1,0,--  
R523)  
0,0,0,0,2,4,5,7,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,1,0,--0,1,0,--0,0,0,  
0,2,4,5,7,6,--0,1,0,--0,0,--0,0,0,0,2,4,5,7,8,9,--  
R524)  
0,0,0,0,2,4,6,7,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,1,0,--0,0,0,0,2,4,6,  
5,--0,1,0,--0,1,0,--0,0,--0,0,0,0,2,4,6,7,8,9,--  
R525)  
0,0,0,0,2,5,6,7,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,0,0,0,2,5,4,--0,1,0,  
--0,1,0,--0,1,0,--0,0,--0,0,0,0,2,5,6,7,8,9,--  
R526)  
0,0,0,0,3,4,5,6,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
0,0,0,--0,0,0,0,3,4,5,6,7,8,--0,0,0,0,3,4,5,6,7,9,--  
R527)  
0,0,0,0,3,4,5,6,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
0,0,0,0,3,4,5,6,8,7,--0,0,--0,0,0,0,3,4,5,6,8,9,--  
R528) 0,0,0,0,3,4,5,7,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,1,0,--0,1,0,--  
R529)  
0,0,0,0,3,4,5,7,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,  
3,4,5,7,6,--0,1,0,--0,0,--0,0,0,0,3,4,5,7,8,9,--  
R530)  
0,0,0,0,3,4,6,7,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,1,0,--0,0,0,0,3,4,6,5,  
--0,1,0,--0,1,0,--0,0,--0,0,0,0,3,4,6,7,8,9,--  
R531)  
0,0,0,0,3,5,6,7,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,0,0,0,3,5,4,--0,1,0,--  
0,1,0,--0,1,0,--0,0,--0,0,0,0,3,5,6,7,8,9,--  
R532)  
0,0,0,0,4,5,6,7,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,0,--0,1,0,--0,  
1,0,--0,1,0,--0,0,--0,0,0,0,4,5,6,7,8,9,--  
R533)  
0,0,0,1,2,3,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,  
0,1,2,3,4,5,6,7,--0,0,0,1,2,3,4,5,6,8,--0,0,0,1,2,3,4,5,6,9,--  
R534)  
0,0,0,1,2,3,4,5,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,5,  
7,6,--0,0,0,--0,0,0,1,2,3,4,5,7,8,--0,0,0,1,2,3,4,5,7,9,--  
R535)  
0,0,0,1,2,3,4,5,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,5,  
7,6,--0,0,0,1,2,3,4,5,8,7,--0,0,--0,0,0,1,2,3,4,5,8,9,--  
R536)  
0,0,0,1,2,3,4,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,6,5,--0,1,  
0,--0,0,0,--0,0,0,1,2,3,4,6,7,8,--0,0,0,1,2,3,4,6,7,9,--  
R537)  
0,0,0,1,2,3,4,6,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,6,5,--0,1,  
0,--0,0,0,1,2,3,4,6,8,7,--0,0,--0,0,0,1,2,3,4,6,8,9,--  
R538)  
0,0,0,1,2,3,4,7,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,6,5,--  
R539)  
0,0,0,1,2,3,4,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,6,5,--0,0,  
0,1,2,3,4,7,6,--0,1,0,--0,0,--0,0,0,1,2,3,4,7,8,9,--

R540)

0,0,0,1,2,3,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,1,0,--0,1,0,  
--0,0,0,--0,0,0,1,2,3,5,6,7,8,--0,0,0,1,2,3,5,6,7,9,--

R541)

0,0,0,1,2,3,5,6,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,1,0,--0,1,0,  
--0,0,0,1,2,3,5,6,8,7,--0,0,--0,0,0,1,2,3,5,6,8,9,--

R542) 0,0,0,1,2,3,5,7,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,1,0,--

R543)

0,0,0,1,2,3,5,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,1,0,--0,0,0,  
1,2,3,5,7,6,--0,1,0,--0,0,--0,0,0,1,2,3,5,7,8,9,--

R544)

0,0,0,1,2,3,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,0,0,1,2,3,6,  
5,--0,1,0,--0,1,0,--0,0,--0,0,0,1,2,3,6,7,8,9,--

R545)

0,0,0,1,2,4,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,1,0,--0,1,0,--  
0,0,0,--0,0,0,1,2,4,5,6,7,8,--0,0,0,1,2,4,5,6,7,9,--

R546)

0,0,0,1,2,4,5,6,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,1,0,--0,1,0,--  
0,0,0,1,2,4,5,6,8,7,--0,0,--0,0,0,1,2,4,5,6,8,9,--

R547) 0,0,0,1,2,4,5,7,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,1,0,--

R548)

0,0,0,1,2,4,5,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,1,0,--0,0,0,1,  
2,4,5,7,6,--0,1,0,--0,0,--0,0,0,1,2,4,5,7,8,9,--

R549)

0,0,0,1,2,4,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,0,0,1,2,4,6,5,  
--0,1,0,--0,1,0,--0,0,--0,0,0,1,2,4,6,7,8,9,--

R550)

0,0,0,1,2,5,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,0,1,2,5,4,--0,1,0,--  
0,1,0,--0,1,0,--0,0,--0,0,0,1,2,5,6,7,8,9,--

R551)

0,0,0,1,3,4,5,6,7,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,  
0,0,--0,0,0,1,3,4,5,6,7,8,--0,0,0,1,3,4,5,6,7,9,--

R552)

0,0,0,1,3,4,5,6,8,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,  
0,0,1,3,4,5,6,8,7,--0,0,--0,0,0,1,3,4,5,6,8,9,--

R553) 0,0,0,1,3,4,5,7,6,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,1,0,--

R554)

0,0,0,1,3,4,5,7,8,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,1,0,--0,0,0,1,3,  
4,5,7,6,--0,1,0,--0,0,--0,0,0,1,3,4,5,7,8,9,--

R555)

0,0,0,1,3,4,6,7,8,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,0,0,1,3,4,6,5,--  
0,1,0,--0,1,0,--0,0,--0,0,0,1,3,4,6,7,8,9,--

R556)

0,0,0,1,3,5,6,7,8,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,0,0,1,3,5,4,--0,1,0,--0,  
1,0,--0,1,0,--0,0,--0,0,0,1,3,5,6,7,8,9,--

R557)

0,0,0,1,4,5,6,7,8,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,0,0,1,4,3,--0,1,0,--0,1,0,--0,1,  
0,--0,1,0,--0,0,--0,0,0,1,4,5,6,7,8,9,--

R558)

0,0,0,2,3,4,5,6,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,



0,--0,0,0,2,3,4,5,6,7,8,--0,0,0,2,3,4,5,6,7,9,--  
R559)  
0,0,0,2,3,4,5,6,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,  
0,2,3,4,5,6,8,7,--0,0,--0,0,0,2,3,4,5,6,8,9,--  
R560) 0,0,0,2,3,4,5,7,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
R561)  
0,0,0,2,3,4,5,7,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,2,3,4,  
5,7,6,--0,1,0,--0,0,--0,0,0,2,3,4,5,7,8,9,--  
R562)  
0,0,0,2,3,4,6,7,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,2,3,4,6,5,--0,  
1,0,--0,1,0,--0,0,--0,0,0,2,3,4,6,7,8,9,--  
R563)  
0,0,0,2,3,5,6,7,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,0,2,3,5,4,--0,1,0,--0,1,  
0,--0,1,0,--0,0,--0,0,0,2,3,5,6,7,8,9,--  
R564)  
0,0,0,2,4,5,6,7,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,0,2,4,3,--0,1,0,--0,1,0,--0,1,0,  
--0,1,0,--0,0,--0,0,0,2,4,5,6,7,8,9,--  
R565)  
0,0,0,3,4,5,6,7,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
0,1,0,--0,0,--0,0,0,3,4,5,6,7,8,9,--  
R566)  
0,0,1,2,3,4,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,  
--0,0,1,2,3,4,5,6,7,8,--0,0,1,2,3,4,5,6,7,9,--  
R567)  
0,0,1,2,3,4,5,6,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,  
2,3,4,5,6,8,7,--0,0,--0,0,1,2,3,4,5,6,8,9,--  
R568) 0,0,1,2,3,4,5,7,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
R569)  
0,0,1,2,3,4,5,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,5,  
7,6,--0,1,0,--0,0,--0,0,1,2,3,4,5,7,8,9,--  
R570)  
0,0,1,2,3,4,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,6,5,--0,1,  
0,--0,1,0,--0,0,--0,0,1,2,3,4,6,7,8,9,--  
R571)  
0,0,1,2,3,5,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,1,0,--0,1,0,  
--0,1,0,--0,0,--0,0,1,2,3,5,6,7,8,9,--  
R572)  
0,0,1,2,4,5,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,1,0,--0,1,0,--  
0,1,0,--0,0,--0,0,1,2,4,5,6,7,8,9,--  
R573)  
0,0,1,3,4,5,6,7,8,-->0,1,0,--0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,  
1,0,--0,0,--0,0,1,3,4,5,6,7,8,9,--  
R574)  
0,0,2,3,4,5,6,7,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,  
0,--0,0,--0,0,2,3,4,5,6,7,8,9,--  
R575)  
0,1,2,3,4,5,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,  
--0,0,--0,1,2,3,4,5,6,7,8,9,--  
List of different nodes in T[L]  
LEN=1) 0,:

LEN=2) 0,0: 0,1:  
LEN=3) 0,0,0: 0,0,1: 0,0,2: 0,1,0: 0,1,2:  
LEN=4) 0,0,0,0: 0,0,0,1: 0,0,0,2: 0,0,0,3: 0,0,1,2: 0,0,1,3: 0,0,2,1:  
0,0,2,3: 0,1,2,3:  
LEN=5) 0,0,0,0,0: 0,0,0,0,1: 0,0,0,0,2: 0,0,0,0,3: 0,0,0,0,4: 0,0,0,1,2:  
0,0,0,1,3: 0,0,0,1,4: 0,0,0,2,3: 0,0,0,2,4: 0,0,0,3,2: 0,0,0,3,4: 0,0,1,2,3:  
0,0,1,2,4: 0,0,1,3,2: 0,0,1,3,4: 0,0,2,3,4: 0,1,2,3,4:  
LEN=6) 0,0,0,0,0,0: 0,0,0,0,0,1: 0,0,0,0,0,2: 0,0,0,0,0,3: 0,0,0,0,0,4:  
0,0,0,0,0,5: 0,0,0,0,1,2: 0,0,0,0,1,3: 0,0,0,0,1,4: 0,0,0,0,1,5: 0,0,0,0,2,3:  
0,0,0,0,2,4: 0,0,0,0,2,5: 0,0,0,0,3,4: 0,0,0,0,3,5: 0,0,0,0,4,3: 0,0,0,0,4,5:  
0,0,0,1,2,3: 0,0,0,1,2,4: 0,0,0,1,2,5: 0,0,0,1,3,4: 0,0,0,1,3,5: 0,0,0,1,4,3:  
0,0,0,1,4,5: 0,0,0,2,3,4: 0,0,0,2,3,5: 0,0,0,2,4,3: 0,0,0,2,4,5: 0,0,0,3,4,5:  
0,0,1,2,3,4: 0,0,1,2,3,5: 0,0,1,2,4,3: 0,0,1,2,4,5: 0,0,1,3,4,5: 0,0,2,3,4,5:  
0,1,2,3,4,5:  
LEN=7) 0,0,0,0,0,0,0: 0,0,0,0,0,0,1: 0,0,0,0,0,0,2: 0,0,0,0,0,0,3:  
0,0,0,0,0,0,4: 0,0,0,0,0,0,5: 0,0,0,0,0,0,6: 0,0,0,0,0,1,2: 0,0,0,0,0,1,3:  
0,0,0,0,0,1,4: 0,0,0,0,0,1,5: 0,0,0,0,0,1,6: 0,0,0,0,0,2,3: 0,0,0,0,0,2,4:  
0,0,0,0,0,2,5: 0,0,0,0,0,2,6: 0,0,0,0,0,3,4: 0,0,0,0,0,3,5: 0,0,0,0,0,3,6:  
0,0,0,0,0,4,5: 0,0,0,0,0,4,6: 0,0,0,0,0,5,4: 0,0,0,0,0,5,6: 0,0,0,0,1,2,3:  
0,0,0,0,1,2,4: 0,0,0,0,1,2,5: 0,0,0,0,1,2,6: 0,0,0,0,1,3,4: 0,0,0,0,1,3,5:  
0,0,0,0,1,3,6: 0,0,0,0,1,4,5: 0,0,0,0,1,4,6: 0,0,0,0,1,5,4: 0,0,0,0,1,5,6:  
0,0,0,0,2,3,4: 0,0,0,0,2,3,5: 0,0,0,0,2,3,6: 0,0,0,0,2,4,5: 0,0,0,0,2,4,6:  
0,0,0,0,2,5,4: 0,0,0,0,2,5,6: 0,0,0,0,3,4,5: 0,0,0,0,3,4,6: 0,0,0,0,3,5,4:  
0,0,0,0,3,5,6: 0,0,0,0,4,5,6: 0,0,0,1,2,3,4: 0,0,0,1,2,3,5: 0,0,0,1,2,3,6:  
0,0,0,1,2,4,5: 0,0,0,1,2,4,6: 0,0,0,1,2,5,4: 0,0,0,1,2,5,6: 0,0,0,1,3,4,5:  
0,0,0,1,3,4,6: 0,0,0,1,3,5,4: 0,0,0,1,3,5,6: 0,0,0,1,4,5,6: 0,0,0,2,3,4,5:  
0,0,0,2,3,4,6: 0,0,0,2,3,5,4: 0,0,0,2,3,5,6: 0,0,0,2,4,5,6: 0,0,0,3,4,5,6:  
0,0,1,2,3,4,5: 0,0,1,2,3,4,6: 0,0,1,2,3,5,4: 0,0,1,2,3,5,6: 0,0,1,2,4,5,6:  
0,0,1,3,4,5,6: 0,0,2,3,4,5,6: 0,1,2,3,4,5,6:  
LEN=8) 0,0,0,0,0,0,0,0: 0,0,0,0,0,0,0,1: 0,0,0,0,0,0,0,2: 0,0,0,0,0,0,0,3:  
0,0,0,0,0,0,0,4: 0,0,0,0,0,0,0,5: 0,0,0,0,0,0,0,6: 0,0,0,0,0,0,0,7:  
0,0,0,0,0,0,1,2: 0,0,0,0,0,0,1,3: 0,0,0,0,0,0,1,4: 0,0,0,0,0,0,1,5:  
0,0,0,0,0,0,1,6: 0,0,0,0,0,0,1,7: 0,0,0,0,0,0,2,3: 0,0,0,0,0,0,2,4:  
0,0,0,0,0,0,2,5: 0,0,0,0,0,0,2,6: 0,0,0,0,0,0,2,7: 0,0,0,0,0,0,3,4:  
0,0,0,0,0,0,3,5: 0,0,0,0,0,0,3,6: 0,0,0,0,0,0,3,7: 0,0,0,0,0,0,4,5:  
0,0,0,0,0,0,4,6: 0,0,0,0,0,0,4,7: 0,0,0,0,0,0,5,6: 0,0,0,0,0,0,5,7:  
0,0,0,0,0,0,6,5: 0,0,0,0,0,0,6,7: 0,0,0,0,0,1,2,3: 0,0,0,0,0,1,2,4:  
0,0,0,0,0,1,2,5: 0,0,0,0,0,1,2,6: 0,0,0,0,0,1,2,7: 0,0,0,0,0,1,3,4:  
0,0,0,0,0,1,3,5: 0,0,0,0,0,1,3,6: 0,0,0,0,0,1,3,7: 0,0,0,0,0,1,4,5:  
0,0,0,0,0,1,4,6: 0,0,0,0,0,1,4,7: 0,0,0,0,0,1,5,6: 0,0,0,0,0,1,5,7:  
0,0,0,0,0,1,6,5: 0,0,0,0,0,1,6,7: 0,0,0,0,0,2,3,4: 0,0,0,0,0,2,3,5:  
0,0,0,0,0,2,3,6: 0,0,0,0,0,2,3,7: 0,0,0,0,0,2,4,5: 0,0,0,0,0,2,4,6:  
0,0,0,0,0,2,4,7: 0,0,0,0,0,2,5,6: 0,0,0,0,0,2,5,7: 0,0,0,0,0,2,6,5:  
0,0,0,0,0,2,6,7: 0,0,0,0,0,3,4,5: 0,0,0,0,0,3,4,6: 0,0,0,0,0,3,4,7:  
0,0,0,0,0,3,5,6: 0,0,0,0,0,3,5,7: 0,0,0,0,0,3,6,5: 0,0,0,0,0,3,6,7:  
0,0,0,0,0,4,5,6: 0,0,0,0,0,4,5,7: 0,0,0,0,0,4,6,5: 0,0,0,0,0,4,6,7:  
0,0,0,0,0,5,6,7: 0,0,0,0,1,2,3,4: 0,0,0,0,1,2,3,5: 0,0,0,0,1,2,3,6:  
0,0,0,0,1,2,3,7: 0,0,0,0,1,2,4,5: 0,0,0,0,1,2,4,6: 0,0,0,0,1,2,4,7:  
0,0,0,0,1,2,5,6: 0,0,0,0,1,2,5,7: 0,0,0,0,1,2,6,5: 0,0,0,0,1,2,6,7:  
0,0,0,0,1,3,4,5: 0,0,0,0,1,3,4,6: 0,0,0,0,1,3,4,7: 0,0,0,0,1,3,5,6:

0,0,0,0,1,3,5,7, : 0,0,0,0,1,3,6,5, : 0,0,0,0,1,3,6,7, : 0,0,0,0,1,4,5,6, :  
0,0,0,0,1,4,5,7, : 0,0,0,0,1,4,6,5, : 0,0,0,0,1,4,6,7, : 0,0,0,0,1,5,6,7, :  
0,0,0,0,2,3,4,5, : 0,0,0,0,2,3,4,6, : 0,0,0,0,2,3,4,7, : 0,0,0,0,2,3,5,6, :  
0,0,0,0,2,3,5,7, : 0,0,0,0,2,3,6,5, : 0,0,0,0,2,3,6,7, : 0,0,0,0,2,4,5,6, :  
0,0,0,0,2,4,5,7, : 0,0,0,0,2,4,6,5, : 0,0,0,0,2,4,6,7, : 0,0,0,0,2,5,6,7, :  
0,0,0,0,3,4,5,6, : 0,0,0,0,3,4,5,7, : 0,0,0,0,3,4,6,5, : 0,0,0,0,3,4,6,7, :  
0,0,0,0,3,5,6,7, : 0,0,0,0,4,5,6,7, : 0,0,0,1,2,3,4,5, : 0,0,0,1,2,3,4,6, :  
0,0,0,1,2,3,4,7, : 0,0,0,1,2,3,5,6, : 0,0,0,1,2,3,5,7, : 0,0,0,1,2,3,6,5, :  
0,0,0,1,2,3,6,7, : 0,0,0,1,2,4,5,6, : 0,0,0,1,2,4,5,7, : 0,0,0,1,2,4,6,5, :  
0,0,0,1,2,4,6,7, : 0,0,0,1,2,5,6,7, : 0,0,0,1,3,4,5,6, : 0,0,0,1,3,4,5,7, :  
0,0,0,1,3,4,6,5, : 0,0,0,1,3,4,6,7, : 0,0,0,1,3,5,6,7, : 0,0,0,1,4,5,6,7, :  
0,0,0,2,3,4,5,6, : 0,0,0,2,3,4,5,7, : 0,0,0,2,3,4,6,5, : 0,0,0,2,3,4,6,7, :  
0,0,0,2,3,5,6,7, : 0,0,0,2,4,5,6,7, : 0,0,0,3,4,5,6,7, : 0,0,1,2,3,4,5,6, :  
0,0,1,2,3,4,5,7, : 0,0,1,2,3,4,6,5, : 0,0,1,2,3,4,6,7, : 0,0,1,2,3,5,6,7, :  
0,0,1,2,4,5,6,7, : 0,0,1,3,4,5,6,7, : 0,0,2,3,4,5,6,7, : 0,1,2,3,4,5,6,7, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, :  
0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, :  
0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,1,2, : 0,0,0,0,0,0,0,1,3, :  
0,0,0,0,0,0,0,1,4, : 0,0,0,0,0,0,0,1,5, : 0,0,0,0,0,0,0,1,6, : 0,0,0,0,0,0,0,1,7, :  
0,0,0,0,0,0,0,1,8, : 0,0,0,0,0,0,0,2,3, : 0,0,0,0,0,0,0,2,4, : 0,0,0,0,0,0,0,2,5, :  
0,0,0,0,0,0,0,2,6, : 0,0,0,0,0,0,0,2,7, : 0,0,0,0,0,0,0,2,8, : 0,0,0,0,0,0,0,3,4, :  
0,0,0,0,0,0,0,3,5, : 0,0,0,0,0,0,0,3,6, : 0,0,0,0,0,0,0,3,7, : 0,0,0,0,0,0,0,3,8, :  
0,0,0,0,0,0,0,4,5, : 0,0,0,0,0,0,0,4,6, : 0,0,0,0,0,0,0,4,7, : 0,0,0,0,0,0,0,4,8, :  
0,0,0,0,0,0,0,5,6, : 0,0,0,0,0,0,0,5,7, : 0,0,0,0,0,0,0,5,8, : 0,0,0,0,0,0,0,6,7, :  
0,0,0,0,0,0,0,6,8, : 0,0,0,0,0,0,0,7,6, : 0,0,0,0,0,0,0,7,8, : 0,0,0,0,0,0,1,2,3, :  
0,0,0,0,0,0,1,2,4, : 0,0,0,0,0,0,1,2,5, : 0,0,0,0,0,0,1,2,6, : 0,0,0,0,0,0,1,2,7, :  
0,0,0,0,0,0,1,2,8, : 0,0,0,0,0,0,1,3,4, : 0,0,0,0,0,0,1,3,5, : 0,0,0,0,0,0,1,3,6, :  
0,0,0,0,0,0,1,3,7, : 0,0,0,0,0,0,1,3,8, : 0,0,0,0,0,0,1,4,5, : 0,0,0,0,0,0,1,4,6, :  
0,0,0,0,0,0,1,4,7, : 0,0,0,0,0,0,1,4,8, : 0,0,0,0,0,0,1,5,6, : 0,0,0,0,0,0,1,5,7, :  
0,0,0,0,0,0,1,5,8, : 0,0,0,0,0,0,1,6,7, : 0,0,0,0,0,0,1,6,8, : 0,0,0,0,0,0,1,7,6, :  
0,0,0,0,0,0,1,7,8, : 0,0,0,0,0,0,2,3,4, : 0,0,0,0,0,0,2,3,5, : 0,0,0,0,0,0,2,3,6, :  
0,0,0,0,0,0,2,3,7, : 0,0,0,0,0,0,2,3,8, : 0,0,0,0,0,0,2,4,5, : 0,0,0,0,0,0,2,4,6, :  
0,0,0,0,0,0,2,4,7, : 0,0,0,0,0,0,2,4,8, : 0,0,0,0,0,0,2,5,6, : 0,0,0,0,0,0,2,5,7, :  
0,0,0,0,0,0,2,5,8, : 0,0,0,0,0,0,2,6,7, : 0,0,0,0,0,0,2,6,8, : 0,0,0,0,0,0,2,7,6, :  
0,0,0,0,0,0,2,7,8, : 0,0,0,0,0,0,3,4,5, : 0,0,0,0,0,0,3,4,6, : 0,0,0,0,0,0,3,4,7, :  
0,0,0,0,0,0,3,4,8, : 0,0,0,0,0,0,3,5,6, : 0,0,0,0,0,0,3,5,7, : 0,0,0,0,0,0,3,5,8, :  
0,0,0,0,0,0,3,6,7, : 0,0,0,0,0,0,3,6,8, : 0,0,0,0,0,0,3,7,6, : 0,0,0,0,0,0,3,7,8, :  
0,0,0,0,0,0,4,5,6, : 0,0,0,0,0,0,4,5,7, : 0,0,0,0,0,0,4,5,8, : 0,0,0,0,0,0,4,6,7, :  
0,0,0,0,0,0,4,6,8, : 0,0,0,0,0,0,4,7,6, : 0,0,0,0,0,0,4,7,8, : 0,0,0,0,0,0,5,6,7, :  
0,0,0,0,0,0,5,6,8, : 0,0,0,0,0,0,5,7,6, : 0,0,0,0,0,0,5,7,8, : 0,0,0,0,0,0,6,7,8, :  
0,0,0,0,0,1,2,3,4, : 0,0,0,0,0,1,2,3,5, : 0,0,0,0,0,1,2,3,6, : 0,0,0,0,0,1,2,3,7, :  
0,0,0,0,0,1,2,3,8, : 0,0,0,0,0,1,2,4,5, : 0,0,0,0,0,1,2,4,6, : 0,0,0,0,0,1,2,4,7, :  
0,0,0,0,0,1,2,4,8, : 0,0,0,0,0,1,2,5,6, : 0,0,0,0,0,1,2,5,7, : 0,0,0,0,0,1,2,5,8, :  
0,0,0,0,0,1,2,6,7, : 0,0,0,0,0,1,2,6,8, : 0,0,0,0,0,1,2,7,6, : 0,0,0,0,0,1,2,7,8, :  
0,0,0,0,0,1,3,4,5, : 0,0,0,0,0,1,3,4,6, : 0,0,0,0,0,1,3,4,7, : 0,0,0,0,0,1,3,4,8, :  
0,0,0,0,0,1,3,5,6, : 0,0,0,0,0,1,3,5,7, : 0,0,0,0,0,1,3,5,8, : 0,0,0,0,0,1,3,6,7, :  
0,0,0,0,0,1,3,6,8, : 0,0,0,0,0,1,3,7,6, : 0,0,0,0,0,1,3,7,8, : 0,0,0,0,0,1,4,5,6, :  
0,0,0,0,0,1,4,5,7, : 0,0,0,0,0,1,4,5,8, : 0,0,0,0,0,1,4,6,7, : 0,0,0,0,0,1,4,6,8, :  
0,0,0,0,0,1,4,7,6, : 0,0,0,0,0,1,4,7,8, : 0,0,0,0,0,1,5,6,7, : 0,0,0,0,0,1,5,6,8, :  
0,0,0,0,0,1,5,7,6, : 0,0,0,0,0,1,5,7,8, : 0,0,0,0,0,1,6,7,8, : 0,0,0,0,0,2,3,4,5, :

0,0,0,0,0,2,3,4,6, : 0,0,0,0,0,2,3,4,7, : 0,0,0,0,0,2,3,4,8, : 0,0,0,0,0,2,3,5,6, :  
0,0,0,0,0,2,3,5,7, : 0,0,0,0,0,2,3,5,8, : 0,0,0,0,0,2,3,6,7, : 0,0,0,0,0,2,3,6,8, :  
0,0,0,0,0,2,3,7,6, : 0,0,0,0,0,2,3,7,8, : 0,0,0,0,0,2,4,5,6, : 0,0,0,0,0,2,4,5,7, :  
0,0,0,0,0,2,4,5,8, : 0,0,0,0,0,2,4,6,7, : 0,0,0,0,0,2,4,6,8, : 0,0,0,0,0,2,4,7,6, :  
0,0,0,0,0,2,4,7,8, : 0,0,0,0,0,2,5,6,7, : 0,0,0,0,0,2,5,6,8, : 0,0,0,0,0,2,5,7,6, :  
0,0,0,0,0,2,5,7,8, : 0,0,0,0,0,2,6,7,8, : 0,0,0,0,0,3,4,5,6, : 0,0,0,0,0,3,4,5,7, :  
0,0,0,0,0,3,4,5,8, : 0,0,0,0,0,3,4,6,7, : 0,0,0,0,0,3,4,6,8, : 0,0,0,0,0,3,4,7,6, :  
0,0,0,0,0,3,4,7,8, : 0,0,0,0,0,3,5,6,7, : 0,0,0,0,0,3,5,6,8, : 0,0,0,0,0,3,5,7,6, :  
0,0,0,0,0,3,5,7,8, : 0,0,0,0,0,3,6,7,8, : 0,0,0,0,0,4,5,6,7, : 0,0,0,0,0,4,5,6,8, :  
0,0,0,0,0,4,5,7,6, : 0,0,0,0,0,4,5,7,8, : 0,0,0,0,0,4,6,7,8, : 0,0,0,0,0,5,6,7,8, :  
0,0,0,0,1,2,3,4,5, : 0,0,0,0,1,2,3,4,6, : 0,0,0,0,1,2,3,4,7, : 0,0,0,0,1,2,3,4,8, :  
0,0,0,0,1,2,3,5,6, : 0,0,0,0,1,2,3,5,7, : 0,0,0,0,1,2,3,5,8, : 0,0,0,0,1,2,3,6,7, :  
0,0,0,0,1,2,3,6,8, : 0,0,0,0,1,2,3,7,6, : 0,0,0,0,1,2,3,7,8, : 0,0,0,0,1,2,4,5,6, :  
0,0,0,0,1,2,4,5,7, : 0,0,0,0,1,2,4,5,8, : 0,0,0,0,1,2,4,6,7, : 0,0,0,0,1,2,4,6,8, :  
0,0,0,0,1,2,4,7,6, : 0,0,0,0,1,2,4,7,8, : 0,0,0,0,1,2,5,6,7, : 0,0,0,0,1,2,5,6,8, :  
0,0,0,0,1,2,5,7,6, : 0,0,0,0,1,2,5,7,8, : 0,0,0,0,1,2,6,7,8, : 0,0,0,0,1,3,4,5,6, :  
0,0,0,0,1,3,4,5,7, : 0,0,0,0,1,3,4,5,8, : 0,0,0,0,1,3,4,6,7, : 0,0,0,0,1,3,4,6,8, :  
0,0,0,0,1,3,4,7,6, : 0,0,0,0,1,3,4,7,8, : 0,0,0,0,1,3,5,6,7, : 0,0,0,0,1,3,5,6,8, :  
0,0,0,0,1,3,5,7,6, : 0,0,0,0,1,3,5,7,8, : 0,0,0,0,1,3,6,7,8, : 0,0,0,0,1,4,5,6,7, :  
0,0,0,0,1,4,5,6,8, : 0,0,0,0,1,4,5,7,6, : 0,0,0,0,1,4,5,7,8, : 0,0,0,0,1,4,6,7,8, :  
0,0,0,0,1,5,6,7,8, : 0,0,0,0,2,3,4,5,6, : 0,0,0,0,2,3,4,5,7, : 0,0,0,0,2,3,4,5,8, :  
0,0,0,0,2,3,4,6,7, : 0,0,0,0,2,3,4,6,8, : 0,0,0,0,2,3,4,7,6, : 0,0,0,0,2,3,4,7,8, :  
0,0,0,0,2,3,5,6,7, : 0,0,0,0,2,3,5,6,8, : 0,0,0,0,2,3,5,7,6, : 0,0,0,0,2,3,5,7,8, :  
0,0,0,0,2,3,6,7,8, : 0,0,0,0,2,4,5,6,7, : 0,0,0,0,2,4,5,6,8, : 0,0,0,0,2,4,5,7,6, :  
0,0,0,0,2,4,5,7,8, : 0,0,0,0,2,4,6,7,8, : 0,0,0,0,2,5,6,7,8, : 0,0,0,0,3,4,5,6,7, :  
0,0,0,0,3,4,5,6,8, : 0,0,0,0,3,4,5,7,6, : 0,0,0,0,3,4,5,7,8, : 0,0,0,0,3,4,6,7,8, :  
0,0,0,0,3,5,6,7,8, : 0,0,0,0,4,5,6,7,8, : 0,0,0,1,2,3,4,5,6, : 0,0,0,1,2,3,4,5,7, :  
0,0,0,1,2,3,4,5,8, : 0,0,0,1,2,3,4,6,7, : 0,0,0,1,2,3,4,6,8, : 0,0,0,1,2,3,4,7,6, :  
0,0,0,1,2,3,4,7,8, : 0,0,0,1,2,3,5,6,7, : 0,0,0,1,2,3,5,6,8, : 0,0,0,1,2,3,5,7,6, :  
0,0,0,1,2,3,5,7,8, : 0,0,0,1,2,3,6,7,8, : 0,0,0,1,2,4,5,6,7, : 0,0,0,1,2,4,5,6,8, :  
0,0,0,1,2,4,5,7,6, : 0,0,0,1,2,4,5,7,8, : 0,0,0,1,2,4,6,7,8, : 0,0,0,1,2,5,6,7,8, :  
0,0,0,1,3,4,5,6,7, : 0,0,0,1,3,4,5,6,8, : 0,0,0,1,3,4,5,7,6, : 0,0,0,1,3,4,5,7,8, :  
0,0,0,1,3,4,6,7,8, : 0,0,0,1,3,5,6,7,8, : 0,0,0,1,4,5,6,7,8, : 0,0,0,2,3,4,5,6,7, :  
0,0,0,2,3,4,5,6,8, : 0,0,0,2,3,4,5,7,6, : 0,0,0,2,3,4,5,7,8, : 0,0,0,2,3,4,6,7,8, :  
0,0,0,2,3,5,6,7,8, : 0,0,0,2,4,5,6,7,8, : 0,0,0,3,4,5,6,7,8, : 0,0,1,2,3,4,5,6,7, :  
0,0,1,2,3,4,5,6,8, : 0,0,1,2,3,4,5,7,6, : 0,0,1,2,3,4,5,7,8, : 0,0,1,2,3,4,6,7,8, :  
0,0,1,2,3,5,6,7,8, : 0,0,1,2,4,5,6,7,8, : 0,0,1,3,4,5,6,7,8, : 0,0,2,3,4,5,6,7,8, :  
0,1,2,3,4,5,6,7,8, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :  
0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, :  
0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :  
0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,1,2, : 0,0,0,0,0,0,0,0,1,3, :  
0,0,0,0,0,0,0,0,1,4, : 0,0,0,0,0,0,0,0,1,5, : 0,0,0,0,0,0,0,0,1,6, :  
0,0,0,0,0,0,0,0,1,7, : 0,0,0,0,0,0,0,0,1,8, : 0,0,0,0,0,0,0,0,1,9, :  
0,0,0,0,0,0,0,0,2,3, : 0,0,0,0,0,0,0,0,2,4, : 0,0,0,0,0,0,0,0,2,5, :  
0,0,0,0,0,0,0,0,2,6, : 0,0,0,0,0,0,0,0,2,7, : 0,0,0,0,0,0,0,0,2,8, :  
0,0,0,0,0,0,0,0,2,9, : 0,0,0,0,0,0,0,0,3,4, : 0,0,0,0,0,0,0,0,3,5, :  
0,0,0,0,0,0,0,0,3,6, : 0,0,0,0,0,0,0,0,3,7, : 0,0,0,0,0,0,0,0,3,8, :  
0,0,0,0,0,0,0,0,3,9, : 0,0,0,0,0,0,0,0,4,5, : 0,0,0,0,0,0,0,0,4,6, :  
0,0,0,0,0,0,0,0,4,7, : 0,0,0,0,0,0,0,0,4,8, : 0,0,0,0,0,0,0,0,4,9, :







0,0,0,0,1,4,5,6,8,9 : 0,0,0,0,1,4,5,7,8,9 : 0,0,0,0,1,4,6,7,8,9 :  
 0,0,0,0,1,5,6,7,8,9 : 0,0,0,0,2,3,4,5,6,7 : 0,0,0,0,2,3,4,5,6,8 :  
 0,0,0,0,2,3,4,5,6,9 : 0,0,0,0,2,3,4,5,7,8 : 0,0,0,0,2,3,4,5,7,9 :  
 0,0,0,0,2,3,4,5,8,7 : 0,0,0,0,2,3,4,5,8,9 : 0,0,0,0,2,3,4,6,7,8 :  
 0,0,0,0,2,3,4,6,7,9 : 0,0,0,0,2,3,4,6,8,7 : 0,0,0,0,2,3,4,6,8,9 :  
 0,0,0,0,2,3,4,7,8,9 : 0,0,0,0,2,3,5,6,7,8 : 0,0,0,0,2,3,5,6,7,9 :  
 0,0,0,0,2,3,5,6,8,7 : 0,0,0,0,2,3,5,6,8,9 : 0,0,0,0,2,3,5,7,8,9 :  
 0,0,0,0,2,3,6,7,8,9 : 0,0,0,0,2,4,5,6,7,8 : 0,0,0,0,2,4,5,6,7,9 :  
 0,0,0,0,2,4,5,6,8,7 : 0,0,0,0,2,4,5,6,8,9 : 0,0,0,0,2,4,5,7,8,9 :  
 0,0,0,0,2,4,6,7,8,9 : 0,0,0,0,2,5,6,7,8,9 : 0,0,0,0,3,4,5,6,7,8 :  
 0,0,0,0,3,4,5,6,7,9 : 0,0,0,0,3,4,5,6,8,7 : 0,0,0,0,3,4,5,6,8,9 :  
 0,0,0,0,3,4,5,7,8,9 : 0,0,0,0,3,4,6,7,8,9 : 0,0,0,0,3,5,6,7,8,9 :  
 0,0,0,0,4,5,6,7,8,9 : 0,0,0,1,2,3,4,5,6,7 : 0,0,0,1,2,3,4,5,6,8 :  
 0,0,0,1,2,3,4,5,6,9 : 0,0,0,1,2,3,4,5,7,8 : 0,0,0,1,2,3,4,5,7,9 :  
 0,0,0,1,2,3,4,5,8,7 : 0,0,0,1,2,3,4,5,8,9 : 0,0,0,1,2,3,4,6,7,8 :  
 0,0,0,1,2,3,4,6,7,9 : 0,0,0,1,2,3,4,6,8,7 : 0,0,0,1,2,3,4,6,8,9 :  
 0,0,0,1,2,3,4,7,8,9 : 0,0,0,1,2,3,5,6,7,8 : 0,0,0,1,2,3,5,6,7,9 :  
 0,0,0,1,2,3,5,6,8,7 : 0,0,0,1,2,3,5,6,8,9 : 0,0,0,1,2,3,5,7,8,9 :  
 0,0,0,1,2,3,6,7,8,9 : 0,0,0,1,2,4,5,6,7,8 : 0,0,0,1,2,4,5,6,7,9 :  
 0,0,0,1,2,4,5,6,8,7 : 0,0,0,1,2,4,5,6,8,9 : 0,0,0,1,2,4,5,7,8,9 :  
 0,0,0,1,2,4,6,7,8,9 : 0,0,0,1,2,5,6,7,8,9 : 0,0,0,1,3,4,5,6,7,8 :  
 0,0,0,1,3,4,5,6,7,9 : 0,0,0,1,3,4,5,6,8,7 : 0,0,0,1,3,4,5,6,8,9 :  
 0,0,0,1,3,4,5,7,8,9 : 0,0,0,1,3,4,6,7,8,9 : 0,0,0,1,3,5,6,7,8,9 :  
 0,0,0,1,4,5,6,7,8,9 : 0,0,0,2,3,4,5,6,7,8 : 0,0,0,2,3,4,5,6,7,9 :  
 0,0,0,2,3,4,5,6,8,7 : 0,0,0,2,3,4,5,6,8,9 : 0,0,0,2,3,4,5,7,8,9 :  
 0,0,0,2,3,4,6,7,8,9 : 0,0,0,2,3,5,6,7,8,9 : 0,0,0,2,4,5,6,7,8,9 :  
 0,0,0,3,4,5,6,7,8,9 : 0,0,1,2,3,4,5,6,7,8 : 0,0,1,2,3,4,5,6,7,9 :  
 0,0,1,2,3,4,5,6,8,7 : 0,0,1,2,3,4,5,6,8,9 : 0,0,1,2,3,4,5,7,8,9 :  
 0,0,1,2,3,4,6,7,8,9 : 0,0,1,2,3,5,6,7,8,9 : 0,0,1,2,4,5,6,7,8,9 :  
 0,0,1,3,4,5,6,7,8,9 : 0,0,2,3,4,5,6,7,8,9 : 0,1,2,3,4,5,6,7,8,9 :

Number new nodes in level n is given by : 1,2,5,9,18,36,72,144,288,576,

-----Class

1269-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[100][101][102][110][210]]$

-----

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--
- R3) 0,1,-->0,1,0,--0,0,--0,1,2,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R5) 0,0,1,-->0,1,0,--0,0,0,--0,0,1,2,--0,0,1,3,--
- R6) 0,0,2,-->0,0,2,0,--0,1,0,--0,0,--0,0,2,3,--
- R7) 0,1,0,-->
- R8) 0,1,2,-->0,1,0,--0,1,0,--0,0,--0,1,2,3,--
- R9) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R10) 0,0,0,1,-->0,1,0,--0,0,0,0,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--
- R11) 0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,--0,0,0,2,3,--0,0,0,2,4,--
- R12) 0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,3,4,--



R13) 0,0,1,2,-->0,1,0,--0,1,0,--0,0,0,--0,0,1,2,3,--0,0,1,2,4,--  
R14) 0,0,1,3,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,--0,0,1,3,4,--  
R15) 0,0,2,0,-->0,1,0,--  
R16) 0,0,2,3,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,--0,0,2,3,4,--  
R17) 0,1,2,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,1,2,3,4,--  
R18)  
0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--  
R19)  
0,0,0,0,1,-->0,1,0,--0,0,0,0,0,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,  
1,5,--  
R20)  
0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,--0,0,0,0,2,3,--0,0,0,0,2,4,--0,0,0,0,2,5,--  
R21)  
0,0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,0,0,3,4,--0,0,0,0,3,5,--  
R22) 0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,0,4,5,--  
R23)  
0,0,0,1,2,-->0,1,0,--0,1,0,--0,0,0,0,--0,0,0,1,2,3,--0,0,0,1,2,4,--0,0,0,1,2,5,--  
R24) 0,0,0,1,3,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,0,1,3,4,--0,0,0,1,3,5,--  
R25) 0,0,0,1,4,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,1,4,5,--  
R26) 0,0,0,2,3,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,0,--0,0,0,2,3,4,--0,0,0,2,3,5,--  
R27) 0,0,0,2,4,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,2,4,5,--  
R28) 0,0,0,3,0,-->0,0,2,0,--0,1,0,--  
R29) 0,0,0,3,4,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,--0,0,0,3,4,5,--  
R30) 0,0,1,2,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,0,1,2,3,4,--0,0,1,2,3,5,--  
R31) 0,0,1,2,4,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,--0,0,1,2,4,5,--  
R32) 0,0,1,3,4,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,--0,0,1,3,4,5,--  
R33) 0,0,2,3,4,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,2,3,4,5,--  
R34) 0,1,2,3,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,1,2,3,4,5,--  
R35)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R36)  
0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,  
--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--  
R37)  
0,0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,0,2,3,--0,0,0,0,0,2,4,--0,0,0,  
0,0,2,5,--0,0,0,0,0,2,6,--  
R38)  
0,0,0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,--0,0,0,0,0,3,4,--0,0,0,0,0,3,  
5,--0,0,0,0,0,3,6,--  
R39)  
0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,0,0,0,4,5,--  
0,0,0,0,0,4,6,--  
R40)  
0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--0,  
0,0,0,0,5,6,--  
R41)  
0,0,0,0,1,2,-->0,1,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,1,2,3,--0,0,0,0,1,2,4,--0,0,0,0,  
1,2,5,--0,0,0,0,1,2,6,--

R42)

0,0,0,0,1,3,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,--0,0,0,0,1,3,4,--0,0,0,0,1,3,5,--  
0,0,0,0,1,3,6,--

R43)

0,0,0,0,1,4,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,0,0,1,4,5,--0,0,0,  
0,1,4,6,--

R44)

0,0,0,0,1,5,-->0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,0,1,  
5,6,--

R45)

0,0,0,0,2,3,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,0,2,3,4,--0,0,0,0,2,3,5,--  
0,0,0,0,2,3,6,--

R46)

0,0,0,0,2,4,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,0,0,2,4,5,--0,0,0,0,  
2,4,6,--

R47)

0,0,0,0,2,5,-->0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,0,2,5,6,  
--

R48)

0,0,0,0,3,4,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,--0,0,0,0,3,4,5,--0,0,0,  
0,3,4,6,--

R49)

0,0,0,0,3,5,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,0,3,5,6,  
--

R50) 0,0,0,0,4,0,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--

R51)

0,0,0,0,4,5,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,--0,0,0,0,4,  
5,6,--

R52)

0,0,0,1,2,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,1,2,3,4,--0,0,0,1,2,3,5,--0,  
0,0,1,2,3,6,--

R53)

0,0,0,1,2,4,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,0,1,2,4,5,--0,0,0,1,2,  
4,6,--

R54)

0,0,0,1,2,5,-->0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,1,2,5,6,--

R55)

0,0,0,1,3,4,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,--0,0,0,1,3,4,5,--0,0,0,1,3,  
4,6,--

R56)

0,0,0,1,3,5,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,1,3,5,6,--

R57)

0,0,0,1,4,5,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,--0,0,0,1,4,5,6,--

R58)

0,0,0,2,3,4,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,0,0,2,3,4,5,--0,0,0,2,3,  
4,6,--

R59)

0,0,0,2,3,5,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,2,3,5,6,--

R60)

0,0,0,2,4,5,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,--0,0,0,2,4,5,6,--

R61)  
0,0,0,3,4,5,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,0,3,4,5,6,--  
R62)  
0,0,1,2,3,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,0,1,2,3,4,5,--0,0,1,2,3,4,  
6,--  
R63)  
0,0,1,2,3,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,--0,0,1,2,3,5,6,--  
R64)  
0,0,1,2,4,5,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,--0,0,1,2,4,5,6,--  
R65)  
0,0,1,3,4,5,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,1,3,4,5,6,--  
R66)  
0,0,2,3,4,5,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,2,3,4,5,6,--  
R67) 0,1,2,3,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,6,--  
R68)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R69)  
0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,  
0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--  
R70)  
0,0,0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,3,--0,0,0,0,0,0,2,4,  
--0,0,0,0,0,0,2,5,--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,2,7,--  
R71)  
0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,0,0,3,4,--0,0,0,  
0,0,0,3,5,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,7,--  
R72)  
0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,--0,0,0,0,0,0,  
4,5,--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,7,--  
R73)  
0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,  
--0,0,0,0,0,0,5,6,--0,0,0,0,0,0,5,7,--  
R74)  
0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,  
0,--0,1,0,--0,0,--0,0,0,0,0,0,6,7,--  
R75)  
0,0,0,0,0,1,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,1,2,3,--0,0,0,0,0,1,2,4,--  
0,0,0,0,0,1,2,5,--0,0,0,0,0,1,2,6,--0,0,0,0,0,1,2,7,--  
R76)  
0,0,0,0,0,1,3,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,0,1,3,4,--0,0,0,0,0,  
1,3,5,--0,0,0,0,0,1,3,6,--0,0,0,0,0,1,3,7,--  
R77)  
0,0,0,0,0,1,4,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,--0,0,0,0,0,1,4,5,--  
0,0,0,0,0,1,4,6,--0,0,0,0,0,1,4,7,--  
R78)  
0,0,0,0,0,1,5,-->0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,0,  
0,0,1,5,6,--0,0,0,0,0,1,5,7,--  
R79)  
0,0,0,0,0,1,6,-->0,1,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,  
--0,0,--0,0,0,0,0,1,6,7,--

R80)

0,0,0,0,0,2,3,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,0,2,3,4,--0,0,0,0,0,  
2,3,5,--0,0,0,0,0,2,3,6,--0,0,0,0,0,2,3,7,--

R81)

0,0,0,0,0,2,4,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,--0,0,0,0,0,2,4,5,--0,  
0,0,0,0,2,4,6,--0,0,0,0,0,2,4,7,--

R82)

0,0,0,0,0,2,5,-->0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,0,0,0,  
2,5,6,--0,0,0,0,0,2,5,7,--

R83)

0,0,0,0,0,2,6,-->0,0,2,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,  
--0,0,0,0,0,2,6,7,--

R84)

0,0,0,0,0,3,4,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,0,0,3,4,5,--  
0,0,0,0,0,3,4,6,--0,0,0,0,0,3,4,7,--

R85)

0,0,0,0,0,3,5,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,0,0,0,  
3,5,6,--0,0,0,0,0,3,5,7,--

R86)

0,0,0,0,0,3,6,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--  
0,0,0,0,0,3,6,7,--

R87)

0,0,0,0,0,4,5,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,--0,0,0,  
0,0,4,5,6,--0,0,0,0,0,4,5,7,--

R88)

0,0,0,0,0,4,6,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,  
--0,0,0,0,0,4,6,7,--

R89) 0,0,0,0,0,5,0,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--

R90)

0,0,0,0,0,5,6,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,  
--0,0,--0,0,0,0,0,5,6,7,--

R91)

0,0,0,0,1,2,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,1,2,3,4,--0,0,0,0,1,2,  
3,5,--0,0,0,0,1,2,3,6,--0,0,0,0,1,2,3,7,--

R92)

0,0,0,0,1,2,4,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,--0,0,0,0,1,2,4,5,--0,0,  
0,0,1,2,4,6,--0,0,0,0,1,2,4,7,--

R93)

0,0,0,0,1,2,5,-->0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,0,0,1,2,  
5,6,--0,0,0,0,1,2,5,7,--

R94)

0,0,0,0,1,2,6,-->0,1,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--  
0,0,0,0,1,2,6,7,--

R95)

0,0,0,0,1,3,4,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,0,1,3,4,5,--0,0,  
0,0,1,3,4,6,--0,0,0,0,1,3,4,7,--

R96)

0,0,0,0,1,3,5,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,0,0,1,3,5,  
6,--0,0,0,0,1,3,5,7,--

R97)

0,0,0,0,1,3,6,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--0,0,  
0,0,1,3,6,7,--

R98)

0,0,0,0,1,4,5,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,--0,0,0,0,1,4,  
5,6,--0,0,0,0,1,4,5,7,--

R99)

0,0,0,0,1,4,6,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,--0,0,  
0,0,1,4,6,7,--

R100)

0,0,0,0,1,5,6,-->0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,--  
0,0,0,0,1,5,6,7,--

R101)

0,0,0,0,2,3,4,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,0,2,3,4,5,--0,0,  
0,0,2,3,4,6,--0,0,0,0,2,3,4,7,--

R102)

0,0,0,0,2,3,5,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,0,0,2,3,5,  
6,--0,0,0,0,2,3,5,7,--

R103)

0,0,0,0,2,3,6,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--0,0,  
0,0,2,3,6,7,--

R104)

0,0,0,0,2,4,5,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,--0,0,0,0,2,4,5,  
6,--0,0,0,0,2,4,5,7,--

R105)

0,0,0,0,2,4,6,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,  
0,2,4,6,7,--

R106)

0,0,0,0,2,5,6,-->0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,--0,0,  
0,0,2,5,6,7,--

R107)

0,0,0,0,3,4,5,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,0,0,0,3,4,  
5,6,--0,0,0,0,3,4,5,7,--

R108)

0,0,0,0,3,4,6,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,--0,0,  
0,0,3,4,6,7,--

R109)

0,0,0,0,3,5,6,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,--0,0,  
0,0,3,5,6,7,--

R110)

0,0,0,0,4,5,6,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--  
0,0,0,0,4,5,6,7,--

R111)

0,0,0,1,2,3,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,1,2,3,4,5,--0,0,0,  
1,2,3,4,6,--0,0,0,1,2,3,4,7,--

R112)

0,0,0,1,2,3,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,0,1,2,3,5,6,  
--0,0,0,1,2,3,5,7,--

R113)

0,0,0,1,2,3,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,  
1,2,3,6,7,--

R114)

0,0,0,1,2,4,5,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,--0,0,0,1,2,4,5,6,  
--0,0,0,1,2,4,5,7,--

R115)

0,0,0,1,2,4,6,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,1,  
2,4,6,7,--

R116)

0,0,0,1,2,5,6,-->0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,--0,0,0,  
1,2,5,6,7,--

R117)

0,0,0,1,3,4,5,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,0,0,1,3,4,5,6,  
--0,0,0,1,3,4,5,7,--

R118)

0,0,0,1,3,4,6,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,1,  
3,4,6,7,--

R119)

0,0,0,1,3,5,6,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,--0,0,0,1,  
3,5,6,7,--

R120)

0,0,0,1,4,5,6,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,0,  
1,4,5,6,7,--

R121)

0,0,0,2,3,4,5,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,0,0,2,3,4,5,6,  
--0,0,0,2,3,4,5,7,--

R122)

0,0,0,2,3,4,6,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,2,  
3,4,6,7,--

R123)

0,0,0,2,3,5,6,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,--0,0,0,2,  
3,5,6,7,--

R124)

0,0,0,2,4,5,6,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,0,2,  
4,5,6,7,--

R125)

0,0,0,3,4,5,6,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,0,  
3,4,5,6,7,--

R126)

0,0,1,2,3,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,0,1,2,3,4,5,6,--  
0,0,1,2,3,4,5,7,--

R127)

0,0,1,2,3,4,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,--0,0,1,2,3,  
4,6,7,--

R128)

0,0,1,2,3,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,--0,0,1,2,3,  
5,6,7,--

R129)

0,0,1,2,4,5,6,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,1,2,4,  
5,6,7,--

R130)

0,0,1,3,4,5,6,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,1,3,4,

5,6,7,--

R131)

0,0,2,3,4,5,6,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,2,3,4,  
5,6,7,--

R132)

0,1,2,3,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,  
6,7,--

R133)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R134)

0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,1,3,  
--0,0,0,0,0,0,0,1,4,--0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,1,7,--0,  
,0,0,0,0,0,0,1,8,--

R135)

0,0,0,0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,3,--0,0,0,0,0,  
0,0,2,4,--0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,  
,2,8,--

R136)

0,0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,0,0,0,3,4,--  
0,0,0,0,0,0,0,3,5,--0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,3,8,--

R137)

0,0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,  
0,0,0,4,5,--0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,4,8,--

R138)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,  
0,0,--0,0,0,0,0,0,5,6,--0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,5,8,--

R139)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,  
2,0,--0,1,0,--0,0,0,--0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,6,8,--

R140)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,  
0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,0,0,0,7,8,--

R141)

0,0,0,0,0,0,1,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,2,3,--0,0,0,0,0,0,  
1,2,4,--0,0,0,0,0,0,1,2,5,--0,0,0,0,0,0,1,2,6,--0,0,0,0,0,0,1,2,7,--0,0,0,0,0,0,1,2,  
,8,--

R142)

0,0,0,0,0,0,1,3,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,0,1,3,4,--0,0,  
0,0,0,0,1,3,5,--0,0,0,0,0,0,1,3,6,--0,0,0,0,0,0,1,3,7,--0,0,0,0,0,0,1,3,8,--

R143)

0,0,0,0,0,0,1,4,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,0,0,1,  
4,5,--0,0,0,0,0,0,1,4,6,--0,0,0,0,0,0,1,4,7,--0,0,0,0,0,0,1,4,8,--

R144)

0,0,0,0,0,0,1,5,-->0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,--0,  
0,0,0,0,0,1,5,6,--0,0,0,0,0,0,1,5,7,--0,0,0,0,0,0,1,5,8,--

R145)

0,0,0,0,0,0,1,6,-->0,1,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,  
0,--0,0,0,--0,0,0,0,0,0,1,6,7,--0,0,0,0,0,0,1,6,8,--

R146)

0,0,0,0,0,0,1,7,-->0,1,0,--0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,  
0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,0,0,1,7,8,--

R147)

0,0,0,0,0,0,2,3,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,2,3,4,--0,0,  
0,0,0,0,2,3,5,--0,0,0,0,0,0,2,3,6,--0,0,0,0,0,0,2,3,7,--0,0,0,0,0,0,2,3,8,--

R148)

0,0,0,0,0,0,2,4,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,0,0,2,4,  
5,--0,0,0,0,0,0,2,4,6,--0,0,0,0,0,0,2,4,7,--0,0,0,0,0,0,2,4,8,--

R149)

0,0,0,0,0,0,2,5,-->0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,--0,0,0,  
0,0,0,2,5,6,--0,0,0,0,0,0,2,5,7,--0,0,0,0,0,0,2,5,8,--

R150)

0,0,0,0,0,0,2,6,-->0,0,2,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,  
0,0,--0,0,0,0,0,0,2,6,7,--0,0,0,0,0,0,2,6,8,--

R151)

0,0,0,0,0,0,2,7,-->0,0,2,0,--0,1,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,  
2,0,--0,1,0,--0,0,--0,0,0,0,0,0,2,7,8,--

R152)

0,0,0,0,0,0,3,4,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,0,0,3,  
4,5,--0,0,0,0,0,0,3,4,6,--0,0,0,0,0,0,3,4,7,--0,0,0,0,0,0,3,4,8,--

R153)

0,0,0,0,0,0,3,5,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,--0,0,0,  
0,0,0,3,5,6,--0,0,0,0,0,0,3,5,7,--0,0,0,0,0,0,3,5,8,--

R154)

0,0,0,0,0,0,3,6,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,  
0,--0,0,0,0,0,0,3,6,7,--0,0,0,0,0,0,3,6,8,--

R155)

0,0,0,0,0,0,3,7,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,  
--0,1,0,--0,0,--0,0,0,0,0,0,3,7,8,--

R156)

0,0,0,0,0,0,4,5,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,--0,  
0,0,0,0,0,4,5,6,--0,0,0,0,0,0,4,5,7,--0,0,0,0,0,0,4,5,8,--

R157)

0,0,0,0,0,0,4,6,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,  
0,0,--0,0,0,0,0,0,4,6,7,--0,0,0,0,0,0,4,6,8,--

R158)

0,0,0,0,0,0,4,7,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,  
--0,1,0,--0,0,--0,0,0,0,0,0,4,7,8,--

R159)

0,0,0,0,0,0,5,6,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,  
0,--0,0,0,--0,0,0,0,0,0,5,6,7,--0,0,0,0,0,0,5,6,8,--

R160)

0,0,0,0,0,0,5,7,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,  
2,0,--0,1,0,--0,0,--0,0,0,0,0,0,5,7,8,--

R161)

0,0,0,0,0,0,6,0,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--

R162)

0,0,0,0,0,0,6,7,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,  
2,0,--0,1,0,--0,1,0,--0,0,--0,0,0,0,0,0,6,7,8,--



R163)

0,0,0,0,0,1,2,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,1,2,3,4,--0,0,0,  
0,0,1,2,3,5,--0,0,0,0,0,1,2,3,6,--0,0,0,0,0,1,2,3,7,--0,0,0,0,0,1,2,3,8,--

R164)

0,0,0,0,0,1,2,4,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,0,1,2,4,5,  
--0,0,0,0,0,1,2,4,6,--0,0,0,0,0,1,2,4,7,--0,0,0,0,0,1,2,4,8,--

R165)

0,0,0,0,0,1,2,5,-->0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,--0,0,0,0,  
0,1,2,5,6,--0,0,0,0,0,1,2,5,7,--0,0,0,0,0,1,2,5,8,--

R166)

0,0,0,0,0,1,2,6,-->0,1,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,  
0,--0,0,0,0,0,1,2,6,7,--0,0,0,0,0,1,2,6,8,--

R167)

0,0,0,0,0,1,2,7,-->0,1,0,--0,1,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,  
0,--0,1,0,--0,0,--0,0,0,0,0,1,2,7,8,--

R168)

0,0,0,0,0,1,3,4,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,0,1,3,4,5,  
--0,0,0,0,0,1,3,4,6,--0,0,0,0,0,1,3,4,7,--0,0,0,0,0,1,3,4,8,--

R169)

0,0,0,0,0,1,3,5,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,--0,0,0,0,0,  
1,3,5,6,--0,0,0,0,0,1,3,5,7,--0,0,0,0,0,1,3,5,8,--

R170)

0,0,0,0,0,1,3,6,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,--  
0,0,0,0,0,1,3,6,7,--0,0,0,0,0,1,3,6,8,--

R171)

0,0,0,0,0,1,3,7,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,  
1,0,--0,0,--0,0,0,0,0,1,3,7,8,--

R172)

0,0,0,0,0,1,4,5,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,0,  
0,1,4,5,6,--0,0,0,0,0,1,4,5,7,--0,0,0,0,0,1,4,5,8,--

R173)

0,0,0,0,0,1,4,6,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,--  
0,0,0,0,0,1,4,6,7,--0,0,0,0,0,1,4,6,8,--

R174)

0,0,0,0,0,1,4,7,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,  
0,--0,0,--0,0,0,0,0,1,4,7,8,--

R175)

0,0,0,0,0,1,5,6,-->0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,  
0,--0,0,0,0,0,1,5,6,7,--0,0,0,0,0,1,5,6,8,--

R176)

0,0,0,0,0,1,5,7,-->0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,  
1,0,--0,0,--0,0,0,0,0,1,5,7,8,--

R177)

0,0,0,0,0,1,6,7,-->0,1,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,  
0,--0,1,0,--0,0,--0,0,0,0,0,1,6,7,8,--

R178)

0,0,0,0,0,2,3,4,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,0,2,3,4,5,  
--0,0,0,0,0,2,3,4,6,--0,0,0,0,0,2,3,4,7,--0,0,0,0,0,2,3,4,8,--

R179)

0,0,0,0,0,2,3,5,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,--0,0,0,0,0,

2,3,5,6,--0,0,0,0,0,2,3,5,7,--0,0,0,0,0,2,3,5,8,--  
R180)  
0,0,0,0,0,2,3,6,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,--  
0,0,0,0,0,2,3,6,7,--0,0,0,0,0,2,3,6,8,--  
R181)  
0,0,0,0,0,2,3,7,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,  
1,0,--0,0,--0,0,0,0,0,2,3,7,8,--  
R182)  
0,0,0,0,0,2,4,5,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,0,0,  
2,4,5,6,--0,0,0,0,0,2,4,5,7,--0,0,0,0,0,2,4,5,8,--  
R183)  
0,0,0,0,0,2,4,6,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,--0,  
0,0,0,0,2,4,6,7,--0,0,0,0,0,2,4,6,8,--  
R184)  
0,0,0,0,0,2,4,7,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,  
--0,0,--0,0,0,0,0,2,4,7,8,--  
R185)  
0,0,0,0,0,2,5,6,-->0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,--  
0,0,0,0,0,2,5,6,7,--0,0,0,0,0,2,5,6,8,--  
R186)  
0,0,0,0,0,2,5,7,-->0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,  
--0,0,--0,0,0,0,0,2,5,7,8,--  
R187)  
0,0,0,0,0,2,6,7,-->0,0,2,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,  
1,0,--0,0,--0,0,0,0,0,2,6,7,8,--  
R188)  
0,0,0,0,0,3,4,5,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,0,  
0,3,4,5,6,--0,0,0,0,0,3,4,5,7,--0,0,0,0,0,3,4,5,8,--  
R189)  
0,0,0,0,0,3,4,6,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,--  
0,0,0,0,0,3,4,6,7,--0,0,0,0,0,3,4,6,8,--  
R190)  
0,0,0,0,0,3,4,7,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,  
0,--0,0,--0,0,0,0,0,3,4,7,8,--  
R191)  
0,0,0,0,0,3,5,6,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,--  
0,0,0,0,0,3,5,6,7,--0,0,0,0,0,3,5,6,8,--  
R192)  
0,0,0,0,0,3,5,7,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,  
--0,0,--0,0,0,0,0,3,5,7,8,--  
R193)  
0,0,0,0,0,3,6,7,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,  
0,--0,0,--0,0,0,0,0,3,6,7,8,--  
R194)  
0,0,0,0,0,4,5,6,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,  
0,--0,0,0,0,0,4,5,6,7,--0,0,0,0,0,4,5,6,8,--  
R195)  
0,0,0,0,0,4,5,7,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,  
1,0,--0,0,--0,0,0,0,0,4,5,7,8,--  
R196)

0,0,0,0,0,4,6,7,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,4,6,7,8,--

R197)

0,0,0,0,0,5,6,7,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,5,6,7,8,--

R198)

0,0,0,0,1,2,3,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,1,2,3,4,5,--0,0,0,0,1,2,3,4,6,--0,0,0,0,1,2,3,4,7,--0,0,0,0,1,2,3,4,8,--

R199)

0,0,0,0,1,2,3,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,--0,0,0,0,1,2,3,5,6,--0,0,0,0,1,2,3,5,7,--0,0,0,0,1,2,3,5,8,--

R200)

0,0,0,0,1,2,3,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,0,0,1,2,3,6,7,--0,0,0,0,1,2,3,6,8,--

R201)

0,0,0,0,1,2,3,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,0,0,1,2,3,7,8,--

R202)

0,0,0,0,1,2,4,5,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,0,1,2,4,5,6,--0,0,0,0,1,2,4,5,7,--0,0,0,0,1,2,4,5,8,--

R203)

0,0,0,0,1,2,4,6,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,0,0,1,2,4,6,7,--0,0,0,0,1,2,4,6,8,--

R204)

0,0,0,0,1,2,4,7,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,0,0,1,2,4,7,8,--

R205)

0,0,0,0,1,2,5,6,-->0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,--0,0,0,0,1,2,5,6,7,--0,0,0,0,1,2,5,6,8,--

R206)

0,0,0,0,1,2,5,7,-->0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,0,0,1,2,5,7,8,--

R207)

0,0,0,0,1,2,6,7,-->0,1,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,--0,0,0,0,1,2,6,7,8,--

R208)

0,0,0,0,1,3,4,5,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,0,1,3,4,5,6,--0,0,0,0,1,3,4,5,7,--0,0,0,0,1,3,4,5,8,--

R209)

0,0,0,0,1,3,4,6,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,0,0,1,3,4,6,7,--0,0,0,0,1,3,4,6,8,--

R210)

0,0,0,0,1,3,4,7,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,0,0,1,3,4,7,8,--

R211)

0,0,0,0,1,3,5,6,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,--0,0,0,0,1,3,5,6,7,--0,0,0,0,1,3,5,6,8,--

R212)

0,0,0,0,1,3,5,7,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,0,0,1,3,5,7,8,--

R213)

0,0,0,0,1,3,6,7,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--  
0,0,--0,0,0,0,1,3,6,7,8,--

R214)

0,0,0,0,1,4,5,6,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,  
0,0,0,1,4,5,6,7,--0,0,0,0,1,4,5,6,8,--

R215)

0,0,0,0,1,4,5,7,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--  
0,0,--0,0,0,0,1,4,5,7,8,--

R216)

0,0,0,0,1,4,6,7,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--  
0,0,--0,0,0,0,1,4,6,7,8,--

R217)

0,0,0,0,1,5,6,7,-->0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,  
0,--0,0,--0,0,0,0,1,5,6,7,8,--

R218)

0,0,0,0,2,3,4,5,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,0,2,3,  
4,5,6,--0,0,0,0,2,3,4,5,7,--0,0,0,0,2,3,4,5,8,--

R219)

0,0,0,0,2,3,4,6,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,  
0,0,2,3,4,6,7,--0,0,0,0,2,3,4,6,8,--

R220)

0,0,0,0,2,3,4,7,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--  
0,0,--0,0,0,0,2,3,4,7,8,--

R221)

0,0,0,0,2,3,5,6,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,--0,0,  
0,0,2,3,5,6,7,--0,0,0,0,2,3,5,6,8,--

R222)

0,0,0,0,2,3,5,7,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,  
0,--0,0,0,0,2,3,5,7,8,--

R223)

0,0,0,0,2,3,6,7,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--  
0,0,--0,0,0,0,2,3,6,7,8,--

R224)

0,0,0,0,2,4,5,6,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,0,  
0,0,2,4,5,6,7,--0,0,0,0,2,4,5,6,8,--

R225)

0,0,0,0,2,4,5,7,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,  
0,--0,0,0,0,2,4,5,7,8,--

R226)

0,0,0,0,2,4,6,7,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,  
0,--0,0,0,0,2,4,6,7,8,--

R227)

0,0,0,0,2,5,6,7,-->0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--  
0,0,--0,0,0,0,2,5,6,7,8,--

R228)

0,0,0,0,3,4,5,6,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,  
0,0,0,3,4,5,6,7,--0,0,0,0,3,4,5,6,8,--

R229)

0,0,0,0,3,4,5,7,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--

0,0,--0,0,0,0,3,4,5,7,8,--

R230)

0,0,0,0,3,4,6,7,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--  
0,0,--0,0,0,0,3,4,6,7,8,--

R231)

0,0,0,0,3,5,6,7,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--  
0,0,--0,0,0,0,3,5,6,7,8,--

R232)

0,0,0,0,4,5,6,7,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,  
0,--0,0,--0,0,0,0,4,5,6,7,8,--

R233)

0,0,0,1,2,3,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,1,2,3,4,  
5,6,--0,0,0,1,2,3,4,5,7,--0,0,0,1,2,3,4,5,8,--

R234)

0,0,0,1,2,3,4,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,0,  
1,2,3,4,6,7,--0,0,0,1,2,3,4,6,8,--

R235)

0,0,0,1,2,3,4,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,  
0,--0,0,0,1,2,3,4,7,8,--

R236)

0,0,0,1,2,3,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,--0,0,0,  
1,2,3,5,6,7,--0,0,0,1,2,3,5,6,8,--

R237)

0,0,0,1,2,3,5,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,  
--0,0,0,1,2,3,5,7,8,--

R238)

0,0,0,1,2,3,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,  
0,--0,0,0,1,2,3,6,7,8,--

R239)

0,0,0,1,2,4,5,6,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,0,0,  
1,2,4,5,6,7,--0,0,0,1,2,4,5,6,8,--

R240)

0,0,0,1,2,4,5,7,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,  
--0,0,0,1,2,4,5,7,8,--

R241)

0,0,0,1,2,4,6,7,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,  
--0,0,0,1,2,4,6,7,8,--

R242)

0,0,0,1,2,5,6,7,-->0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,  
0,--0,0,0,1,2,5,6,7,8,--

R243)

0,0,0,1,3,4,5,6,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,0,0,  
1,3,4,5,6,7,--0,0,0,1,3,4,5,6,8,--

R244)

0,0,0,1,3,4,5,7,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,  
--0,0,0,1,3,4,5,7,8,--

R245)

0,0,0,1,3,4,6,7,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,  
--0,0,0,1,3,4,6,7,8,--

R246)

0,0,0,1,3,5,6,7,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,  
--0,0,0,1,3,5,6,7,8,--

R247)

0,0,0,1,4,5,6,7,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,  
0,--0,0,0,1,4,5,6,7,8,--

R248)

0,0,0,2,3,4,5,6,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,0,0,  
2,3,4,5,6,7,--0,0,0,2,3,4,5,6,8,--

R249)

0,0,0,2,3,4,5,7,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,  
--0,0,0,2,3,4,5,7,8,--

R250)

0,0,0,2,3,4,6,7,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,  
--0,0,0,2,3,4,6,7,8,--

R251)

0,0,0,2,3,5,6,7,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,  
--0,0,0,2,3,5,6,7,8,--

R252)

0,0,0,2,4,5,6,7,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,  
--0,0,0,2,4,5,6,7,8,--

R253)

0,0,0,3,4,5,6,7,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,  
0,--0,0,0,3,4,5,6,7,8,--

R254)

0,0,1,2,3,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,0,1,2,  
3,4,5,6,7,--0,0,1,2,3,4,5,6,8,--

R255)

0,0,1,2,3,4,5,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,--  
0,0,1,2,3,4,5,7,8,--

R256)

0,0,1,2,3,4,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,--  
0,0,1,2,3,4,6,7,8,--

R257)

0,0,1,2,3,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--  
0,0,1,2,3,5,6,7,8,--

R258)

0,0,1,2,4,5,6,7,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--  
0,0,1,2,4,5,6,7,8,--

R259)

0,0,1,3,4,5,6,7,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--  
0,0,1,3,4,5,6,7,8,--

R260)

0,0,2,3,4,5,6,7,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--  
0,0,2,3,4,5,6,7,8,--

R261)

0,1,2,3,4,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,  
1,2,3,4,5,6,7,8,--

R262)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0

,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R263)

0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,1,3,--0,0,0,0,0,0,0,0,1,4,--0,0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,0,1,7,--0,0,0,0,0,0,0,0,1,8,--0,0,0,0,0,0,0,0,1,9,--

R264)

0,0,0,0,0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,3,--0,0,0,0,0,0,0,0,2,4,--0,0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,0,2,8,--0,0,0,0,0,0,0,0,2,9,--

R265)

0,0,0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,3,4,--0,0,0,0,0,0,0,0,3,5,--0,0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,0,3,8,--0,0,0,0,0,0,0,0,3,9,--

R266)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,0,0,0,4,5,--0,0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,0,4,8,--0,0,0,0,0,0,0,0,4,9,--

R267)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,--0,0,0,0,0,0,0,0,5,6,--0,0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,0,5,8,--0,0,0,0,0,0,0,0,5,9,--

R268)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,--0,0,0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,0,6,9,--

R269)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,--0,0,0,0,0,0,0,0,7,8,--0,0,0,0,0,0,0,0,7,9,--

R270)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,8,0,--0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,0,0,0,0,0,8,9,--

R271)

0,0,0,0,0,0,0,0,1,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,2,3,--0,0,0,0,0,0,1,2,4,--0,0,0,0,0,0,0,0,1,2,5,--0,0,0,0,0,0,0,0,1,2,6,--0,0,0,0,0,0,0,0,1,2,7,--0,0,0,0,0,0,0,0,1,2,8,--0,0,0,0,0,0,0,0,1,2,9,--

R272)

0,0,0,0,0,0,0,0,1,3,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,3,4,--0,0,0,0,0,0,0,0,1,3,5,--0,0,0,0,0,0,0,0,1,3,6,--0,0,0,0,0,0,0,0,1,3,7,--0,0,0,0,0,0,0,0,1,3,8,--0,0,0,0,0,0,0,0,1,3,9,--

R273)

0,0,0,0,0,0,0,0,1,4,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,4,5,--0,0,0,0,0,0,0,0,1,4,6,--0,0,0,0,0,0,0,0,1,4,7,--0,0,0,0,0,0,0,0,1,4,8,--0,0,0,0,0,0,0,0,1,4,9,--

R274)

0,0,0,0,0,0,0,0,1,5,-->0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,5,6,--0,0,0,0,0,0,0,0,1,5,7,--0,0,0,0,0,0,0,0,1,5,8,--0,0,0,0,0,0,0,0,1,5,9,--

R275)

0,0,0,0,0,0,0,1,6,-->0,1,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,  
1,0,--0,0,0,0,--0,0,0,0,0,0,1,6,7,--0,0,0,0,0,0,1,6,8,--0,0,0,0,0,0,1,6,9,--  
R276)

0,0,0,0,0,0,0,1,7,-->0,1,0,--0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,  
3,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,0,0,0,0,1,7,8,--0,0,0,0,0,0,1,7,9,--  
R277)

0,0,0,0,0,0,0,1,8,-->0,1,0,--0,0,0,0,0,0,7,0,--0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--  
0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,0,0,0,1,8,9,--  
R278)

0,0,0,0,0,0,0,2,3,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,3,4,  
--0,0,0,0,0,0,0,2,3,5,--0,0,0,0,0,0,0,2,3,6,--0,0,0,0,0,0,0,2,3,7,--0,0,0,0,0,0,0,2,  
,3,8,--0,0,0,0,0,0,0,2,3,9,--  
R279)

0,0,0,0,0,0,0,2,4,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,0,  
0,2,4,5,--0,0,0,0,0,0,0,2,4,6,--0,0,0,0,0,0,0,2,4,7,--0,0,0,0,0,0,0,2,4,8,--0,0,0,0,  
,0,0,0,2,4,9,--  
R280)

0,0,0,0,0,0,0,2,5,-->0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,--0,  
0,0,0,0,0,0,2,5,6,--0,0,0,0,0,0,0,2,5,7,--0,0,0,0,0,0,0,2,5,8,--0,0,0,0,0,0,0,2,5,9  
,--  
R281)

0,0,0,0,0,0,0,2,6,-->0,0,2,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--  
0,0,0,0,--0,0,0,0,0,0,0,2,6,7,--0,0,0,0,0,0,0,2,6,8,--0,0,0,0,0,0,0,2,6,9,--  
R282)

0,0,0,0,0,0,0,2,7,-->0,0,2,0,--0,1,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,  
0,2,0,--0,1,0,--0,0,0,--0,0,0,0,0,0,0,2,7,8,--0,0,0,0,0,0,0,2,7,9,--  
R283)

0,0,0,0,0,0,0,2,8,-->0,0,2,0,--0,1,0,--0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,  
0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,0,0,0,2,8,9,--  
R284)

0,0,0,0,0,0,0,3,4,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,  
0,0,3,4,5,--0,0,0,0,0,0,0,3,4,6,--0,0,0,0,0,0,0,3,4,7,--0,0,0,0,0,0,0,3,4,8,--0,0,0,  
,0,0,0,0,3,4,9,--  
R285)

0,0,0,0,0,0,0,3,5,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,--0,  
0,0,0,0,0,0,3,5,6,--0,0,0,0,0,0,0,3,5,7,--0,0,0,0,0,0,0,3,5,8,--0,0,0,0,0,0,0,3,5,9  
,--  
R286)

0,0,0,0,0,0,0,3,6,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,  
0,0,0,--0,0,0,0,0,0,0,3,6,7,--0,0,0,0,0,0,0,3,6,8,--0,0,0,0,0,0,0,3,6,9,--  
R287)

0,0,0,0,0,0,0,3,7,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,  
0,--0,1,0,--0,0,0,--0,0,0,0,0,0,0,3,7,8,--0,0,0,0,0,0,0,3,7,9,--  
R288)

0,0,0,0,0,0,0,3,8,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,  
0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,0,0,0,0,3,8,9,--  
R289)

0,0,0,0,0,0,0,4,5,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,  
--0,0,0,0,0,0,0,4,5,6,--0,0,0,0,0,0,0,4,5,7,--0,0,0,0,0,0,0,4,5,8,--0,0,0,0,0,0,0,4,  
,5,9,--



R290)

0,0,0,0,0,0,0,4,6,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--  
0,0,0,0,--0,0,0,0,0,0,4,6,7,--0,0,0,0,0,0,4,6,8,--0,0,0,0,0,0,4,6,9,--

R291)

0,0,0,0,0,0,0,4,7,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,  
0,--0,1,0,--0,0,0,--0,0,0,0,0,0,4,7,8,--0,0,0,0,0,0,4,7,9,--

R292)

0,0,0,0,0,0,0,4,8,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,4,0,--0,0,  
0,3,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,0,0,0,4,8,9,--

R293)

0,0,0,0,0,0,0,5,6,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,  
1,0,--0,0,0,0,--0,0,0,0,0,0,5,6,7,--0,0,0,0,0,0,5,6,8,--0,0,0,0,0,0,5,6,9,--

R294)

0,0,0,0,0,0,0,5,7,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,  
0,2,0,--0,1,0,--0,0,0,--0,0,0,0,0,0,5,7,8,--0,0,0,0,0,0,5,7,9,--

R295)

0,0,0,0,0,0,0,5,8,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,  
0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,0,0,0,5,8,9,--

R296)

0,0,0,0,0,0,0,6,7,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,  
0,2,0,--0,1,0,--0,1,0,--0,0,0,--0,0,0,0,0,0,6,7,8,--0,0,0,0,0,0,6,7,9,--

R297)

0,0,0,0,0,0,0,6,8,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,  
0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,0,0,0,6,8,9,--

R298)

0,0,0,0,0,0,0,7,0,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,  
0,2,0,--0,1,0,--

R299)

0,0,0,0,0,0,0,7,8,-->0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,  
4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,--0,0,0,0,0,0,7,8,9,--

R300)

0,0,0,0,0,0,1,2,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,1,2,3,4,--  
0,0,0,0,0,0,1,2,3,5,--0,0,0,0,0,0,1,2,3,6,--0,0,0,0,0,0,1,2,3,7,--0,0,0,0,0,0,1,2,3  
,8,--0,0,0,0,0,0,1,2,3,9,--

R301)

0,0,0,0,0,0,1,2,4,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,0,1,  
2,4,5,--0,0,0,0,0,0,1,2,4,6,--0,0,0,0,0,0,1,2,4,7,--0,0,0,0,0,0,1,2,4,8,--0,0,0,0,0,  
,0,1,2,4,9,--

R302)

0,0,0,0,0,0,1,2,5,-->0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,--0,0,  
0,0,0,0,1,2,5,6,--0,0,0,0,0,0,1,2,5,7,--0,0,0,0,0,0,1,2,5,8,--0,0,0,0,0,0,1,2,5,9,--

R303)

0,0,0,0,0,0,1,2,6,-->0,1,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,  
0,0,0,--0,0,0,0,0,0,1,2,6,7,--0,0,0,0,0,0,1,2,6,8,--0,0,0,0,0,0,1,2,6,9,--

R304)

0,0,0,0,0,0,1,2,7,-->0,1,0,--0,1,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,  
2,0,--0,1,0,--0,0,0,--0,0,0,0,0,0,1,2,7,8,--0,0,0,0,0,0,1,2,7,9,--

R305)

0,0,0,0,0,0,1,2,8,-->0,1,0,--0,1,0,--0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,

--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,0,0,0,1,2,8,9,--  
R306)  
0,0,0,0,0,0,1,3,4,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,0,1,  
3,4,5,--0,0,0,0,0,0,1,3,4,6,--0,0,0,0,0,0,1,3,4,7,--0,0,0,0,0,0,1,3,4,8,--0,0,0,0,0,  
,0,1,3,4,9,--  
R307)  
0,0,0,0,0,0,1,3,5,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,--0,0,0,  
0,0,0,1,3,5,6,--0,0,0,0,0,0,1,3,5,7,--0,0,0,0,0,0,1,3,5,8,--0,0,0,0,0,0,1,3,5,9,--  
R308)  
0,0,0,0,0,0,1,3,6,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,  
0,--0,0,0,0,0,0,1,3,6,7,--0,0,0,0,0,0,1,3,6,8,--0,0,0,0,0,0,1,3,6,9,--  
R309)  
0,0,0,0,0,0,1,3,7,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--  
0,1,0,--0,0,0,--0,0,0,0,0,0,1,3,7,8,--0,0,0,0,0,0,1,3,7,9,--  
R310)  
0,0,0,0,0,0,1,3,8,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,  
3,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,0,0,0,1,3,8,9,--  
R311)  
0,0,0,0,0,0,1,4,5,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,--0,0,  
0,0,0,0,1,4,5,6,--0,0,0,0,0,0,1,4,5,7,--0,0,0,0,0,0,1,4,5,8,--0,0,0,0,0,0,1,4,5,9,--  
-  
R312)  
0,0,0,0,0,0,1,4,6,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,  
0,--0,0,0,0,0,0,1,4,6,7,--0,0,0,0,0,0,1,4,6,8,--0,0,0,0,0,0,1,4,6,9,--  
R313)  
0,0,0,0,0,0,1,4,7,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,  
1,0,--0,0,0,--0,0,0,0,0,0,1,4,7,8,--0,0,0,0,0,0,1,4,7,9,--  
R314)  
0,0,0,0,0,0,1,4,8,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,  
--0,0,2,0,--0,1,0,--0,0,--0,0,0,0,0,0,1,4,8,9,--  
R315)  
0,0,0,0,0,0,1,5,6,-->0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,  
0,0,0,--0,0,0,0,0,0,1,5,6,7,--0,0,0,0,0,0,1,5,6,8,--0,0,0,0,0,0,1,5,6,9,--  
R316)  
0,0,0,0,0,0,1,5,7,-->0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--  
0,1,0,--0,0,0,--0,0,0,0,0,0,1,5,7,8,--0,0,0,0,0,0,1,5,7,9,--  
R317)  
0,0,0,0,0,0,1,5,8,-->0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,  
--0,0,2,0,--0,1,0,--0,0,--0,0,0,0,0,0,1,5,8,9,--  
R318)  
0,0,0,0,0,0,1,6,7,-->0,1,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,  
1,0,--0,1,0,--0,0,0,--0,0,0,0,0,0,1,6,7,8,--0,0,0,0,0,0,1,6,7,9,--  
R319)  
0,0,0,0,0,0,1,6,8,-->0,1,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,  
1,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,0,0,0,1,6,8,9,--  
R320)  
0,0,0,0,0,0,1,7,8,-->0,1,0,--0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,  
3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,--0,0,0,0,0,0,1,7,8,9,--  
R321)  
0,0,0,0,0,0,2,3,4,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,

3,4,5,--0,0,0,0,0,2,3,4,6,--0,0,0,0,0,2,3,4,7,--0,0,0,0,0,2,3,4,8,--0,0,0,0,0,0,2,3,4,9,--

R322)

0,0,0,0,0,2,3,5,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,0,2,3,5,6,--0,0,0,0,0,2,3,5,7,--0,0,0,0,0,2,3,5,8,--0,0,0,0,0,2,3,5,9,--

R323)

0,0,0,0,0,2,3,6,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,--0,0,0,0,0,2,3,6,7,--0,0,0,0,0,2,3,6,8,--0,0,0,0,0,2,3,6,9,--

R324)

0,0,0,0,0,2,3,7,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,0,0,0,2,3,7,8,--0,0,0,0,0,2,3,7,9,--

R325)

0,0,0,0,0,2,3,8,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,0,0,2,3,8,9,--

R326)

0,0,0,0,0,2,4,5,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,0,2,4,5,6,--0,0,0,0,0,2,4,5,7,--0,0,0,0,0,2,4,5,8,--0,0,0,0,0,2,4,5,9,--

R327)

0,0,0,0,0,2,4,6,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,--0,0,0,0,0,2,4,6,7,--0,0,0,0,0,2,4,6,8,--0,0,0,0,0,2,4,6,9,--

R328)

0,0,0,0,0,2,4,7,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,0,0,0,2,4,7,8,--0,0,0,0,0,2,4,7,9,--

R329)

0,0,0,0,0,2,4,8,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,0,0,2,4,8,9,--

R330)

0,0,0,0,0,2,5,6,-->0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,0,0,2,5,6,7,--0,0,0,0,0,2,5,6,8,--0,0,0,0,0,2,5,6,9,--

R331)

0,0,0,0,0,2,5,7,-->0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,0,0,0,2,5,7,8,--0,0,0,0,0,2,5,7,9,--

R332)

0,0,0,0,0,2,5,8,-->0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,0,0,2,5,8,9,--

R333)

0,0,0,0,0,2,6,7,-->0,0,2,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,--0,0,0,0,0,2,6,7,8,--0,0,0,0,0,2,6,7,9,--

R334)

0,0,0,0,0,2,6,8,-->0,0,2,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,0,0,2,6,8,9,--

R335)

0,0,0,0,0,2,7,8,-->0,0,2,0,--0,1,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,--0,0,0,0,0,2,7,8,9,--

R336)

0,0,0,0,0,3,4,5,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,0,3,4,5,6,--0,0,0,0,0,3,4,5,7,--0,0,0,0,0,3,4,5,8,--0,0,0,0,0,3,4,5,9,--

R337)

0,0,0,0,0,3,4,6,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,--

0,--0,0,0,0,0,0,3,4,6,7,--0,0,0,0,0,0,3,4,6,8,--0,0,0,0,0,0,3,4,6,9,--  
R338)  
0,0,0,0,0,0,3,4,7,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,  
1,0,--0,0,0,--0,0,0,0,0,0,3,4,7,8,--0,0,0,0,0,0,3,4,7,9,--  
R339)  
0,0,0,0,0,0,3,4,8,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,  
--0,0,2,0,--0,1,0,--0,0,--0,0,0,0,0,0,3,4,8,9,--  
R340)  
0,0,0,0,0,0,3,5,6,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,  
0,--0,0,0,0,0,0,3,5,6,7,--0,0,0,0,0,0,3,5,6,8,--0,0,0,0,0,0,3,5,6,9,--  
R341)  
0,0,0,0,0,0,3,5,7,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,  
0,--0,0,0,--0,0,0,0,0,0,3,5,7,8,--0,0,0,0,0,0,3,5,7,9,--  
R342)  
0,0,0,0,0,0,3,5,8,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,  
0,2,0,--0,1,0,--0,0,--0,0,0,0,0,0,3,5,8,9,--  
R343)  
0,0,0,0,0,0,3,6,7,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,  
1,0,--0,0,0,--0,0,0,0,0,0,3,6,7,8,--0,0,0,0,0,0,3,6,7,9,--  
R344)  
0,0,0,0,0,0,3,6,8,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,  
0,2,0,--0,1,0,--0,0,--0,0,0,0,0,0,3,6,8,9,--  
R345)  
0,0,0,0,0,0,3,7,8,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,  
0,--0,1,0,--0,1,0,--0,0,--0,0,0,0,0,0,3,7,8,9,--  
R346)  
0,0,0,0,0,0,4,5,6,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,  
0,0,0,--0,0,0,0,0,0,4,5,6,7,--0,0,0,0,0,0,4,5,6,8,--0,0,0,0,0,0,4,5,6,9,--  
R347)  
0,0,0,0,0,0,4,5,7,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--  
0,1,0,--0,0,0,--0,0,0,0,0,0,4,5,7,8,--0,0,0,0,0,0,4,5,7,9,--  
R348)  
0,0,0,0,0,0,4,5,8,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,3,0,  
--0,0,2,0,--0,1,0,--0,0,--0,0,0,0,0,0,4,5,8,9,--  
R349)  
0,0,0,0,0,0,4,6,7,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--  
0,1,0,--0,0,0,--0,0,0,0,0,0,4,6,7,8,--0,0,0,0,0,0,4,6,7,9,--  
R350)  
0,0,0,0,0,0,4,6,8,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--  
0,0,2,0,--0,1,0,--0,0,--0,0,0,0,0,0,4,6,8,9,--  
R351)  
0,0,0,0,0,0,4,7,8,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,  
0,--0,1,0,--0,1,0,--0,0,--0,0,0,0,0,0,4,7,8,9,--  
R352)  
0,0,0,0,0,0,5,6,7,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,  
1,0,--0,1,0,--0,0,0,--0,0,0,0,0,0,5,6,7,8,--0,0,0,0,0,0,5,6,7,9,--  
R353)  
0,0,0,0,0,0,5,6,8,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,  
1,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,0,0,0,5,6,8,9,--  
R354)

0,0,0,0,0,0,5,7,8,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,--0,0,0,0,0,0,5,7,8,9,--

R355)

0,0,0,0,0,0,6,7,8,-->0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,0,0,0,0,6,7,8,9,--

R356)

0,0,0,0,0,1,2,3,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,1,2,3,4,5,--0,0,0,0,0,1,2,3,4,6,--0,0,0,0,0,1,2,3,4,7,--0,0,0,0,0,1,2,3,4,8,--0,0,0,0,0,1,2,3,4,9,--

R357)

0,0,0,0,0,1,2,3,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,0,1,2,3,5,6,--0,0,0,0,0,1,2,3,5,7,--0,0,0,0,0,1,2,3,5,8,--0,0,0,0,0,1,2,3,5,9,--

R358)

0,0,0,0,0,1,2,3,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,--0,0,0,0,0,1,2,3,6,7,--0,0,0,0,0,1,2,3,6,8,--0,0,0,0,0,1,2,3,6,9,--

R359)

0,0,0,0,0,1,2,3,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,0,0,0,1,2,3,7,8,--0,0,0,0,0,1,2,3,7,9,--

R360)

0,0,0,0,0,1,2,3,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,1,2,3,8,9,--

R361)

0,0,0,0,0,1,2,4,5,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,0,1,2,4,5,6,--0,0,0,0,0,1,2,4,5,7,--0,0,0,0,0,1,2,4,5,8,--0,0,0,0,0,1,2,4,5,9,--

R362)

0,0,0,0,0,1,2,4,6,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,--0,0,0,0,0,1,2,4,6,7,--0,0,0,0,0,1,2,4,6,8,--0,0,0,0,0,1,2,4,6,9,--

R363)

0,0,0,0,0,1,2,4,7,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,0,0,0,1,2,4,7,8,--0,0,0,0,0,1,2,4,7,9,--

R364)

0,0,0,0,0,1,2,4,8,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,1,2,4,8,9,--

R365)

0,0,0,0,0,1,2,5,6,-->0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,0,0,1,2,5,6,7,--0,0,0,0,0,1,2,5,6,8,--0,0,0,0,0,1,2,5,6,9,--

R366)

0,0,0,0,0,1,2,5,7,-->0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,0,0,0,1,2,5,7,8,--0,0,0,0,0,1,2,5,7,9,--

R367)

0,0,0,0,0,1,2,5,8,-->0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,1,2,5,8,9,--

R368)

0,0,0,0,0,1,2,6,7,-->0,1,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,1,2,6,7,8,--0,0,0,0,0,1,2,6,7,9,--

R369)

0,0,0,0,0,1,2,6,8,-->0,1,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,1,2,6,8,9,--

R370)

0,0,0,0,0,1,2,7,8,-->0,1,0,--0,1,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,0,0,0,1,2,7,8,9,--

2,0,--0,1,0,--0,1,0,--0,0,--0,0,0,0,0,1,2,7,8,9,--  
R371)  
0,0,0,0,0,1,3,4,5,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,  
0,1,3,4,5,6,--0,0,0,0,0,1,3,4,5,7,--0,0,0,0,0,1,3,4,5,8,--0,0,0,0,0,1,3,4,5,9,--  
R372)  
0,0,0,0,0,1,3,4,6,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,--  
0,0,0,0,0,1,3,4,6,7,--0,0,0,0,0,1,3,4,6,8,--0,0,0,0,0,1,3,4,6,9,--  
R373)  
0,0,0,0,0,1,3,4,7,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,  
--0,0,0,--0,0,0,0,0,1,3,4,7,8,--0,0,0,0,0,1,3,4,7,9,--  
R374)  
0,0,0,0,0,1,3,4,8,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,  
0,2,0,--0,1,0,--0,0,--0,0,0,0,0,1,3,4,8,9,--  
R375)  
0,0,0,0,0,1,3,5,6,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,--  
0,0,0,0,0,1,3,5,6,7,--0,0,0,0,0,1,3,5,6,8,--0,0,0,0,0,1,3,5,6,9,--  
R376)  
0,0,0,0,0,1,3,5,7,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--  
0,0,0,--0,0,0,0,0,1,3,5,7,8,--0,0,0,0,0,1,3,5,7,9,--  
R377)  
0,0,0,0,0,1,3,5,8,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,  
0,--0,1,0,--0,0,--0,0,0,0,0,1,3,5,8,9,--  
R378)  
0,0,0,0,0,1,3,6,7,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,  
--0,0,0,--0,0,0,0,0,1,3,6,7,8,--0,0,0,0,0,1,3,6,7,9,--  
R379)  
0,0,0,0,0,1,3,6,8,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,  
0,--0,1,0,--0,0,--0,0,0,0,0,1,3,6,8,9,--  
R380)  
0,0,0,0,0,1,3,7,8,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--  
0,1,0,--0,1,0,--0,0,--0,0,0,0,0,1,3,7,8,9,--  
R381)  
0,0,0,0,0,1,4,5,6,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,  
--0,0,0,0,0,1,4,5,6,7,--0,0,0,0,0,1,4,5,6,8,--0,0,0,0,0,1,4,5,6,9,--  
R382)  
0,0,0,0,0,1,4,5,7,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,  
--0,0,0,--0,0,0,0,0,1,4,5,7,8,--0,0,0,0,0,1,4,5,7,9,--  
R383)  
0,0,0,0,0,1,4,5,8,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,  
2,0,--0,1,0,--0,0,--0,0,0,0,0,1,4,5,8,9,--  
R384)  
0,0,0,0,0,1,4,6,7,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,  
--0,0,0,--0,0,0,0,0,1,4,6,7,8,--0,0,0,0,0,1,4,6,7,9,--  
R385)  
0,0,0,0,0,1,4,6,8,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,  
0,--0,1,0,--0,0,--0,0,0,0,0,1,4,6,8,9,--  
R386)  
0,0,0,0,0,1,4,7,8,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,  
1,0,--0,1,0,--0,0,--0,0,0,0,0,1,4,7,8,9,--  
R387)

0,0,0,0,0,1,5,6,7,-->0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,1,5,6,7,8,--0,0,0,0,0,1,5,6,7,9,--

R388)

0,0,0,0,0,1,5,6,8,-->0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,0,0,1,5,6,8,9,--

R389)

0,0,0,0,0,1,5,7,8,-->0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,--0,0,0,0,0,1,5,7,8,9,--

R390)

0,0,0,0,0,1,6,7,8,-->0,1,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,0,0,0,1,6,7,8,9,--

R391)

0,0,0,0,0,2,3,4,5,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,0,2,3,4,5,6,--0,0,0,0,0,2,3,4,5,7,--0,0,0,0,0,2,3,4,5,8,--0,0,0,0,0,2,3,4,5,9,--

R392)

0,0,0,0,0,2,3,4,6,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,0,2,3,4,6,7,--0,0,0,0,0,2,3,4,6,8,--0,0,0,0,0,2,3,4,6,9,--

R393)

0,0,0,0,0,2,3,4,7,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,--0,0,0,0,0,2,3,4,7,8,--0,0,0,0,0,2,3,4,7,9,--

R394)

0,0,0,0,0,2,3,4,8,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,0,0,2,3,4,8,9,--

R395)

0,0,0,0,0,2,3,5,6,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,0,2,3,5,6,7,--0,0,0,0,0,2,3,5,6,8,--0,0,0,0,0,2,3,5,6,9,--

R396)

0,0,0,0,0,2,3,5,7,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,--0,0,0,0,0,2,3,5,7,8,--0,0,0,0,0,2,3,5,7,9,--

R397)

0,0,0,0,0,2,3,5,8,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,0,0,2,3,5,8,9,--

R398)

0,0,0,0,0,2,3,6,7,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,0,0,2,3,6,7,8,--0,0,0,0,0,2,3,6,7,9,--

R399)

0,0,0,0,0,2,3,6,8,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,0,0,2,3,6,8,9,--

R400)

0,0,0,0,0,2,3,7,8,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,--0,0,0,0,0,2,3,7,8,9,--

R401)

0,0,0,0,0,2,4,5,6,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,0,2,4,5,6,7,--0,0,0,0,0,2,4,5,6,8,--0,0,0,0,0,2,4,5,6,9,--

R402)

0,0,0,0,0,2,4,5,7,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,--0,0,0,0,0,2,4,5,7,8,--0,0,0,0,0,2,4,5,7,9,--

R403)

0,0,0,0,0,2,4,5,8,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,0,0,2,4,5,8,9,--

R404)

0,0,0,0,0,2,4,6,7,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--  
0,0,0,--0,0,0,0,0,2,4,6,7,8,--0,0,0,0,0,2,4,6,7,9,--

R405)

0,0,0,0,0,2,4,6,8,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,  
--0,1,0,--0,0,--0,0,0,0,0,2,4,6,8,9,--

R406)

0,0,0,0,0,2,4,7,8,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,  
0,--0,1,0,--0,0,--0,0,0,0,0,2,4,7,8,9,--

R407)

0,0,0,0,0,2,5,6,7,-->0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,  
--0,0,0,--0,0,0,0,0,2,5,6,7,8,--0,0,0,0,0,2,5,6,7,9,--

R408)

0,0,0,0,0,2,5,6,8,-->0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,  
0,--0,1,0,--0,0,--0,0,0,0,0,2,5,6,8,9,--

R409)

0,0,0,0,0,2,5,7,8,-->0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,  
0,--0,1,0,--0,0,--0,0,0,0,0,2,5,7,8,9,--

R410)

0,0,0,0,0,2,6,7,8,-->0,0,2,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--  
0,1,0,--0,1,0,--0,0,--0,0,0,0,0,2,6,7,8,9,--

R411)

0,0,0,0,0,3,4,5,6,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,  
--0,0,0,0,0,3,4,5,6,7,--0,0,0,0,0,3,4,5,6,8,--0,0,0,0,0,3,4,5,6,9,--

R412)

0,0,0,0,0,3,4,5,7,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,  
--0,0,0,--0,0,0,0,0,3,4,5,7,8,--0,0,0,0,0,3,4,5,7,9,--

R413)

0,0,0,0,0,3,4,5,8,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,  
2,0,--0,1,0,--0,0,--0,0,0,0,0,3,4,5,8,9,--

R414)

0,0,0,0,0,3,4,6,7,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,  
--0,0,0,--0,0,0,0,0,3,4,6,7,8,--0,0,0,0,0,3,4,6,7,9,--

R415)

0,0,0,0,0,3,4,6,8,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,  
0,--0,1,0,--0,0,--0,0,0,0,0,3,4,6,8,9,--

R416)

0,0,0,0,0,3,4,7,8,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,  
1,0,--0,1,0,--0,0,--0,0,0,0,0,3,4,7,8,9,--

R417)

0,0,0,0,0,3,5,6,7,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,  
--0,0,0,--0,0,0,0,0,3,5,6,7,8,--0,0,0,0,0,3,5,6,7,9,--

R418)

0,0,0,0,0,3,5,6,8,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,  
0,--0,1,0,--0,0,--0,0,0,0,0,3,5,6,8,9,--

R419)

0,0,0,0,0,3,5,7,8,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,  
0,--0,1,0,--0,0,--0,0,0,0,0,3,5,7,8,9,--

R420)

0,0,0,0,0,3,6,7,8,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,



1,0,--0,1,0,--0,0,--0,0,0,0,0,3,6,7,8,9,--  
R421)  
0,0,0,0,0,4,5,6,7,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,  
1,0,--0,0,0,--0,0,0,0,0,4,5,6,7,8,--0,0,0,0,0,4,5,6,7,9,--  
R422)  
0,0,0,0,0,4,5,6,8,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,  
0,2,0,--0,1,0,--0,0,--0,0,0,0,0,4,5,6,8,9,--  
R423)  
0,0,0,0,0,4,5,7,8,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--  
0,1,0,--0,1,0,--0,0,--0,0,0,0,0,4,5,7,8,9,--  
R424)  
0,0,0,0,0,4,6,7,8,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--  
0,1,0,--0,1,0,--0,0,--0,0,0,0,0,4,6,7,8,9,--  
R425)  
0,0,0,0,0,5,6,7,8,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,  
1,0,--0,1,0,--0,1,0,--0,0,--0,0,0,0,0,5,6,7,8,9,--  
R426)  
0,0,0,0,1,2,3,4,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,1,  
2,3,4,5,6,--0,0,0,0,1,2,3,4,5,7,--0,0,0,0,1,2,3,4,5,8,--0,0,0,0,1,2,3,4,5,9,--  
R427)  
0,0,0,0,1,2,3,4,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,--0,  
0,0,0,1,2,3,4,6,7,--0,0,0,0,1,2,3,4,6,8,--0,0,0,0,1,2,3,4,6,9,--  
R428)  
0,0,0,0,1,2,3,4,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--  
0,0,0,--0,0,0,0,1,2,3,4,7,8,--0,0,0,0,1,2,3,4,7,9,--  
R429)  
0,0,0,0,1,2,3,4,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,  
2,0,--0,1,0,--0,0,--0,0,0,0,1,2,3,4,8,9,--  
R430)  
0,0,0,0,1,2,3,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,--0,  
0,0,0,1,2,3,5,6,7,--0,0,0,0,1,2,3,5,6,8,--0,0,0,0,1,2,3,5,6,9,--  
R431)  
0,0,0,0,1,2,3,5,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,  
0,0,--0,0,0,0,1,2,3,5,7,8,--0,0,0,0,1,2,3,5,7,9,--  
R432)  
0,0,0,0,1,2,3,5,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,  
--0,1,0,--0,0,--0,0,0,0,1,2,3,5,8,9,--  
R433)  
0,0,0,0,1,2,3,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--  
0,0,0,--0,0,0,0,1,2,3,6,7,8,--0,0,0,0,1,2,3,6,7,9,--  
R434)  
0,0,0,0,1,2,3,6,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,  
--0,1,0,--0,0,--0,0,0,0,1,2,3,6,8,9,--  
R435)  
0,0,0,0,1,2,3,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,  
1,0,--0,1,0,--0,0,--0,0,0,0,1,2,3,7,8,9,--  
R436)  
0,0,0,0,1,2,4,5,6,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,--0,  
0,0,0,1,2,4,5,6,7,--0,0,0,0,1,2,4,5,6,8,--0,0,0,0,1,2,4,5,6,9,--  
R437)

0,0,0,0,1,2,4,5,7,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,  
0,0,--0,0,0,0,1,2,4,5,7,8,--0,0,0,0,1,2,4,5,7,9,--

R438)

0,0,0,0,1,2,4,5,8,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,  
--0,1,0,--0,0,--0,0,0,0,1,2,4,5,8,9,--

R439)

0,0,0,0,1,2,4,6,7,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,  
0,0,--0,0,0,0,1,2,4,6,7,8,--0,0,0,0,1,2,4,6,7,9,--

R440)

0,0,0,0,1,2,4,6,8,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--  
0,1,0,--0,0,--0,0,0,0,1,2,4,6,8,9,--

R441)

0,0,0,0,1,2,4,7,8,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,  
--0,1,0,--0,0,--0,0,0,0,1,2,4,7,8,9,--

R442)

0,0,0,0,1,2,5,6,7,-->0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--  
0,0,0,--0,0,0,0,1,2,5,6,7,8,--0,0,0,0,1,2,5,6,7,9,--

R443)

0,0,0,0,1,2,5,6,8,-->0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,  
--0,1,0,--0,0,--0,0,0,0,1,2,5,6,8,9,--

R444)

0,0,0,0,1,2,5,7,8,-->0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,  
--0,1,0,--0,0,--0,0,0,0,1,2,5,7,8,9,--

R445)

0,0,0,0,1,2,6,7,8,-->0,1,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,  
1,0,--0,1,0,--0,0,--0,0,0,0,1,2,6,7,8,9,--

R446)

0,0,0,0,1,3,4,5,6,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,--0,  
0,0,0,1,3,4,5,6,7,--0,0,0,0,1,3,4,5,6,8,--0,0,0,0,1,3,4,5,6,9,--

R447)

0,0,0,0,1,3,4,5,7,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,  
0,0,--0,0,0,0,1,3,4,5,7,8,--0,0,0,0,1,3,4,5,7,9,--

R448)

0,0,0,0,1,3,4,5,8,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,  
--0,1,0,--0,0,--0,0,0,0,1,3,4,5,8,9,--

R449)

0,0,0,0,1,3,4,6,7,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,  
0,0,--0,0,0,0,1,3,4,6,7,8,--0,0,0,0,1,3,4,6,7,9,--

R450)

0,0,0,0,1,3,4,6,8,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--  
0,1,0,--0,0,--0,0,0,0,1,3,4,6,8,9,--

R451)

0,0,0,0,1,3,4,7,8,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,  
--0,1,0,--0,0,--0,0,0,0,1,3,4,7,8,9,--

R452)

0,0,0,0,1,3,5,6,7,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,  
0,0,--0,0,0,0,1,3,5,6,7,8,--0,0,0,0,1,3,5,6,7,9,--

R453)

0,0,0,0,1,3,5,6,8,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--  
0,1,0,--0,0,--0,0,0,0,1,3,5,6,8,9,--

R454)

0,0,0,0,1,3,5,7,8,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--  
0,1,0,--0,0,--0,0,0,0,1,3,5,7,8,9,--

R455)

0,0,0,0,1,3,6,7,8,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,  
--0,1,0,--0,0,--0,0,0,0,1,3,6,7,8,9,--

R456)

0,0,0,0,1,4,5,6,7,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
0,0,0,--0,0,0,0,1,4,5,6,7,8,--0,0,0,0,1,4,5,6,7,9,--

R457)

0,0,0,0,1,4,5,6,8,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,0,  
--0,1,0,--0,0,--0,0,0,0,1,4,5,6,8,9,--

R458)

0,0,0,0,1,4,5,7,8,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,  
--0,1,0,--0,0,--0,0,0,0,1,4,5,7,8,9,--

R459)

0,0,0,0,1,4,6,7,8,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,  
--0,1,0,--0,0,--0,0,0,0,1,4,6,7,8,9,--

R460)

0,0,0,0,1,5,6,7,8,-->0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,  
1,0,--0,1,0,--0,0,--0,0,0,0,1,5,6,7,8,9,--

R461)

0,0,0,0,2,3,4,5,6,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,--0,  
0,0,0,2,3,4,5,6,7,--0,0,0,0,2,3,4,5,6,8,--0,0,0,0,2,3,4,5,6,9,--

R462)

0,0,0,0,2,3,4,5,7,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,  
0,0,--0,0,0,0,2,3,4,5,7,8,--0,0,0,0,2,3,4,5,7,9,--

R463)

0,0,0,0,2,3,4,5,8,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,  
--0,1,0,--0,0,--0,0,0,0,2,3,4,5,8,9,--

R464)

0,0,0,0,2,3,4,6,7,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,  
0,0,--0,0,0,0,2,3,4,6,7,8,--0,0,0,0,2,3,4,6,7,9,--

R465)

0,0,0,0,2,3,4,6,8,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--  
0,1,0,--0,0,--0,0,0,0,2,3,4,6,8,9,--

R466)

0,0,0,0,2,3,4,7,8,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,  
--0,1,0,--0,0,--0,0,0,0,2,3,4,7,8,9,--

R467)

0,0,0,0,2,3,5,6,7,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,  
0,0,--0,0,0,0,2,3,5,6,7,8,--0,0,0,0,2,3,5,6,7,9,--

R468)

0,0,0,0,2,3,5,6,8,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--  
0,1,0,--0,0,--0,0,0,0,2,3,5,6,8,9,--

R469)

0,0,0,0,2,3,5,7,8,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--  
0,1,0,--0,0,--0,0,0,0,2,3,5,7,8,9,--

R470)

0,0,0,0,2,3,6,7,8,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,

--0,1,0,--0,0,--0,0,0,0,2,3,6,7,8,9,--  
R471)  
0,0,0,0,2,4,5,6,7,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,  
0,0,--0,0,0,0,2,4,5,6,7,8,--0,0,0,0,2,4,5,6,7,9,--  
R472)  
0,0,0,0,2,4,5,6,8,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--  
0,1,0,--0,0,--0,0,0,0,2,4,5,6,8,9,--  
R473)  
0,0,0,0,2,4,5,7,8,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--  
0,1,0,--0,0,--0,0,0,0,2,4,5,7,8,9,--  
R474)  
0,0,0,0,2,4,6,7,8,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--  
0,1,0,--0,0,--0,0,0,0,2,4,6,7,8,9,--  
R475)  
0,0,0,0,2,5,6,7,8,-->0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,  
--0,1,0,--0,0,--0,0,0,0,2,5,6,7,8,9,--  
R476)  
0,0,0,0,3,4,5,6,7,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
0,0,0,--0,0,0,0,3,4,5,6,7,8,--0,0,0,0,3,4,5,6,7,9,--  
R477)  
0,0,0,0,3,4,5,6,8,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,0,  
--0,1,0,--0,0,--0,0,0,0,3,4,5,6,8,9,--  
R478)  
0,0,0,0,3,4,5,7,8,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,  
--0,1,0,--0,0,--0,0,0,0,3,4,5,7,8,9,--  
R479)  
0,0,0,0,3,4,6,7,8,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,  
--0,1,0,--0,0,--0,0,0,0,3,4,6,7,8,9,--  
R480)  
0,0,0,0,3,5,6,7,8,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,  
--0,1,0,--0,0,--0,0,0,0,3,5,6,7,8,9,--  
R481)  
0,0,0,0,4,5,6,7,8,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,  
1,0,--0,1,0,--0,0,--0,0,0,0,4,5,6,7,8,9,--  
R482)  
0,0,0,1,2,3,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,  
0,1,2,3,4,5,6,7,--0,0,0,1,2,3,4,5,6,8,--0,0,0,1,2,3,4,5,6,9,--  
R483)  
0,0,0,1,2,3,4,5,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,  
0,--0,0,0,1,2,3,4,5,7,8,--0,0,0,1,2,3,4,5,7,9,--  
R484)  
0,0,0,1,2,3,4,5,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--  
0,1,0,--0,0,--0,0,0,1,2,3,4,5,8,9,--  
R485)  
0,0,0,1,2,3,4,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,  
0,--0,0,0,1,2,3,4,6,7,8,--0,0,0,1,2,3,4,6,7,9,--  
R486)  
0,0,0,1,2,3,4,6,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,  
1,0,--0,0,--0,0,0,1,2,3,4,6,8,9,--  
R487)

0,0,0,1,2,3,4,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--  
0,1,0,--0,0,--0,0,0,1,2,3,4,7,8,9,--

R488)

0,0,0,1,2,3,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,  
0,--0,0,0,1,2,3,5,6,7,8,--0,0,0,1,2,3,5,6,7,9,--

R489)

0,0,0,1,2,3,5,6,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,  
1,0,--0,0,--0,0,0,1,2,3,5,6,8,9,--

R490)

0,0,0,1,2,3,5,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,  
1,0,--0,0,--0,0,0,1,2,3,5,7,8,9,--

R491)

0,0,0,1,2,3,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--  
0,1,0,--0,0,--0,0,0,1,2,3,6,7,8,9,--

R492)

0,0,0,1,2,4,5,6,7,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,  
0,--0,0,0,1,2,4,5,6,7,8,--0,0,0,1,2,4,5,6,7,9,--

R493)

0,0,0,1,2,4,5,6,8,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,  
1,0,--0,0,--0,0,0,1,2,4,5,6,8,9,--

R494)

0,0,0,1,2,4,5,7,8,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,  
1,0,--0,0,--0,0,0,1,2,4,5,7,8,9,--

R495)

0,0,0,1,2,4,6,7,8,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,  
1,0,--0,0,--0,0,0,1,2,4,6,7,8,9,--

R496)

0,0,0,1,2,5,6,7,8,-->0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--  
0,1,0,--0,0,--0,0,0,1,2,5,6,7,8,9,--

R497)

0,0,0,1,3,4,5,6,7,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,  
0,--0,0,0,1,3,4,5,6,7,8,--0,0,0,1,3,4,5,6,7,9,--

R498)

0,0,0,1,3,4,5,6,8,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,  
1,0,--0,0,--0,0,0,1,3,4,5,6,8,9,--

R499)

0,0,0,1,3,4,5,7,8,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,  
1,0,--0,0,--0,0,0,1,3,4,5,7,8,9,--

R500)

0,0,0,1,3,4,6,7,8,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,  
1,0,--0,0,--0,0,0,1,3,4,6,7,8,9,--

R501)

0,0,0,1,3,5,6,7,8,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,  
1,0,--0,0,--0,0,0,1,3,5,6,7,8,9,--

R502)

0,0,0,1,4,5,6,7,8,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
0,1,0,--0,0,--0,0,0,1,4,5,6,7,8,9,--

R503)

0,0,0,2,3,4,5,6,7,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,  
0,--0,0,0,2,3,4,5,6,7,8,--0,0,0,2,3,4,5,6,7,9,--

R504)

0,0,0,2,3,4,5,6,8,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,--0,0,0,2,3,4,5,6,8,9,--

R505)

0,0,0,2,3,4,5,7,8,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,--0,0,0,2,3,4,5,7,8,9,--

R506)

0,0,0,2,3,4,6,7,8,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,0,2,3,4,6,7,8,9,--

R507)

0,0,0,2,3,5,6,7,8,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,0,2,3,5,6,7,8,9,--

R508)

0,0,0,2,4,5,6,7,8,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,0,2,4,5,6,7,8,9,--

R509)

0,0,0,3,4,5,6,7,8,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,0,3,4,5,6,7,8,9,--

R510)

0,0,1,2,3,4,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,0,1,2,3,4,5,6,7,8,--0,0,1,2,3,4,5,6,7,9,--

R511)

0,0,1,2,3,4,5,6,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,--0,0,1,2,3,4,5,6,8,9,--

R512)

0,0,1,2,3,4,5,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,--0,0,1,2,3,4,5,7,8,9,--

R513)

0,0,1,2,3,4,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,1,2,3,4,6,7,8,9,--

R514)

0,0,1,2,3,5,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,1,2,3,5,6,7,8,9,--

R515)

0,0,1,2,4,5,6,7,8,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,1,2,4,5,6,7,8,9,--

R516)

0,0,1,3,4,5,6,7,8,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,1,3,4,5,6,7,8,9,--

R517)

0,0,2,3,4,5,6,7,8,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,2,3,4,5,6,7,8,9,--

R518)

0,1,2,3,4,5,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,1,2,3,4,5,6,7,8,9,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,0, : 0,0,1, : 0,0,2, : 0,1,0, : 0,1,2, :

LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,2, : 0,0,0,3, : 0,0,1,2, : 0,0,1,3, : 0,0,2,0, :

0,0,2,3, : 0,1,2,3, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,1,2, :  
0,0,0,1,3, : 0,0,0,1,4, : 0,0,0,2,3, : 0,0,0,2,4, : 0,0,0,3,0, : 0,0,0,3,4, : 0,0,1,2,3, :  
0,0,1,2,4, : 0,0,1,3,4, : 0,0,2,3,4, : 0,1,2,3,4, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, :  
0,0,0,0,0,5, : 0,0,0,0,1,2, : 0,0,0,0,1,3, : 0,0,0,0,1,4, : 0,0,0,0,1,5, : 0,0,0,0,2,3, :  
0,0,0,0,2,4, : 0,0,0,0,2,5, : 0,0,0,0,3,4, : 0,0,0,0,3,5, : 0,0,0,0,4,0, : 0,0,0,0,4,5, :  
0,0,0,1,2,3, : 0,0,0,1,2,4, : 0,0,0,1,2,5, : 0,0,0,1,3,4, : 0,0,0,1,3,5, : 0,0,0,1,4,5, :  
0,0,0,2,3,4, : 0,0,0,2,3,5, : 0,0,0,2,4,5, : 0,0,0,3,4,5, : 0,0,1,2,3,4, : 0,0,1,2,3,5, :  
0,0,1,2,4,5, : 0,0,1,3,4,5, : 0,0,2,3,4,5, : 0,1,2,3,4,5, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :  
0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,1,2, : 0,0,0,0,0,1,3, :  
0,0,0,0,0,1,4, : 0,0,0,0,0,1,5, : 0,0,0,0,0,1,6, : 0,0,0,0,0,2,3, : 0,0,0,0,0,2,4, :  
0,0,0,0,0,2,5, : 0,0,0,0,0,2,6, : 0,0,0,0,0,3,4, : 0,0,0,0,0,3,5, : 0,0,0,0,0,3,6, :  
0,0,0,0,0,4,5, : 0,0,0,0,0,4,6, : 0,0,0,0,0,5,0, : 0,0,0,0,0,5,6, : 0,0,0,0,1,2,3, :  
0,0,0,0,1,2,4, : 0,0,0,0,1,2,5, : 0,0,0,0,1,2,6, : 0,0,0,0,1,3,4, : 0,0,0,0,1,3,5, :  
0,0,0,0,1,3,6, : 0,0,0,0,1,4,5, : 0,0,0,0,1,4,6, : 0,0,0,0,1,5,6, : 0,0,0,0,2,3,4, :  
0,0,0,0,2,3,5, : 0,0,0,0,2,3,6, : 0,0,0,0,2,4,5, : 0,0,0,0,2,4,6, : 0,0,0,0,2,5,6, :  
0,0,0,0,3,4,5, : 0,0,0,0,3,4,6, : 0,0,0,0,3,5,6, : 0,0,0,0,4,5,6, : 0,0,0,1,2,3,4, :  
0,0,0,1,2,3,5, : 0,0,0,1,2,3,6, : 0,0,0,1,2,4,5, : 0,0,0,1,2,4,6, : 0,0,0,1,2,5,6, :  
0,0,0,1,3,4,5, : 0,0,0,1,3,4,6, : 0,0,0,1,3,5,6, : 0,0,0,1,4,5,6, : 0,0,0,2,3,4,5, :  
0,0,0,2,3,4,6, : 0,0,0,2,3,5,6, : 0,0,0,2,4,5,6, : 0,0,0,3,4,5,6, : 0,0,1,2,3,4,5, :  
0,0,1,2,3,4,6, : 0,0,1,2,3,5,6, : 0,0,1,2,4,5,6, : 0,0,1,3,4,5,6, : 0,0,2,3,4,5,6, :  
0,1,2,3,4,5,6, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :  
0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :  
0,0,0,0,0,0,1,2, : 0,0,0,0,0,0,1,3, : 0,0,0,0,0,0,1,4, : 0,0,0,0,0,0,1,5, :  
0,0,0,0,0,0,1,6, : 0,0,0,0,0,0,1,7, : 0,0,0,0,0,0,2,3, : 0,0,0,0,0,0,2,4, :  
0,0,0,0,0,0,2,5, : 0,0,0,0,0,0,2,6, : 0,0,0,0,0,0,2,7, : 0,0,0,0,0,0,3,4, :  
0,0,0,0,0,0,3,5, : 0,0,0,0,0,0,3,6, : 0,0,0,0,0,0,3,7, : 0,0,0,0,0,0,4,5, :  
0,0,0,0,0,0,4,6, : 0,0,0,0,0,0,4,7, : 0,0,0,0,0,0,5,6, : 0,0,0,0,0,0,5,7, :  
0,0,0,0,0,0,6,0, : 0,0,0,0,0,0,6,7, : 0,0,0,0,0,1,2,3, : 0,0,0,0,0,1,2,4, :  
0,0,0,0,0,1,2,5, : 0,0,0,0,0,1,2,6, : 0,0,0,0,0,1,2,7, : 0,0,0,0,0,1,3,4, :  
0,0,0,0,0,1,3,5, : 0,0,0,0,0,1,3,6, : 0,0,0,0,0,1,3,7, : 0,0,0,0,0,1,4,5, :  
0,0,0,0,0,1,4,6, : 0,0,0,0,0,1,4,7, : 0,0,0,0,0,1,5,6, : 0,0,0,0,0,1,5,7, :  
0,0,0,0,0,1,6,7, : 0,0,0,0,0,2,3,4, : 0,0,0,0,0,2,3,5, : 0,0,0,0,0,2,3,6, :  
0,0,0,0,0,2,3,7, : 0,0,0,0,0,2,4,5, : 0,0,0,0,0,2,4,6, : 0,0,0,0,0,2,4,7, :  
0,0,0,0,0,2,5,6, : 0,0,0,0,0,2,5,7, : 0,0,0,0,0,2,6,7, : 0,0,0,0,0,3,4,5, :  
0,0,0,0,0,3,4,6, : 0,0,0,0,0,3,4,7, : 0,0,0,0,0,3,5,6, : 0,0,0,0,0,3,5,7, :  
0,0,0,0,0,3,6,7, : 0,0,0,0,0,4,5,6, : 0,0,0,0,0,4,5,7, : 0,0,0,0,0,4,6,7, :  
0,0,0,0,0,5,6,7, : 0,0,0,0,1,2,3,4, : 0,0,0,0,1,2,3,5, : 0,0,0,0,1,2,3,6, :  
0,0,0,0,1,2,3,7, : 0,0,0,0,1,2,4,5, : 0,0,0,0,1,2,4,6, : 0,0,0,0,1,2,4,7, :  
0,0,0,0,1,2,5,6, : 0,0,0,0,1,2,5,7, : 0,0,0,0,1,2,6,7, : 0,0,0,0,1,3,4,5, :  
0,0,0,0,1,3,4,6, : 0,0,0,0,1,3,4,7, : 0,0,0,0,1,3,5,6, : 0,0,0,0,1,3,5,7, :  
0,0,0,0,1,3,6,7, : 0,0,0,0,1,4,5,6, : 0,0,0,0,1,4,5,7, : 0,0,0,0,1,4,6,7, :  
0,0,0,0,1,5,6,7, : 0,0,0,0,2,3,4,5, : 0,0,0,0,2,3,4,6, : 0,0,0,0,2,3,4,7, :  
0,0,0,0,2,3,5,6, : 0,0,0,0,2,3,5,7, : 0,0,0,0,2,3,6,7, : 0,0,0,0,2,4,5,6, :  
0,0,0,0,2,4,5,7, : 0,0,0,0,2,4,6,7, : 0,0,0,0,2,5,6,7, : 0,0,0,0,3,4,5,6, :  
0,0,0,0,3,4,5,7, : 0,0,0,0,3,4,6,7, : 0,0,0,0,3,5,6,7, : 0,0,0,0,4,5,6,7, :  
0,0,0,1,2,3,4,5, : 0,0,0,1,2,3,4,6, : 0,0,0,1,2,3,4,7, : 0,0,0,1,2,3,5,6, :

0,0,0,1,2,3,5,7, : 0,0,0,1,2,3,6,7, : 0,0,0,1,2,4,5,6, : 0,0,0,1,2,4,5,7, :  
0,0,0,1,2,4,6,7, : 0,0,0,1,2,5,6,7, : 0,0,0,1,3,4,5,6, : 0,0,0,1,3,4,5,7, :  
0,0,0,1,3,4,6,7, : 0,0,0,1,3,5,6,7, : 0,0,0,1,4,5,6,7, : 0,0,0,2,3,4,5,6, :  
0,0,0,2,3,4,5,7, : 0,0,0,2,3,4,6,7, : 0,0,0,2,3,5,6,7, : 0,0,0,2,4,5,6,7, :  
0,0,0,3,4,5,6,7, : 0,0,1,2,3,4,5,6, : 0,0,1,2,3,4,5,7, : 0,0,1,2,3,4,6,7, :  
0,0,1,2,3,5,6,7, : 0,0,1,2,4,5,6,7, : 0,0,1,3,4,5,6,7, : 0,0,2,3,4,5,6,7, :  
0,1,2,3,4,5,6,7, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, :  
0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, :  
0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,1,2, : 0,0,0,0,0,0,0,1,3, :  
0,0,0,0,0,0,0,1,4, : 0,0,0,0,0,0,0,1,5, : 0,0,0,0,0,0,0,1,6, : 0,0,0,0,0,0,0,1,7, :  
0,0,0,0,0,0,0,1,8, : 0,0,0,0,0,0,0,2,3, : 0,0,0,0,0,0,0,2,4, : 0,0,0,0,0,0,0,2,5, :  
0,0,0,0,0,0,0,2,6, : 0,0,0,0,0,0,0,2,7, : 0,0,0,0,0,0,0,2,8, : 0,0,0,0,0,0,0,3,4, :  
0,0,0,0,0,0,0,3,5, : 0,0,0,0,0,0,0,3,6, : 0,0,0,0,0,0,0,3,7, : 0,0,0,0,0,0,0,3,8, :  
0,0,0,0,0,0,0,4,5, : 0,0,0,0,0,0,0,4,6, : 0,0,0,0,0,0,0,4,7, : 0,0,0,0,0,0,0,4,8, :  
0,0,0,0,0,0,0,5,6, : 0,0,0,0,0,0,0,5,7, : 0,0,0,0,0,0,0,5,8, : 0,0,0,0,0,0,0,6,7, :  
0,0,0,0,0,0,0,6,8, : 0,0,0,0,0,0,0,7,0, : 0,0,0,0,0,0,0,7,8, : 0,0,0,0,0,0,1,2,3, :  
0,0,0,0,0,0,1,2,4, : 0,0,0,0,0,0,1,2,5, : 0,0,0,0,0,0,1,2,6, : 0,0,0,0,0,0,1,2,7, :  
0,0,0,0,0,0,1,2,8, : 0,0,0,0,0,0,1,3,4, : 0,0,0,0,0,0,1,3,5, : 0,0,0,0,0,0,1,3,6, :  
0,0,0,0,0,0,1,3,7, : 0,0,0,0,0,0,1,3,8, : 0,0,0,0,0,0,1,4,5, : 0,0,0,0,0,0,1,4,6, :  
0,0,0,0,0,0,1,4,7, : 0,0,0,0,0,0,1,4,8, : 0,0,0,0,0,0,1,5,6, : 0,0,0,0,0,0,1,5,7, :  
0,0,0,0,0,0,1,5,8, : 0,0,0,0,0,0,1,6,7, : 0,0,0,0,0,0,1,6,8, : 0,0,0,0,0,0,1,7,8, :  
0,0,0,0,0,0,2,3,4, : 0,0,0,0,0,0,2,3,5, : 0,0,0,0,0,0,2,3,6, : 0,0,0,0,0,0,2,3,7, :  
0,0,0,0,0,0,2,3,8, : 0,0,0,0,0,0,2,4,5, : 0,0,0,0,0,0,2,4,6, : 0,0,0,0,0,0,2,4,7, :  
0,0,0,0,0,0,2,4,8, : 0,0,0,0,0,0,2,5,6, : 0,0,0,0,0,0,2,5,7, : 0,0,0,0,0,0,2,5,8, :  
0,0,0,0,0,0,2,6,7, : 0,0,0,0,0,0,2,6,8, : 0,0,0,0,0,0,2,7,8, : 0,0,0,0,0,0,3,4,5, :  
0,0,0,0,0,0,3,4,6, : 0,0,0,0,0,0,3,4,7, : 0,0,0,0,0,0,3,4,8, : 0,0,0,0,0,0,3,5,6, :  
0,0,0,0,0,0,3,5,7, : 0,0,0,0,0,0,3,5,8, : 0,0,0,0,0,0,3,6,7, : 0,0,0,0,0,0,3,6,8, :  
0,0,0,0,0,0,3,7,8, : 0,0,0,0,0,0,4,5,6, : 0,0,0,0,0,0,4,5,7, : 0,0,0,0,0,0,4,5,8, :  
0,0,0,0,0,0,4,6,7, : 0,0,0,0,0,0,4,6,8, : 0,0,0,0,0,0,4,7,8, : 0,0,0,0,0,0,5,6,7, :  
0,0,0,0,0,0,5,6,8, : 0,0,0,0,0,0,5,7,8, : 0,0,0,0,0,0,6,7,8, : 0,0,0,0,0,1,2,3,4, :  
0,0,0,0,0,1,2,3,5, : 0,0,0,0,0,1,2,3,6, : 0,0,0,0,0,1,2,3,7, : 0,0,0,0,0,1,2,3,8, :  
0,0,0,0,0,1,2,4,5, : 0,0,0,0,0,1,2,4,6, : 0,0,0,0,0,1,2,4,7, : 0,0,0,0,0,1,2,4,8, :  
0,0,0,0,0,1,2,5,6, : 0,0,0,0,0,1,2,5,7, : 0,0,0,0,0,1,2,5,8, : 0,0,0,0,0,1,2,6,7, :  
0,0,0,0,0,1,2,6,8, : 0,0,0,0,0,1,2,7,8, : 0,0,0,0,0,1,3,4,5, : 0,0,0,0,0,1,3,4,6, :  
0,0,0,0,0,1,3,4,7, : 0,0,0,0,0,1,3,4,8, : 0,0,0,0,0,1,3,5,6, : 0,0,0,0,0,1,3,5,7, :  
0,0,0,0,0,1,3,5,8, : 0,0,0,0,0,1,3,6,7, : 0,0,0,0,0,1,3,6,8, : 0,0,0,0,0,1,3,7,8, :  
0,0,0,0,0,1,4,5,6, : 0,0,0,0,0,1,4,5,7, : 0,0,0,0,0,1,4,5,8, : 0,0,0,0,0,1,4,6,7, :  
0,0,0,0,0,1,4,6,8, : 0,0,0,0,0,1,4,7,8, : 0,0,0,0,0,1,5,6,7, : 0,0,0,0,0,1,5,6,8, :  
0,0,0,0,0,1,5,7,8, : 0,0,0,0,0,1,6,7,8, : 0,0,0,0,0,2,3,4,5, : 0,0,0,0,0,2,3,4,6, :  
0,0,0,0,0,2,3,4,7, : 0,0,0,0,0,2,3,4,8, : 0,0,0,0,0,2,3,5,6, : 0,0,0,0,0,2,3,5,7, :  
0,0,0,0,0,2,3,5,8, : 0,0,0,0,0,2,3,6,7, : 0,0,0,0,0,2,3,6,8, : 0,0,0,0,0,2,3,7,8, :  
0,0,0,0,0,2,4,5,6, : 0,0,0,0,0,2,4,5,7, : 0,0,0,0,0,2,4,5,8, : 0,0,0,0,0,2,4,6,7, :  
0,0,0,0,0,2,4,6,8, : 0,0,0,0,0,2,4,7,8, : 0,0,0,0,0,2,5,6,7, : 0,0,0,0,0,2,5,6,8, :  
0,0,0,0,0,2,5,7,8, : 0,0,0,0,0,2,6,7,8, : 0,0,0,0,0,3,4,5,6, : 0,0,0,0,0,3,4,5,7, :  
0,0,0,0,0,3,4,5,8, : 0,0,0,0,0,3,4,6,7, : 0,0,0,0,0,3,4,6,8, : 0,0,0,0,0,3,4,7,8, :  
0,0,0,0,0,3,5,6,7, : 0,0,0,0,0,3,5,6,8, : 0,0,0,0,0,3,5,7,8, : 0,0,0,0,0,3,6,7,8, :  
0,0,0,0,0,4,5,6,7, : 0,0,0,0,0,4,5,6,8, : 0,0,0,0,0,4,5,7,8, : 0,0,0,0,0,4,6,7,8, :  
0,0,0,0,0,5,6,7,8, : 0,0,0,0,1,2,3,4,5, : 0,0,0,0,1,2,3,4,6, : 0,0,0,0,1,2,3,4,7, :  
0,0,0,0,1,2,3,4,8, : 0,0,0,0,1,2,3,5,6, : 0,0,0,0,1,2,3,5,7, : 0,0,0,0,1,2,3,5,8, :



0,0,0,0,1,2,3,6,7, : 0,0,0,0,1,2,3,6,8, : 0,0,0,0,1,2,3,7,8, : 0,0,0,0,1,2,4,5,6, :  
0,0,0,0,1,2,4,5,7, : 0,0,0,0,1,2,4,5,8, : 0,0,0,0,1,2,4,6,7, : 0,0,0,0,1,2,4,6,8, :  
0,0,0,0,1,2,4,7,8, : 0,0,0,0,1,2,5,6,7, : 0,0,0,0,1,2,5,6,8, : 0,0,0,0,1,2,5,7,8, :  
0,0,0,0,1,2,6,7,8, : 0,0,0,0,1,3,4,5,6, : 0,0,0,0,1,3,4,5,7, : 0,0,0,0,1,3,4,5,8, :  
0,0,0,0,1,3,4,6,7, : 0,0,0,0,1,3,4,6,8, : 0,0,0,0,1,3,4,7,8, : 0,0,0,0,1,3,5,6,7, :  
0,0,0,0,1,3,5,6,8, : 0,0,0,0,1,3,5,7,8, : 0,0,0,0,1,3,6,7,8, : 0,0,0,0,1,4,5,6,7, :  
0,0,0,0,1,4,5,6,8, : 0,0,0,0,1,4,5,7,8, : 0,0,0,0,1,4,6,7,8, : 0,0,0,0,1,5,6,7,8, :  
0,0,0,0,2,3,4,5,6, : 0,0,0,0,2,3,4,5,7, : 0,0,0,0,2,3,4,5,8, : 0,0,0,0,2,3,4,6,7, :  
0,0,0,0,2,3,4,6,8, : 0,0,0,0,2,3,4,7,8, : 0,0,0,0,2,3,5,6,7, : 0,0,0,0,2,3,5,6,8, :  
0,0,0,0,2,3,5,7,8, : 0,0,0,0,2,3,6,7,8, : 0,0,0,0,2,4,5,6,7, : 0,0,0,0,2,4,5,6,8, :  
0,0,0,0,2,4,5,7,8, : 0,0,0,0,2,4,6,7,8, : 0,0,0,0,2,5,6,7,8, : 0,0,0,0,3,4,5,6,7, :  
0,0,0,0,3,4,5,6,8, : 0,0,0,0,3,4,5,7,8, : 0,0,0,0,3,4,6,7,8, : 0,0,0,0,3,5,6,7,8, :  
0,0,0,0,4,5,6,7,8, : 0,0,0,1,2,3,4,5,6, : 0,0,0,1,2,3,4,5,7, : 0,0,0,1,2,3,4,5,8, :  
0,0,0,1,2,3,4,6,7, : 0,0,0,1,2,3,4,6,8, : 0,0,0,1,2,3,4,7,8, : 0,0,0,1,2,3,5,6,7, :  
0,0,0,1,2,3,5,6,8, : 0,0,0,1,2,3,5,7,8, : 0,0,0,1,2,3,6,7,8, : 0,0,0,1,2,4,5,6,7, :  
0,0,0,1,2,4,5,6,8, : 0,0,0,1,2,4,5,7,8, : 0,0,0,1,2,4,6,7,8, : 0,0,0,1,2,5,6,7,8, :  
0,0,0,1,3,4,5,6,7, : 0,0,0,1,3,4,5,6,8, : 0,0,0,1,3,4,5,7,8, : 0,0,0,1,3,4,6,7,8, :  
0,0,0,1,3,5,6,7,8, : 0,0,0,1,4,5,6,7,8, : 0,0,0,2,3,4,5,6,7, : 0,0,0,2,3,4,5,6,8, :  
0,0,0,2,3,4,5,7,8, : 0,0,0,2,3,4,6,7,8, : 0,0,0,2,3,5,6,7,8, : 0,0,0,2,4,5,6,7,8, :  
0,0,0,3,4,5,6,7,8, : 0,0,1,2,3,4,5,6,7, : 0,0,1,2,3,4,5,6,8, : 0,0,1,2,3,4,5,7,8, :  
0,0,1,2,3,4,6,7,8, : 0,0,1,2,3,5,6,7,8, : 0,0,1,2,4,5,6,7,8, : 0,0,1,3,4,5,6,7,8, :  
0,0,2,3,4,5,6,7,8, : 0,1,2,3,4,5,6,7,8, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :  
0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, :  
0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :  
0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,1,2, : 0,0,0,0,0,0,0,0,1,3, :  
0,0,0,0,0,0,0,0,0,1,4, : 0,0,0,0,0,0,0,0,0,1,5, : 0,0,0,0,0,0,0,0,0,1,6, :  
0,0,0,0,0,0,0,0,0,1,7, : 0,0,0,0,0,0,0,0,0,1,8, : 0,0,0,0,0,0,0,0,0,1,9, :  
0,0,0,0,0,0,0,0,0,2,3, : 0,0,0,0,0,0,0,0,0,2,4, : 0,0,0,0,0,0,0,0,0,2,5, :  
0,0,0,0,0,0,0,0,0,2,6, : 0,0,0,0,0,0,0,0,0,2,7, : 0,0,0,0,0,0,0,0,0,2,8, :  
0,0,0,0,0,0,0,0,0,2,9, : 0,0,0,0,0,0,0,0,0,3,4, : 0,0,0,0,0,0,0,0,0,3,5, :  
0,0,0,0,0,0,0,0,0,3,6, : 0,0,0,0,0,0,0,0,0,3,7, : 0,0,0,0,0,0,0,0,0,3,8, :  
0,0,0,0,0,0,0,0,0,3,9, : 0,0,0,0,0,0,0,0,0,4,5, : 0,0,0,0,0,0,0,0,0,4,6, :  
0,0,0,0,0,0,0,0,0,4,7, : 0,0,0,0,0,0,0,0,0,4,8, : 0,0,0,0,0,0,0,0,0,4,9, :  
0,0,0,0,0,0,0,0,0,5,6, : 0,0,0,0,0,0,0,0,0,5,7, : 0,0,0,0,0,0,0,0,0,5,8, :  
0,0,0,0,0,0,0,0,0,5,9, : 0,0,0,0,0,0,0,0,0,6,7, : 0,0,0,0,0,0,0,0,0,6,8, :  
0,0,0,0,0,0,0,0,0,6,9, : 0,0,0,0,0,0,0,0,0,7,8, : 0,0,0,0,0,0,0,0,0,7,9, :  
0,0,0,0,0,0,0,0,0,8,0, : 0,0,0,0,0,0,0,0,0,8,9, : 0,0,0,0,0,0,0,0,1,2,3, :  
0,0,0,0,0,0,0,0,1,2,4, : 0,0,0,0,0,0,0,0,1,2,5, : 0,0,0,0,0,0,0,0,1,2,6, :  
0,0,0,0,0,0,0,0,1,2,7, : 0,0,0,0,0,0,0,0,1,2,8, : 0,0,0,0,0,0,0,0,1,2,9, :  
0,0,0,0,0,0,0,0,1,3,4, : 0,0,0,0,0,0,0,0,1,3,5, : 0,0,0,0,0,0,0,0,1,3,6, :  
0,0,0,0,0,0,0,0,1,3,7, : 0,0,0,0,0,0,0,0,1,3,8, : 0,0,0,0,0,0,0,0,1,3,9, :  
0,0,0,0,0,0,0,0,1,4,5, : 0,0,0,0,0,0,0,0,1,4,6, : 0,0,0,0,0,0,0,0,1,4,7, :  
0,0,0,0,0,0,0,0,1,4,8, : 0,0,0,0,0,0,0,0,1,4,9, : 0,0,0,0,0,0,0,0,1,5,6, :  
0,0,0,0,0,0,0,0,1,5,7, : 0,0,0,0,0,0,0,0,1,5,8, : 0,0,0,0,0,0,0,0,1,5,9, :  
0,0,0,0,0,0,0,0,1,6,7, : 0,0,0,0,0,0,0,0,1,6,8, : 0,0,0,0,0,0,0,0,1,6,9, :  
0,0,0,0,0,0,0,0,1,7,8, : 0,0,0,0,0,0,0,0,1,7,9, : 0,0,0,0,0,0,0,0,1,8,9, :  
0,0,0,0,0,0,0,0,2,3,4, : 0,0,0,0,0,0,0,0,2,3,5, : 0,0,0,0,0,0,0,0,2,3,6, :  
0,0,0,0,0,0,0,0,2,3,7, : 0,0,0,0,0,0,0,0,2,3,8, : 0,0,0,0,0,0,0,0,2,3,9, :  
0,0,0,0,0,0,0,0,2,4,5, : 0,0,0,0,0,0,0,0,2,4,6, : 0,0,0,0,0,0,0,0,2,4,7, :





0,0,0,0,1,2,3,4,5,7, : 0,0,0,0,1,2,3,4,5,8, : 0,0,0,0,1,2,3,4,5,9, :  
 0,0,0,0,1,2,3,4,6,7, : 0,0,0,0,1,2,3,4,6,8, : 0,0,0,0,1,2,3,4,6,9, :  
 0,0,0,0,1,2,3,4,7,8, : 0,0,0,0,1,2,3,4,7,9, : 0,0,0,0,1,2,3,4,8,9, :  
 0,0,0,0,1,2,3,5,6,7, : 0,0,0,0,1,2,3,5,6,8, : 0,0,0,0,1,2,3,5,6,9, :  
 0,0,0,0,1,2,3,5,7,8, : 0,0,0,0,1,2,3,5,7,9, : 0,0,0,0,1,2,3,5,8,9, :  
 0,0,0,0,1,2,3,6,7,8, : 0,0,0,0,1,2,3,6,7,9, : 0,0,0,0,1,2,3,6,8,9, :  
 0,0,0,0,1,2,3,7,8,9, : 0,0,0,0,1,2,4,5,6,7, : 0,0,0,0,1,2,4,5,6,8, :  
 0,0,0,0,1,2,4,5,6,9, : 0,0,0,0,1,2,4,5,7,8, : 0,0,0,0,1,2,4,5,7,9, :  
 0,0,0,0,1,2,4,5,8,9, : 0,0,0,0,1,2,4,6,7,8, : 0,0,0,0,1,2,4,6,7,9, :  
 0,0,0,0,1,2,4,6,8,9, : 0,0,0,0,1,2,4,7,8,9, : 0,0,0,0,1,2,5,6,7,8, :  
 0,0,0,0,1,2,5,6,7,9, : 0,0,0,0,1,2,5,6,8,9, : 0,0,0,0,1,2,5,7,8,9, :  
 0,0,0,0,1,2,6,7,8,9, : 0,0,0,0,1,3,4,5,6,7, : 0,0,0,0,1,3,4,5,6,8, :  
 0,0,0,0,1,3,4,5,6,9, : 0,0,0,0,1,3,4,5,7,8, : 0,0,0,0,1,3,4,5,7,9, :  
 0,0,0,0,1,3,4,5,8,9, : 0,0,0,0,1,3,4,6,7,8, : 0,0,0,0,1,3,4,6,7,9, :  
 0,0,0,0,1,3,4,6,8,9, : 0,0,0,0,1,3,4,7,8,9, : 0,0,0,0,1,3,5,6,7,8, :  
 0,0,0,0,1,3,5,6,7,9, : 0,0,0,0,1,3,5,6,8,9, : 0,0,0,0,1,3,5,7,8,9, :  
 0,0,0,0,1,3,6,7,8,9, : 0,0,0,0,1,4,5,6,7,8, : 0,0,0,0,1,4,5,6,7,9, :  
 0,0,0,0,1,4,5,6,8,9, : 0,0,0,0,1,4,5,7,8,9, : 0,0,0,0,1,4,6,7,8,9, :  
 0,0,0,0,1,5,6,7,8,9, : 0,0,0,0,2,3,4,5,6,7, : 0,0,0,0,2,3,4,5,6,8, :  
 0,0,0,0,2,3,4,5,6,9, : 0,0,0,0,2,3,4,5,7,8, : 0,0,0,0,2,3,4,5,7,9, :  
 0,0,0,0,2,3,4,5,8,9, : 0,0,0,0,2,3,4,6,7,8, : 0,0,0,0,2,3,4,6,7,9, :  
 0,0,0,0,2,3,4,6,8,9, : 0,0,0,0,2,3,4,7,8,9, : 0,0,0,0,2,3,5,6,7,8, :  
 0,0,0,0,2,3,5,6,7,9, : 0,0,0,0,2,3,5,6,8,9, : 0,0,0,0,2,3,5,7,8,9, :  
 0,0,0,0,2,3,6,7,8,9, : 0,0,0,0,2,4,5,6,7,8, : 0,0,0,0,2,4,5,6,7,9, :  
 0,0,0,0,2,4,5,6,8,9, : 0,0,0,0,2,4,5,7,8,9, : 0,0,0,0,2,4,6,7,8,9, :  
 0,0,0,0,2,5,6,7,8,9, : 0,0,0,0,3,4,5,6,7,8, : 0,0,0,0,3,4,5,6,7,9, :  
 0,0,0,0,3,4,5,6,8,9, : 0,0,0,0,3,4,5,7,8,9, : 0,0,0,0,3,4,6,7,8,9, :  
 0,0,0,0,3,5,6,7,8,9, : 0,0,0,0,4,5,6,7,8,9, : 0,0,0,1,2,3,4,5,6,7, :  
 0,0,0,1,2,3,4,5,6,8, : 0,0,0,1,2,3,4,5,6,9, : 0,0,0,1,2,3,4,5,7,8, :  
 0,0,0,1,2,3,4,5,7,9, : 0,0,0,1,2,3,4,5,8,9, : 0,0,0,1,2,3,4,6,7,8, :  
 0,0,0,1,2,3,4,6,7,9, : 0,0,0,1,2,3,4,6,8,9, : 0,0,0,1,2,3,4,7,8,9, :  
 0,0,0,1,2,3,5,6,7,8, : 0,0,0,1,2,3,5,6,7,9, : 0,0,0,1,2,3,5,6,8,9, :  
 0,0,0,1,2,3,5,7,8,9, : 0,0,0,1,2,3,6,7,8,9, : 0,0,0,1,2,4,5,6,7,8, :  
 0,0,0,1,2,4,5,6,7,9, : 0,0,0,1,2,4,5,6,8,9, : 0,0,0,1,2,4,5,7,8,9, :  
 0,0,0,1,2,4,6,7,8,9, : 0,0,0,1,2,5,6,7,8,9, : 0,0,0,1,3,4,5,6,7,8, :  
 0,0,0,1,3,4,5,6,7,9, : 0,0,0,1,3,4,5,6,8,9, : 0,0,0,1,3,4,5,7,8,9, :  
 0,0,0,1,3,4,6,7,8,9, : 0,0,0,1,3,5,6,7,8,9, : 0,0,0,1,4,5,6,7,8,9, :  
 0,0,0,2,3,4,5,6,7,8, : 0,0,0,2,3,4,5,6,7,9, : 0,0,0,2,3,4,5,6,8,9, :  
 0,0,0,2,3,4,5,7,8,9, : 0,0,0,2,3,4,6,7,8,9, : 0,0,0,2,3,5,6,7,8,9, :  
 0,0,0,2,4,5,6,7,8,9, : 0,0,0,3,4,5,6,7,8,9, : 0,0,1,2,3,4,5,6,7,8, :  
 0,0,1,2,3,4,5,6,7,9, : 0,0,1,2,3,4,5,6,8,9, : 0,0,1,2,3,4,5,7,8,9, :  
 0,0,1,2,3,4,6,7,8,9, : 0,0,1,2,3,5,6,7,8,9, : 0,0,1,2,4,5,6,7,8,9, :  
 0,0,1,3,4,5,6,7,8,9, : 0,0,2,3,4,5,6,7,8,9, : 0,1,2,3,4,5,6,7,8,9, :

Number new nodes in level n is given by : 1,2,5,9,17,33,65,129,257,513,

-----Class

1270-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[100][101][102][120][201]]$

-----  
--



R29)

0,0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,0,3,--0,0,0,0,1,--0,0,0,  
0,2,--0,0,0,0,3,--0,0,0,0,4,--

R30)

0,0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,0,4,--0,0,  
0,1,--0,0,0,2,--0,0,0,3,--

R31)

0,0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,  
0,0,0,0,5,--0,0,1,--0,0,2,--

R32)

0,0,0,0,0,0,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,  
0,0,0,6,5,--0,0,0,0,0,0,6,--0,1,--

R33) 0,0,0,0,0,5,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--

R34)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R35)

0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--  
0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,  
,0,7,--

R36)

0,0,0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,1,--0,0,0,0,0,  
0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R37)

0,0,0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,1,--  
0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R38)

0,0,0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,0,0,4,--  
0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R39)

0,0,0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,  
0,0,0,0,0,0,5,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R40)

0,0,0,0,0,0,0,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,  
0,0,0,0,6,5,--0,0,0,0,0,0,0,6,--0,0,1,--0,0,2,--

R41)

0,0,0,0,0,0,0,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,  
0,0,0,0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,7,--0,1,--

R42)

0,0,0,0,0,0,6,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--

R43)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R44)

0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,  
0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R45)

0,0,0,0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R46)

0,0,0,0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R47)

0,0,0,0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--

R48)

0,0,0,0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,0,5,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R49)

0,0,0,0,0,0,0,0,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--0,0,0,0,0,0,0,6,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R50)

0,0,0,0,0,0,0,0,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,7,--0,0,1,--0,0,2,--

R51)

0,0,0,0,0,0,0,0,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,8,7,--0,0,0,0,0,0,0,8,--0,1,--

R52)

0,0,0,0,0,0,0,0,7,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,: 0,1,0,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,: 0,0,2,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,: 0,0,0,3,2,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,:

0,0,0,0,0,5,: 0,0,0,0,4,3,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,:

0,0,0,0,0,0,4,: 0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,: 0,0,0,0,0,5,4,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:

0,0,0,0,0,0,6,5,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,:

0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,7,6,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,:

0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,:

0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,8,7,:

Number new nodes in level n is given by : 1,2,4,5,6,7,8,9,10,11,

-----Class

1271-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[100][101][102][120][210]]$

--

Rules of  $T[L]$ :

- R1)  $0, -->0,0, --0,1, --$
- R2)  $0,0, -->0,0,0, --0,0,1, --0,0,2, --$
- R3)  $0,1, -->0,1,0, --0,0,1, --0,1, --$
- R4)  $0,0,0, -->0,0,0,0, --0,0,0,1, --0,0,0,2, --0,0,0,3, --$
- R5)  $0,0,1, -->0,1,0, --0,0,0,1, --0,0,1, --0,0,2, --$
- R6)  $0,0,2, -->0,0,2,0, --0,1,0, --0,0,0,2, --0,1, --$
- R7)  $0,1,0, -->$
- R8)  $0,0,0,0, -->0,0,0,0,0, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --$
- R9)  $0,0,0,1, -->0,1,0, --0,0,0,0,1, --0,0,0,1, --0,0,0,2, --0,0,0,3, --$
- R10)  $0,0,0,2, -->0,0,2,0, --0,1,0, --0,0,0,0,2, --0,0,1, --0,0,2, --$
- R11)  $0,0,0,3, -->0,0,0,3,0, --0,0,2,0, --0,1,0, --0,0,0,0,3, --0,1, --$
- R12)  $0,0,2,0, -->0,1,0, --$
- R13)  $0,0,0,0,0, -->0,0,0,0,0,0, --0,0,0,0,0,1, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5, --$
- R14)  $0,0,0,0,1, -->0,1,0, --0,0,0,0,0,1, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --$
- R15)  $0,0,0,0,2, -->0,0,2,0, --0,1,0, --0,0,0,0,0,2, --0,0,0,1, --0,0,0,2, --0,0,0,3, --$
- R16)  $0,0,0,0,3, -->0,0,0,3,0, --0,0,2,0, --0,1,0, --0,0,0,0,0,3, --0,0,1, --0,0,2, --$
- R17)  $0,0,0,0,4, -->0,0,0,0,4,0, --0,0,0,3,0, --0,0,2,0, --0,1,0, --0,0,0,0,0,4, --0,1, --$
- R18)  $0,0,0,3,0, -->0,0,2,0, --0,1,0, --$
- R19)  $0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,0,0,0,0,0,1, --0,0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --$
- R20)  $0,0,0,0,0,1, -->0,1,0, --0,0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5, --$
- R21)  $0,0,0,0,0,2, -->0,0,2,0, --0,1,0, --0,0,0,0,0,0,2, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --$
- R22)  $0,0,0,0,0,3, -->0,0,0,3,0, --0,0,2,0, --0,1,0, --0,0,0,0,0,0,3, --0,0,0,1, --0,0,0,2, --0,0,0,3, --$
- R23)  $0,0,0,0,0,4, -->0,0,0,0,4,0, --0,0,0,3,0, --0,0,2,0, --0,1,0, --0,0,0,0,0,0,4, --0,0,1, --0,0,2, --$
- R24)  $0,0,0,0,0,5, -->0,0,0,0,0,5,0, --0,0,0,0,4,0, --0,0,0,3,0, --0,0,2,0, --0,1,0, --0,0,0,0,0,5, --0,1, --$
- R25)  $0,0,0,0,4,0, -->0,0,0,3,0, --0,0,2,0, --0,1,0, --$
- R26)  $0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,1, --0,0,0,0,0,0,0,2, --0,0,0,0,0,0,0,3, --0,0,0,0,0,0,0,4, --0,0,0,0,0,0,0,5, --0,0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --$
- R27)  $0,0,0,0,0,0,1, -->0,1,0, --0,0,0,0,0,0,0,1, --0,0,0,0,0,0,1, --0,0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --$



R28)

0,0,0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,  
0,0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--

R29)

0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,3,--0,0,0,0,1,--0,0,0,  
0,2,--0,0,0,0,3,--0,0,0,0,4,--

R30)

0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,4,--0,0,  
0,1,--0,0,0,2,--0,0,0,3,--

R31)

0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,  
0,0,0,0,5,--0,0,1,--0,0,2,--

R32)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,  
0,--0,1,0,--0,0,0,0,0,0,6,--0,1,--

R33) 0,0,0,0,0,5,0,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--

R34)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,  
,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R35)

0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--  
0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,  
,0,7,--

R36)

0,0,0,0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,1,--0,0,0,0,0,  
0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R37)

0,0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,1,--  
0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R38)

0,0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,0,4,--  
0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R39)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,  
0,0,0,0,0,5,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R40)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,  
2,0,--0,1,0,--0,0,0,0,0,0,0,6,--0,0,1,--0,0,2,--

R41)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,  
0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,7,--0,1,--

R42)

0,0,0,0,0,0,6,0,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--

R43)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R44)

0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,

0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R45)

0,0,0,0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R46)

0,0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R47)

0,0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R48)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,5,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R49)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,6,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R50)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,7,0,--0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,7,--0,0,1,--0,0,2,--

R51)

0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,0,--0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,6,0,--0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,0,3,0,--0,0,0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,8,--0,1,--

R52)

0,0,0,0,0,0,0,7,0,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,: 0,1,0,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,: 0,0,2,0,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,: 0,0,0,3,0,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,: 0,0,0,0,0,5,:

0,0,0,0,0,4,0,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,:

0,0,0,0,0,0,4,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,4,:

0,0,0,0,0,0,6,0,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,0,7,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,:

0,0,0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,0,0,6,:

0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,4,5,6,7,8,9,10,11,

-----Class

1272-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[100][101][102][201][210]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0, -->0,0, --0,1, --$

R2)  $0,0, -->0,0,0, --0,0,1, --0,0,2, --$

R3)  $0,1, -->0,1,0, --0,0,1, --0,0,2, --$

R4)  $0,0,0, -->0,0,0,0, --0,0,0,1, --0,0,0,2, --0,0,0,3, --$

R5)  $0,0,1, -->0,1,0, --0,0,0,1, --0,0,0,2, --0,0,0,3, --$

R6)  $0,0,2, -->0,1,0, --0,1,0, --0,0,0,2, --0,0,0,3, --$

R7)  $0,1,0, -->$

R8)  $0,0,0,0, -->0,0,0,0,0, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --$

R9)  $0,0,0,1, -->0,1,0, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --$

R10)  $0,0,0,2, -->0,1,0, --0,1,0, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --$

R11)  $0,0,0,3, -->0,1,0, --0,1,0, --0,1,0, --0,0,0,0,3, --0,0,0,0,4, --$

R12)

$0,0,0,0,0, -->0,0,0,0,0,0, --0,0,0,0,0,1, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --$   
 $0,0,0,0,0,5, --$

R13)

$0,0,0,0,1, -->0,1,0, --0,0,0,0,0,1, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,$   
 $0,0,5, --$

R14)

$0,0,0,0,2, -->0,1,0, --0,1,0, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5,$   
--

R15)

$0,0,0,0,3, -->0,1,0, --0,1,0, --0,1,0, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5, --$

R16)  $0,0,0,0,4, -->0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,0,0,0,0,4, --0,0,0,0,0,5, --$

R17)

$0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,0,0,0,0,0,1, --0,0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,$   
 $0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --$

R18)

$0,0,0,0,0,1, -->0,1,0, --0,0,0,0,0,0,1, --0,0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,0,0,0,0,$   
 $4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --$

R19)

$0,0,0,0,0,2, -->0,1,0, --0,1,0, --0,0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,0,0,0,0,4, --0,0,$   
 $0,0,0,0,5, --0,0,0,0,0,0,6, --$

R20)

$0,0,0,0,0,3, -->0,1,0, --0,1,0, --0,1,0, --0,0,0,0,0,0,3, --0,0,0,0,0,0,4, --0,0,0,0,0,0,$   
 $5, --0,0,0,0,0,0,6, --$

R21)

$0,0,0,0,0,4, -->0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,0,0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,$   
 $0,0,0,0,6, --$

R22)

$0,0,0,0,0,5, -->0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,0,0,0,0,0,5, --0,0,0,0,0,0,$   
 $6, --$

R23)

$0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,1, --0,0,0,0,0,0,0,2, --0,0,0,0,0,0,$

0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R24)

0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R25)

0,0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R26)

0,0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R27)

0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R28)

0,0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R29)

0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R30)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R31)

0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R32)

0,0,0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R33)

0,0,0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R34)

0,0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R35)

0,0,0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R36)

0,0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R37)

0,0,0,0,0,0,0,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R38)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,9,--

R39)

0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R40)

0,0,0,0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R41)

0,0,0,0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R42)

0,0,0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R43)

0,0,0,0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R44)

0,0,0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R45)

0,0,0,0,0,0,0,0,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R46)

0,0,0,0,0,0,0,0,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,0, : 0,0,1, : 0,0,2, : 0,1,0, :

LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,2, : 0,0,0,3, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :

0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :

0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, :

0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, :

0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :

0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, :

0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :

0,0,0,0,0,0,0,0,0,9, :

Number new nodes in level n is given by : 1,2,4,4,5,6,7,8,9,10,

-----Class

1273-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[100][101][110][120][201]]$

-----  
--

Rules of  $T[L]$ :

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--

R3) 0,1,-->0,--0,0,--0,1,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R5) 0,0,1,-->0,0,--0,0,0,--0,0,1,--0,0,2,--

R6) 0,0,2,-->0,--0,0,2,1,--0,0,--0,1,--

R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R8) 0,0,0,1,-->0,0,0,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R9) 0,0,0,2,-->0,0,--0,0,0,2,1,--0,0,0,--0,0,1,--0,0,2,--

R10) 0,0,0,3,-->0,--0,0,2,1,--0,0,0,3,2,--0,0,--0,1,--

R11) 0,0,2,1,-->0,0,--0,0,--0,1,--

R12)

0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--

R13)

0,0,0,0,1,-->0,0,0,0,--0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R14) 0,0,0,0,2,-->0,0,0,--0,0,0,0,2,1,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R15) 0,0,0,0,3,-->0,0,--0,0,0,2,1,--0,0,0,0,3,2,--0,0,0,--0,0,1,--0,0,2,--

R16) 0,0,0,0,4,-->0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,--0,1,--

R17) 0,0,0,2,1,-->0,0,0,--0,0,0,--0,0,1,--0,0,2,--

R18) 0,0,0,3,2,-->0,0,--0,0,0,2,1,--0,0,--0,1,--

R19)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R20)

0,0,0,0,0,1,-->0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--  
0,0,0,0,0,4,--0,0,0,0,0,5,--

R21)

0,0,0,0,0,2,-->0,0,0,0,--0,0,0,0,0,2,1,--0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,  
0,3,--0,0,0,0,4,--

R22)

0,0,0,0,0,3,-->0,0,0,--0,0,0,0,2,1,--0,0,0,0,0,3,2,--0,0,0,0,--0,0,0,1,--0,0,0,2,--  
0,0,0,3,--

R23)

0,0,0,0,0,4,-->0,0,--0,0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,0,4,3,--0,0,0,--0,0,1,--0,0,  
2,--

R24)

0,0,0,0,0,5,-->0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,--0,1,--

R25) 0,0,0,0,2,1,-->0,0,0,0,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R26) 0,0,0,0,3,2,-->0,0,0,--0,0,0,0,2,1,--0,0,0,--0,0,1,--0,0,2,--

R27) 0,0,0,0,4,3,-->0,0,--0,0,0,2,1,--0,0,0,0,3,2,--0,0,--0,1,--

R28)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R29)

0,0,0,0,0,0,1,-->0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R30)

0,0,0,0,0,0,2,-->0,0,0,0,0,--0,0,0,0,0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R31)

0,0,0,0,0,0,3,-->0,0,0,0,--0,0,0,0,0,2,1,--0,0,0,0,0,0,3,2,--0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R32)

0,0,0,0,0,0,4,-->0,0,0,--0,0,0,0,2,1,--0,0,0,0,0,3,2,--0,0,0,0,0,0,4,3,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R33)

0,0,0,0,0,0,5,-->0,0,--0,0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,--0,0,1,--0,0,2,--

R34)

0,0,0,0,0,0,6,-->0,--0,0,2,1,--0,0,0,3,2,--0,0,0,4,3,--0,0,0,5,4,--0,0,0,0,0,6,5,--0,0,--0,1,--

R35)

0,0,0,0,0,2,1,-->0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R36)

0,0,0,0,0,3,2,-->0,0,0,0,--0,0,0,0,0,2,1,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R37)

0,0,0,0,0,4,3,-->0,0,0,--0,0,0,0,2,1,--0,0,0,0,3,2,--0,0,0,--0,0,1,--0,0,2,--

R38) 0,0,0,0,0,5,4,-->0,0,--0,0,0,2,1,--0,0,0,3,2,--0,0,0,4,3,--0,0,--0,1,--

R39)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R40)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R41)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,--0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R42)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,--0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,3,2,--0,0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R43)

0,0,0,0,0,0,0,4,-->0,0,0,0,--0,0,0,0,0,2,1,--0,0,0,0,0,0,3,2,--0,0,0,0,0,0,0,4,3,--0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R44)

0,0,0,0,0,0,0,5,-->0,0,0,--0,0,0,0,2,1,--0,0,0,0,0,3,2,--0,0,0,0,0,4,3,--0,0,0,0,0,0,5,4,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R45)

0,0,0,0,0,0,0,6,-->0,0,--0,0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,6,5,--0,0,0,--0,0,1,--0,0,2,--

R46)

0,0,0,0,0,0,0,7,-->0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,  
0,0,6,5,--0,0,0,0,0,0,7,6,--0,0,--0,1,--

R47)

0,0,0,0,0,0,2,1,-->0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,  
0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R48)

0,0,0,0,0,0,3,2,-->0,0,0,0,0,0,--0,0,0,0,0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,  
--0,0,0,0,3,--0,0,0,0,4,--

R49)

0,0,0,0,0,0,4,3,-->0,0,0,0,0,0,--0,0,0,0,0,0,2,1,--0,0,0,0,0,0,3,2,--0,0,0,0,0,0,--0,0,0,1,--  
0,0,0,2,--0,0,0,3,--

R50)

0,0,0,0,0,0,5,4,-->0,0,0,0,--0,0,0,0,2,1,--0,0,0,0,0,3,2,--0,0,0,0,0,0,4,3,--0,0,0,0,--  
0,0,1,--0,0,2,--

R51)

0,0,0,0,0,0,6,5,-->0,0,--0,0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--  
--0,0,--0,1,--

R52)

0,0,0,0,0,0,0,0,0,0,-->0,  
2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R53)

0,0,0,0,0,0,0,0,1,-->0,  
0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,  
0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R54)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,0,--0,0,0,  
0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--  
-0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R55)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,3,2,--0,0,0,  
0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,  
0,5,--0,0,0,0,0,0,6,--

R56)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,--0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,3,2,--0,0,0,0,0,0,  
0,0,4,3,--0,0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,  
0,0,0,5,--

R57)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,--0,0,0,0,0,2,1,--0,0,0,0,0,0,3,2,--0,0,0,0,0,0,0,4,3,  
--0,0,0,0,0,0,0,5,4,--0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
-

R58)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,--0,0,0,0,2,1,--0,0,0,0,0,3,2,--0,0,0,0,0,4,3,--0,0,0,  
0,0,0,0,5,4,--0,0,0,0,0,0,0,6,5,--0,0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R59)

0,0,0,0,0,0,0,0,7,-->0,0,--0,0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,  
4,--0,0,0,0,0,0,6,5,--0,0,0,0,0,0,0,7,6,--0,0,0,0,--0,1,--0,2,--

R60)

0,0,0,0,0,0,0,0,8,-->0,--0,0,2,1,--0,0,0,3,2,--0,0,0,4,3,--0,0,0,5,4,--0,0,0,  
0,0,0,6,5,--0,0,0,0,0,0,7,6,--0,0,0,0,0,0,8,7,--0,0,--0,1,--



R61)  
0,0,0,0,0,0,0,2,1,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,  
--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R62)  
0,0,0,0,0,0,0,3,2,-->0,0,0,0,0,0,--0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,1,--  
0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R63)  
0,0,0,0,0,0,0,4,3,-->0,0,0,0,0,--0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,3,2,--0,0,0,0,0,--  
0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R64)  
0,0,0,0,0,0,0,5,4,-->0,0,0,0,--0,0,0,0,0,2,1,--0,0,0,0,0,0,3,2,--0,0,0,0,0,0,0,4,3,  
--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R65)  
0,0,0,0,0,0,0,6,5,-->0,0,0,--0,0,0,0,2,1,--0,0,0,0,0,3,2,--0,0,0,0,0,0,4,3,--0,0,0,  
0,0,0,0,5,4,--0,0,0,--0,0,1,--0,0,2,--

R66)  
0,0,0,0,0,0,0,7,6,-->0,0,--0,0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,0,4,3,--0,0,0,0,0,0,5,  
4,--0,0,0,0,0,0,6,5,--0,0,--0,1,--

List of different nodes in T[L]

- LEN=1) 0,:
- LEN=2) 0,0,: 0,1,:
- LEN=3) 0,0,0,: 0,0,1, : 0,0,2,:
- LEN=4) 0,0,0,0,: 0,0,0,1, : 0,0,0,2, : 0,0,0,3, : 0,0,2,1,:
- LEN=5) 0,0,0,0,0,: 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,2,1, :  
0,0,0,3,2,:
- LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, :  
0,0,0,0,0,5, : 0,0,0,0,2,1, : 0,0,0,0,3,2, : 0,0,0,0,4,3,:
- LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :  
0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,2,1, : 0,0,0,0,0,3,2, :  
0,0,0,0,0,4,3, : 0,0,0,0,0,5,4,:
- LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :  
0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :  
0,0,0,0,0,0,2,1, : 0,0,0,0,0,0,3,2, : 0,0,0,0,0,0,4,3, : 0,0,0,0,0,0,5,4, :  
0,0,0,0,0,0,6,5,:
- LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, :  
0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, :  
0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,2,1, : 0,0,0,0,0,0,0,3,2, :  
0,0,0,0,0,0,0,4,3, : 0,0,0,0,0,0,0,5,4, : 0,0,0,0,0,0,0,6,5, : 0,0,0,0,0,0,0,7,6, :
- LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :  
0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, :  
0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :  
0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,2,1, : 0,0,0,0,0,0,0,0,3,2, :  
0,0,0,0,0,0,0,0,4,3, : 0,0,0,0,0,0,0,0,5,4, : 0,0,0,0,0,0,0,0,6,5, :  
0,0,0,0,0,0,0,0,7,6, : 0,0,0,0,0,0,0,0,8,7,:

Number new nodes in level n is given by : 1,2,3,5,7,9,11,13,15,17,

-----Class

1274-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[100][101][110][120][210]]$

-----



0,0,0,0,0,0,2,-->0,0,0,0,0,0,2,0,--0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,  
0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R31)

0,0,0,0,0,0,3,-->0,0,0,0,0,0,3,0,--0,0,0,0,0,2,0,--0,0,0,0,--0,0,0,0,0,--0,0,0,0,1,  
--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R32)

0,0,0,0,0,0,4,-->0,0,0,0,0,0,4,0,--0,0,0,0,0,3,0,--0,0,0,0,2,0,--0,0,0,--0,0,0,0,--  
0,0,0,1,--0,0,0,2,--0,0,0,3,--

R33)

0,0,0,0,0,0,5,-->0,0,0,0,0,0,5,0,--0,0,0,0,0,4,0,--0,0,0,0,3,0,--0,0,0,2,0,--0,0,--  
0,0,0,--0,0,1,--0,0,2,--

R34)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,  
0,--0,--0,0,--0,1,--

R35)

0,0,0,0,0,2,0,-->0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,  
0,4,--

R36)

0,0,0,0,0,3,0,-->0,0,0,0,0,2,0,--0,0,0,0,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R37)

0,0,0,0,0,4,0,-->0,0,0,0,0,3,0,--0,0,0,0,2,0,--0,0,0,--0,0,0,--0,0,1,--0,0,2,--

R38) 0,0,0,0,0,5,0,-->0,0,0,0,0,4,0,--0,0,0,0,3,0,--0,0,0,2,0,--0,0,--0,0,--0,1,--

R39)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R40)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,  
0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,  
,0,0,0,0,7,--

R41)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,2,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,  
--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R42)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,3,0,--0,0,0,0,0,0,2,0,--0,0,0,0,0,--0,0,0,0,0,0,--  
0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R43)

0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,4,0,--0,0,0,0,0,0,3,0,--0,0,0,0,0,2,0,--0,0,0,0,--  
0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R44)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,5,0,--0,0,0,0,0,0,4,0,--0,0,0,0,0,3,0,--0,0,0,0,2,  
0,--0,0,0,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R45)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,6,0,--0,0,0,0,0,0,5,0,--0,0,0,0,0,4,0,--0,0,0,0,3,  
0,--0,0,0,2,0,--0,0,--0,0,0,--0,0,1,--0,0,2,--

R46)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,  
0,--0,0,0,3,0,--0,0,2,0,--0,--0,0,--0,1,--

R47)

0,0,0,0,0,0,2,0,-->0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,

0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R48)

0,0,0,0,0,0,3,0,-->0,0,0,0,0,0,2,0,--0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,2,  
--0,0,0,0,3,--0,0,0,0,4,--

R49)

0,0,0,0,0,0,4,0,-->0,0,0,0,0,0,3,0,--0,0,0,0,0,2,0,--0,0,0,0,--0,0,0,0,--0,0,0,1,--  
0,0,0,2,--0,0,0,3,--

R50)

0,0,0,0,0,0,5,0,-->0,0,0,0,0,0,4,0,--0,0,0,0,0,3,0,--0,0,0,0,2,0,--0,0,0,--0,0,0,--  
0,0,1,--0,0,2,--

R51)

0,0,0,0,0,0,6,0,-->0,0,0,0,0,0,5,0,--0,0,0,0,0,4,0,--0,0,0,0,3,0,--0,0,0,2,0,--0,0,  
--0,0,--0,1,--

R52)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R53)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,  
0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,  
0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R54)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,2,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,  
0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,-  
-0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

R55)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,3,0,--0,0,0,0,0,0,0,0,2,0,--0,0,0,0,0,0,--0,0,0,  
0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,  
0,5,--0,0,0,0,0,0,6,--

R56)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,4,0,--0,0,0,0,0,0,0,0,3,0,--0,0,0,0,0,0,2,0,--0,  
0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,  
0,0,0,5,--

R57)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,0,5,0,--0,0,0,0,0,0,0,0,4,0,--0,0,0,0,0,0,3,0,--0,  
0,0,0,0,2,0,--0,0,0,0,--0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,-  
-

R58)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,0,6,0,--0,0,0,0,0,0,0,0,5,0,--0,0,0,0,0,0,4,0,--0,  
0,0,0,0,3,0,--0,0,0,0,2,0,--0,0,0,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R59)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,0,0,6,0,--0,0,0,0,0,0,5,0,--0,  
0,0,0,0,4,0,--0,0,0,0,3,0,--0,0,0,2,0,--0,0,--0,0,0,--0,0,1,--0,0,2,--

R60)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,8,0,--0,0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,6,0,--0,  
0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,--0,0,--0,1,--

R61)

0,0,0,0,0,0,0,0,2,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,  
--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R62)

0,0,0,0,0,0,0,3,0,-->0,0,0,0,0,0,0,2,0,--0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,1,--  
0,0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R63)

0,0,0,0,0,0,0,4,0,-->0,0,0,0,0,0,0,3,0,--0,0,0,0,0,0,2,0,--0,0,0,0,0,--0,0,0,0,0,--  
0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R64)

0,0,0,0,0,0,0,5,0,-->0,0,0,0,0,0,0,4,0,--0,0,0,0,0,0,3,0,--0,0,0,0,0,2,0,--0,0,0,0,  
--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R65)

0,0,0,0,0,0,0,6,0,-->0,0,0,0,0,0,0,5,0,--0,0,0,0,0,0,4,0,--0,0,0,0,0,3,0,--0,0,0,0,  
2,0,--0,0,0,--0,0,0,--0,0,1,--0,0,2,--

R66)

0,0,0,0,0,0,0,7,0,-->0,0,0,0,0,0,0,6,0,--0,0,0,0,0,0,5,0,--0,0,0,0,0,4,0,--0,0,0,0,  
3,0,--0,0,0,2,0,--0,0,--0,0,--0,1,--

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0,0, : 0,1, :

LEN=3) 0,0,0, : 0,0,1, : 0,0,2, :

LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,2, : 0,0,0,3, : 0,0,2,0, :

LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,2,0, :  
0,0,0,3,0, :

LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, :  
0,0,0,0,0,5, : 0,0,0,0,2,0, : 0,0,0,0,3,0, : 0,0,0,0,4,0, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :  
0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,2,0, : 0,0,0,0,0,3,0, :  
0,0,0,0,0,4,0, : 0,0,0,0,0,5,0, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :  
0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :  
0,0,0,0,0,0,2,0, : 0,0,0,0,0,0,3,0, : 0,0,0,0,0,0,4,0, : 0,0,0,0,0,0,5,0, :  
0,0,0,0,0,0,6,0, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, :  
0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, :  
0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,2,0, : 0,0,0,0,0,0,0,3,0, :  
0,0,0,0,0,0,0,4,0, : 0,0,0,0,0,0,0,5,0, : 0,0,0,0,0,0,0,6,0, : 0,0,0,0,0,0,0,7,0, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :  
0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, :  
0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :  
0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,2,0, : 0,0,0,0,0,0,0,0,3,0, :  
0,0,0,0,0,0,0,0,4,0, : 0,0,0,0,0,0,0,0,5,0, : 0,0,0,0,0,0,0,0,6,0, :  
0,0,0,0,0,0,0,0,7,0, : 0,0,0,0,0,0,0,0,8,0, :

Number new nodes in level n is given by : 1,2,3,5,7,9,11,13,15,17,

-----Class

1275-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[100][101][110][201][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--

R3) 0,1,-->0,--0,0,--0,0,2,--  
R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R5) 0,0,1,-->0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--  
R6) 0,0,2,-->0,--0,--0,0,--0,0,0,3,--  
R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R8) 0,0,0,1,-->0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R9) 0,0,0,2,-->0,0,--0,0,--0,0,0,--0,0,0,0,3,--0,0,0,0,4,--  
R10) 0,0,0,3,-->0,--0,--0,--0,0,--0,0,0,0,4,--  
R11)  
0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--  
R12)  
0,0,0,0,1,-->0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,  
0,0,5,--  
R13)  
0,0,0,0,2,-->0,0,0,--0,0,0,--0,0,0,0,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R14) 0,0,0,0,3,-->0,0,--0,0,--0,0,--0,0,0,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R15) 0,0,0,0,4,-->0,--0,--0,--0,--0,0,--0,0,0,0,0,5,--  
R16)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R17)  
0,0,0,0,0,1,-->0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,  
0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R18)  
0,0,0,0,0,2,-->0,0,0,0,--0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,  
0,0,0,0,5,--0,0,0,0,0,0,6,--  
R19)  
0,0,0,0,0,3,-->0,0,0,--0,0,0,--0,0,0,--0,0,0,0,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--  
R20)  
0,0,0,0,0,4,-->0,0,--0,0,--0,0,--0,0,--0,0,0,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R21) 0,0,0,0,0,5,-->0,--0,--0,--0,--0,--0,0,--0,0,0,0,0,6,--  
R22)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R23)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--  
0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R24)  
0,0,0,0,0,0,2,-->0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,0,3,--0,0,0,0,0,  
0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R25)  
0,0,0,0,0,0,3,-->0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,0,0,4,--0,0,0,  
0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R26)  
0,0,0,0,0,0,4,-->0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,0,--0,0,0,0,0,0,0,5,--0,0,0,  
0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R27)  
0,0,0,0,0,0,5,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,0,--0,0,0,0,0,0,0,6,--0,0,0,0,0,

0,0,7,--

R28) 0,0,0,0,0,0,6,-->0,--0,--0,--0,--0,--0,--0,0,--0,0,0,0,0,0,7,--

R29)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R30)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R31)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R32)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R33)

0,0,0,0,0,0,0,4,-->0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R34)

0,0,0,0,0,0,0,5,-->0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,0,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R35)

0,0,0,0,0,0,0,6,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,0,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R36) 0,0,0,0,0,0,0,7,-->0,--0,--0,--0,--0,--0,--0,--0,0,--0,0,0,0,0,0,0,0,8,--

R37)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,9,--

R38)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,9,--

R39)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,9,--

R40)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R41)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R42)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,0,--

0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R43)

0,0,0,0,0,0,0,0,6,-->0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,0,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R44)

0,0,0,0,0,0,0,0,7,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R45)

0,0,0,0,0,0,0,0,8,-->0,--0,--0,--0,--0,--0,--0,--0,--0,0,--0,0,0,0,0,0,0,0,0,9,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,:

0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,:

0,0,0,0,0,0,4,: 0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,:

0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,:

0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,:

0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,3,4,5,6,7,8,9,10,

-----Class

1276-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[100][101][120][201][210]]

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--

R3) 0,1,-->0,--0,0,1,--0,1,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R5) 0,0,1,-->0,0,--0,0,0,1,--0,0,1,--0,0,2,--

R6) 0,0,2,-->0,--0,--0,0,0,2,--0,1,--

R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R8) 0,0,0,1,-->0,0,0,--0,0,0,0,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R9) 0,0,0,2,-->0,0,--0,0,--0,0,0,0,2,--0,0,1,--0,0,2,--

R10) 0,0,0,3,-->0,--0,--0,--0,0,0,0,3,--0,1,--

R11)

0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--

0,0,0,0,0,5,--



R12)

0,0,0,0,1,-->0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,  
--

R13) 0,0,0,0,2,-->0,0,0,--0,0,0,--0,0,0,0,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R14) 0,0,0,0,3,-->0,0,--0,0,--0,0,--0,0,0,0,0,3,--0,0,1,--0,0,2,--

R15) 0,0,0,0,4,-->0,--0,--0,--0,--0,0,0,0,0,4,--0,1,--

R16)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R17)

0,0,0,0,0,1,-->0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,  
--0,0,0,0,0,4,--0,0,0,0,0,5,--

R18)

0,0,0,0,0,2,-->0,0,0,0,--0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,  
3,--0,0,0,0,4,--

R19)

0,0,0,0,0,3,-->0,0,0,--0,0,0,--0,0,0,--0,0,0,0,0,0,3,--0,0,0,1,--0,0,0,2,--0,0,0,3,  
--

R20) 0,0,0,0,0,4,-->0,0,--0,0,--0,0,--0,0,--0,0,0,0,0,0,4,--0,0,1,--0,0,2,--

R21) 0,0,0,0,0,5,-->0,--0,--0,--0,--0,--0,--0,0,0,0,0,0,5,--0,1,--

R22)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R23)

0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,  
0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R24)

0,0,0,0,0,0,2,-->0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,1,--0,0,0,0,0,  
2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R25)

0,0,0,0,0,0,3,-->0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,0,0,0,3,--0,0,0,0,1,--0,0,0,  
0,2,--0,0,0,0,3,--0,0,0,0,4,--

R26)

0,0,0,0,0,0,4,-->0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,0,0,0,0,4,--0,0,0,1,--0,0,0,  
2,--0,0,0,3,--

R27)

0,0,0,0,0,0,5,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,0,0,0,0,0,5,--0,0,1,--0,0,2,--

R28) 0,0,0,0,0,0,6,-->0,--0,--0,--0,--0,--0,--0,0,0,0,0,0,0,6,--0,1,--

R29)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R30)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,  
0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,  
,0,0,0,0,0,7,--

R31)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,1,--  
0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R32)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,0,0,0,3,--0,0,0,0,  
0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R33)

0,0,0,0,0,0,0,4,-->0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,0,0,0,0,4,--0,0,  
0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R34)

0,0,0,0,0,0,0,5,-->0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,0,0,0,0,0,5,--0,0,  
0,1,--0,0,0,2,--0,0,0,3,--

R35)

0,0,0,0,0,0,0,6,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,0,0,0,0,0,0,6,--0,0,1,--  
0,0,2,--

R36) 0,0,0,0,0,0,0,7,-->0,--0,--0,--0,--0,--0,--0,--0,0,0,0,0,0,0,7,--0,1,--

R37)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R38)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,  
0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,  
,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R39)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,  
0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,  
,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R40)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,0,0,3,  
--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,  
,0,0,0,0,0,6,--

R41)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,0,0,  
0,0,4,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R42)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,0,0,  
0,0,0,5,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R43)

0,0,0,0,0,0,0,0,6,-->0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,0,0,0,0,  
0,0,6,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R44)

0,0,0,0,0,0,0,0,7,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,0,0,0,0,0,0,7,  
--0,0,1,--0,0,2,--

R45)

0,0,0,0,0,0,0,0,8,-->0,--0,--0,--0,--0,--0,--0,--0,--0,0,0,0,0,0,0,0,8,--0,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,:

0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,:  
 0,0,0,0,0,0,4,: 0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,:  
 LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,:  
 0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:  
 0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,:  
 0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,2,:  
 0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,:  
 0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,:  
 0,0,0,0,0,0,0,0,0,9,:  
 Number new nodes in level n is given by : 1,2,3,4,5,6,7,8,9,10,

-----Class

1277-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[100][102][110][120][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--

R3) 0,1,-->0,1,0,--0,0,--0,1,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R5) 0,0,1,-->0,1,0,--0,0,0,--0,0,1,--0,0,2,--

R6) 0,0,2,-->0,1,0,--0,0,2,1,--0,0,--0,1,--

R7) 0,1,0,-->0,1,0,--

R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R9) 0,0,0,1,-->0,1,0,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R10) 0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,--0,0,1,--0,0,2,--

R11) 0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,--0,1,--

R12) 0,0,2,1,-->0,0,2,1,0,--0,1,0,--

R13)

0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
 0,0,0,0,0,5,--

R14)

0,0,0,0,1,-->0,1,0,--0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R15) 0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R16) 0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,--0,0,1,--0,0,2,--

R17) 0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,--0,1,--

R18) 0,0,0,3,2,-->0,0,2,1,0,--0,0,0,3,2,1,--0,1,0,--

R19) 0,0,2,1,0,-->

R20)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
 0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R21)

0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,  
 0,0,0,4,--0,0,0,0,0,5,--

R22)

0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,  
 0,0,0,4,--

R23)

0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,  
--

R24)

0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,--0,0,1,--0,0,2,--

R25)

0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,--0,  
1,--

R26) 0,0,0,0,4,3,-->0,0,2,1,0,--0,0,0,3,2,1,--0,0,0,0,4,3,2,--0,1,0,--

R27) 0,0,0,3,2,1,-->0,0,2,1,0,--

R28)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R29)

0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,  
0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R30)

0,0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,  
0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R31)

0,0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--  
0,0,0,0,3,--0,0,0,0,4,--

R32)

0,0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,--0,0,0,1,--0,  
0,0,2,--0,0,0,3,--

R33)

0,0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,  
--0,0,1,--0,0,2,--

R34)

0,0,0,0,0,0,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,  
0,0,0,6,5,--0,0,--0,1,--

R35)

0,0,0,0,0,5,4,-->0,0,2,1,0,--0,0,0,3,2,1,--0,0,0,0,4,3,2,--0,0,0,0,0,5,4,3,--0,1,0,  
--

R36) 0,0,0,0,4,3,2,-->0,0,2,1,0,--0,0,0,3,2,1,--

R37)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R38)

0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,  
7,--

R39)

0,0,0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,  
--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R40)

0,0,0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,  
0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R41)

0,0,0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,--0,0,0,0,  
1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R42)

0,0,0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,  
0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R43)

0,0,0,0,0,0,0,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,  
0,0,0,0,6,5,--0,0,0,--0,0,1,--0,0,2,--

R44)

0,0,0,0,0,0,0,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,  
0,0,0,0,6,5,--0,0,0,0,0,0,7,6,--0,0,--0,1,--

R45)

0,0,0,0,0,0,6,5,-->0,0,2,1,0,--0,0,0,3,2,1,--0,0,0,0,4,3,2,--0,0,0,0,0,5,4,3,--0,0,  
0,0,0,0,6,5,4,--0,1,0,--

R46) 0,0,0,0,0,5,4,3,-->0,0,2,1,0,--0,0,0,3,2,1,--0,0,0,0,4,3,2,--

R47)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R48)

0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,  
0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,  
--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R49)

0,0,0,0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,  
0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,  
0,0,0,0,0,0,7,--

R50)

0,0,0,0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--  
0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R51)

0,0,0,0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,--0,0,  
0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R52)

0,0,0,0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,  
0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R53)

0,0,0,0,0,0,0,0,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,  
0,0,0,0,0,6,5,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R54)

0,0,0,0,0,0,0,0,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,  
0,0,0,0,0,6,5,--0,0,0,0,0,0,7,6,--0,0,0,--0,0,1,--0,0,2,--

R55)

0,0,0,0,0,0,0,0,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,  
0,0,0,0,0,6,5,--0,0,0,0,0,0,7,6,--0,0,0,0,0,0,8,7,--0,0,--0,1,--

R56)

0,0,0,0,0,0,7,6,-->0,0,2,1,0,--0,0,0,3,2,1,--0,0,0,0,4,3,2,--0,0,0,0,0,5,4,3,--0,  
0,0,0,0,0,6,5,4,--0,0,0,0,0,0,7,6,5,--0,1,0,--

R57)

0,0,0,0,0,0,6,5,4,-->0,0,2,1,0,--0,0,0,3,2,1,--0,0,0,0,4,3,2,--0,0,0,0,0,5,4,3,--

List of different nodes in T[L]

LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, : 0,0,2, : 0,1,0, :  
LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,2, : 0,0,0,3, : 0,0,2,1, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, : 0,0,0,3,2, :  
0,0,2,1,0, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, :  
0,0,0,0,0,5, : 0,0,0,0,4,3, : 0,0,0,3,2,1, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :  
0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,4, : 0,0,0,0,4,3,2, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :  
0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :  
0,0,0,0,0,0,6,5, : 0,0,0,0,0,5,4,3, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, :  
0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, :  
0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,0,7,6, : 0,0,0,0,0,0,6,5,4, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :  
0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, :  
0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :  
0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,8,7, : 0,0,0,0,0,0,0,7,6,5, :  
Number new nodes in level n is given by : 1,2,4,5,7,8,9,10,11,12,

-----Class

1278-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[100][102][110][120][210]]$

-----

--

Rules of T[L]:

R1) 0, -->0,0, --0,1, --  
R2) 0,0, -->0,0,0, --0,0,1, --0,0,2, --  
R3) 0,1, -->0,1,0, --0,0, --0,1, --  
R4) 0,0,0, -->0,0,0,0, --0,0,0,1, --0,0,0,2, --0,0,0,3, --  
R5) 0,0,1, -->0,1,0, --0,0,0, --0,0,1, --0,0,2, --  
R6) 0,0,2, -->0,0,2,0, --0,1,0, --0,0, --0,1, --  
R7) 0,1,0, -->0,1,0, --  
R8) 0,0,0,0, -->0,0,0,0,0, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --  
R9) 0,0,0,1, -->0,1,0, --0,0,0,0, --0,0,0,1, --0,0,0,2, --0,0,0,3, --  
R10) 0,0,0,2, -->0,0,2,0, --0,1,0, --0,0,0, --0,0,1, --0,0,2, --  
R11) 0,0,0,3, -->0,0,0,3,0, --0,0,2,0, --0,1,0, --0,0, --0,1, --  
R12) 0,0,2,0, -->0,1,0, --0,1,0, --  
R13)  
0,0,0,0,0, -->0,0,0,0,0,0, --0,0,0,0,0,1, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --  
0,0,0,0,0,5, --  
R14)  
0,0,0,0,1, -->0,1,0, --0,0,0,0,0, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --  
R15) 0,0,0,0,2, -->0,0,2,0, --0,1,0, --0,0,0,0, --0,0,0,1, --0,0,0,2, --0,0,0,3, --  
R16) 0,0,0,0,3, -->0,0,0,3,0, --0,0,2,0, --0,1,0, --0,0,0, --0,0,1, --0,0,2, --  
R17) 0,0,0,0,4, -->0,0,0,0,4,0, --0,0,0,3,0, --0,0,2,0, --0,1,0, --0,0, --0,1, --  
R18) 0,0,0,3,0, -->0,0,2,0, --0,1,0, --0,1,0, --

R19)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R20)

0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R21)

0,0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R22)

0,0,0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R23)

0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,1,--0,0,2,--

R24)

0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--0,1,--

R25) 0,0,0,0,4,0,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--

R26)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R27)

0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R28)

0,0,0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R29)

0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R30)

0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R31)

0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,1,--0,0,2,--

R32)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--0,1,--

R33) 0,0,0,0,0,5,0,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--

R34)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R35)

0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R36)

0,0,0,0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,

--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R37)

0,0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R38)

0,0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R39)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--

R40)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,1,--0,0,2,--

R41)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--0,1,--

R42)

0,0,0,0,0,0,0,6,0,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--

R43)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R44)

0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R45)

0,0,0,0,0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

R46)

0,0,0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R47)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R48)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R49)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,--0,0,1,0,--0,0,2,--0,0,3,--

R50)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--0,1,--0,0,2,--

R51)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,0,--0,0,0,0,0,0,7,0,--0,0,0,0,0,6,0,--0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--0,1,--

R52)



0,0,0,0,0,0,0,7,0,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,5,0,--0,0,0,0,0,4,0,--0,0,0,0,3,0,--0,  
0,2,0,--0,1,0,--0,1,0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,: 0,1,0,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,: 0,0,2,0,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,: 0,0,0,3,0,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,:

0,0,0,0,0,5,: 0,0,0,0,4,0,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,:

0,0,0,0,0,0,4,: 0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,: 0,0,0,0,0,5,0,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:

0,0,0,0,0,0,6,0,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,:

0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,7,0,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,:

0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,:

0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,0,8,0,:

Number new nodes in level n is given by : 1,2,4,5,6,7,8,9,10,11,

-----Class

1279-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[100][102][110][201][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--

R3) 0,1,-->0,1,0,--0,0,--0,1,2,--

R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R5) 0,0,1,-->0,1,0,--0,0,0,--0,0,1,2,--0,0,1,3,--

R6) 0,0,2,-->0,1,0,--0,1,0,--0,0,--0,0,2,3,--

R7) 0,1,0,-->0,1,0,--

R8) 0,1,2,-->0,1,2,0,--0,1,0,--0,0,--0,0,2,3,--

R9) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R10) 0,0,0,1,-->0,1,0,--0,0,0,0,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--

R11) 0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,--0,0,0,2,3,--0,0,0,2,4,--

R12) 0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,0,3,4,--

R13) 0,0,1,2,-->0,1,2,0,--0,1,0,--0,0,0,--0,0,0,2,3,--0,0,0,2,4,--

R14) 0,0,1,3,-->0,1,2,0,--0,1,0,--0,1,0,--0,0,--0,0,0,3,4,--

R15) 0,0,2,3,-->0,1,2,0,--0,1,2,0,--0,1,0,--0,0,--0,0,0,3,4,--

R16) 0,1,2,0,-->

R17)

0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--

0,0,0,0,0,5,--

R18)

0,0,0,0,1,-->0,1,0,--0,0,0,0,0,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R19)

0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,--0,0,0,0,2,3,--0,0,0,0,2,4,--0,0,0,0,2,5,--

R20) 0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,0,0,0,3,4,--0,0,0,0,3,5,--

R21) 0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,0,0,4,5,--

R22)

0,0,0,1,2,-->0,1,2,0,--0,1,0,--0,0,0,0,--0,0,0,0,2,3,--0,0,0,0,2,4,--0,0,0,0,2,5,--

R23) 0,0,0,1,3,-->0,1,2,0,--0,1,0,--0,1,0,--0,0,0,--0,0,0,0,3,4,--0,0,0,0,3,5,--

R24) 0,0,0,1,4,-->0,1,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,0,0,4,5,--

R25) 0,0,0,2,3,-->0,1,2,0,--0,1,2,0,--0,1,0,--0,0,0,--0,0,0,0,3,4,--0,0,0,0,3,5,--

R26) 0,0,0,2,4,-->0,1,2,0,--0,1,2,0,--0,1,0,--0,1,0,--0,0,--0,0,0,0,4,5,--

R27) 0,0,0,3,4,-->0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,0,--0,0,--0,0,0,0,4,5,--

R28)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R29)

0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--

R30)

0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,2,3,--0,0,0,0,0,2,4,--0,0,0,0,0,2,5,--0,0,0,0,0,2,6,--

R31)

0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,0,0,3,4,--0,0,0,0,0,3,5,--0,0,0,0,0,3,6,--

R32)

0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,0,0,0,0,4,5,--0,0,0,0,0,4,6,--

R33) 0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,0,0,0,5,6,--

R34)

0,0,0,0,1,2,-->0,1,2,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,2,3,--0,0,0,0,0,2,4,--0,0,0,0,0,2,5,--0,0,0,0,0,2,6,--

R35)

0,0,0,0,1,3,-->0,1,2,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,0,0,3,4,--0,0,0,0,0,3,5,--0,0,0,0,0,3,6,--

R36)

0,0,0,0,1,4,-->0,1,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,0,0,0,0,4,5,--0,0,0,0,0,4,6,--

R37)

0,0,0,0,1,5,-->0,1,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,0,0,0,5,6,--

R38)

0,0,0,0,2,3,-->0,1,2,0,--0,1,2,0,--0,1,0,--0,0,0,0,--0,0,0,0,0,3,4,--0,0,0,0,0,3,5,--0,0,0,0,0,3,6,--

R39)

0,0,0,0,2,4,-->0,1,2,0,--0,1,2,0,--0,1,0,--0,1,0,--0,0,0,--0,0,0,0,0,4,5,--0,0,0,0,0,4,6,--

R40)

0,0,0,0,2,5,-->0,1,2,0,--0,1,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,0,0,0,5,6,--

R41)

0,0,0,0,3,4,-->0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,0,--0,0,0,--0,0,0,0,0,4,5,--0,0,0,0,

0,0,4,6,--

R42)

0,0,0,0,3,5,-->0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,0,--0,1,0,--0,0,--0,0,0,0,0,5,6,--

R43)

0,0,0,0,4,5,-->0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,0,--0,0,--0,0,0,0,0,5,6,--

R44)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R45)

0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--0,0,0,0,0,0,1,7,--

R46)

0,0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,3,--0,0,0,0,0,0,2,4,--0,0,0,0,0,0,2,5,--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,2,7,--

R47)

0,0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,0,3,4,--0,0,0,0,0,0,3,5,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,7,--

R48)

0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,0,0,0,4,5,--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,7,--

R49)

0,0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,0,0,0,0,0,5,6,--0,0,0,0,0,0,5,7,--

R50)

0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,0,0,0,0,6,7,--

R51)

0,0,0,0,0,1,2,-->0,1,2,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,3,--0,0,0,0,0,0,2,4,--0,0,0,0,0,0,2,5,--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,2,7,--

R52)

0,0,0,0,0,1,3,-->0,1,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,0,3,4,--0,0,0,0,0,0,3,5,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,7,--

R53)

0,0,0,0,0,1,4,-->0,1,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,0,0,0,4,5,--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,7,--

R54)

0,0,0,0,0,1,5,-->0,1,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,0,0,0,0,0,5,6,--0,0,0,0,0,0,5,7,--

R55)

0,0,0,0,0,1,6,-->0,1,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,0,0,0,0,6,7,--

R56)

0,0,0,0,0,2,3,-->0,1,2,0,--0,1,2,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,0,3,4,--0,0,0,0,0,0,3,5,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,7,--

R57)

0,0,0,0,0,2,4,-->0,1,2,0,--0,1,2,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,0,0,0,4,5,--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,7,--

R58)

0,0,0,0,0,2,5,-->0,1,2,0,--0,1,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,0,0,0,0,0,5,6,--

6, --0,0,0,0,0,0,5,7, --

R59)

0,0,0,0,0,2,6, -->0,1,2,0, --0,1,2,0, --0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,0, --0,0,0,0,  
0,0,6,7, --

R60)

0,0,0,0,0,3,4, -->0,1,2,0, --0,1,2,0, --0,1,2,0, --0,1,0, --0,0,0,0, --0,0,0,0,0,0,4,5, --  
0,0,0,0,0,0,4,6, --0,0,0,0,0,0,4,7, --

R61)

0,0,0,0,0,3,5, -->0,1,2,0, --0,1,2,0, --0,1,2,0, --0,1,0, --0,1,0, --0,0,0, --0,0,0,0,0,0,  
5,6, --0,0,0,0,0,0,5,7, --

R62)

0,0,0,0,0,3,6, -->0,1,2,0, --0,1,2,0, --0,1,2,0, --0,1,0, --0,1,0, --0,1,0, --0,0, --0,0,0,  
0,0,0,6,7, --

R63)

0,0,0,0,0,4,5, -->0,1,2,0, --0,1,2,0, --0,1,2,0, --0,1,2,0, --0,1,0, --0,0,0, --0,0,0,0,0,  
0,5,6, --0,0,0,0,0,0,5,7, --

R64)

0,0,0,0,0,4,6, -->0,1,2,0, --0,1,2,0, --0,1,2,0, --0,1,2,0, --0,1,0, --0,1,0, --0,0, --0,0,0,  
0,0,0,0,6,7, --

R65)

0,0,0,0,0,5,6, -->0,1,2,0, --0,1,2,0, --0,1,2,0, --0,1,2,0, --0,1,2,0, --0,1,0, --0,0, --0,  
0,0,0,0,0,6,7, --

R66)

0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0,0,1, --0,0,0,0,0,0,0,0,0,2, --0,0,  
0,0,0,0,0,0,3, --0,0,0,0,0,0,0,0,0,4, --0,0,0,0,0,0,0,0,0,5, --0,0,0,0,0,0,0,0,0,6, --0,0,0,0,  
,0,0,0,0,7, --0,0,0,0,0,0,0,0,8, --

R67)

0,0,0,0,0,0,0,1, -->0,1,0, --0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0,1,2, --0,0,0,0,0,0,0,0,1,3,  
--0,0,0,0,0,0,0,1,4, --0,0,0,0,0,0,0,1,5, --0,0,0,0,0,0,0,1,6, --0,0,0,0,0,0,0,1,7, --0,  
,0,0,0,0,0,0,1,8, --

R68)

0,0,0,0,0,0,0,2, -->0,1,0, --0,1,0, --0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0,2,3, --0,0,0,0,0,0,  
0,2,4, --0,0,0,0,0,0,0,2,5, --0,0,0,0,0,0,0,2,6, --0,0,0,0,0,0,0,2,7, --0,0,0,0,0,0,0,2,  
,8, --

R69)

0,0,0,0,0,0,0,3, -->0,1,0, --0,1,0, --0,1,0, --0,0,0,0,0,0, --0,0,0,0,0,0,0,0,3,4, --0,0,0,  
0,0,0,0,3,5, --0,0,0,0,0,0,0,3,6, --0,0,0,0,0,0,0,3,7, --0,0,0,0,0,0,0,3,8, --

R70)

0,0,0,0,0,0,0,4, -->0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,0,0,0,0, --0,0,0,0,0,0,0,0,4,5, --  
0,0,0,0,0,0,0,4,6, --0,0,0,0,0,0,0,4,7, --0,0,0,0,0,0,0,4,8, --

R71)

0,0,0,0,0,0,0,5, -->0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,0,0,0, --0,0,0,0,0,0,0,  
5,6, --0,0,0,0,0,0,0,5,7, --0,0,0,0,0,0,0,5,8, --

R72)

0,0,0,0,0,0,0,6, -->0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,0,0, --0,0,0,0,  
0,0,0,6,7, --0,0,0,0,0,0,0,6,8, --

R73)

0,0,0,0,0,0,0,7, -->0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,0, --0,  
0,0,0,0,0,0,7,8, --

R74)

0,0,0,0,0,0,1,2,-->0,1,2,0,--0,1,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,3,--0,0,0,0,0,  
0,0,2,4,--0,0,0,0,0,0,2,5,--0,0,0,0,0,0,2,6,--0,0,0,0,0,0,2,7,--0,0,0,0,0,0,  
,2,8,--

R75)

0,0,0,0,0,0,1,3,-->0,1,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,0,0,3,4,--0,0,  
0,0,0,0,0,3,5,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,7,--0,0,0,0,0,0,3,8,--

R76)

0,0,0,0,0,0,1,4,-->0,1,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,0,0,0,4,5,  
--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,7,--0,0,0,0,0,0,4,8,--

R77)

0,0,0,0,0,0,1,5,-->0,1,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,0,0,0,  
0,5,6,--0,0,0,0,0,0,5,7,--0,0,0,0,0,0,5,8,--

R78)

0,0,0,0,0,0,1,6,-->0,1,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,0,0,  
0,0,0,0,6,7,--0,0,0,0,0,0,6,8,--

R79)

0,0,0,0,0,0,1,7,-->0,1,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--  
0,0,0,0,0,0,7,8,--

R80)

0,0,0,0,0,0,2,3,-->0,1,2,0,--0,1,2,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,0,0,3,4,--0,  
0,0,0,0,0,0,3,5,--0,0,0,0,0,0,3,6,--0,0,0,0,0,0,3,7,--0,0,0,0,0,0,3,8,--

R81)

0,0,0,0,0,0,2,4,-->0,1,2,0,--0,1,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,0,0,0,4,  
5,--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,7,--0,0,0,0,0,0,4,8,--

R82)

0,0,0,0,0,0,2,5,-->0,1,2,0,--0,1,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,0,0,  
0,0,5,6,--0,0,0,0,0,0,5,7,--0,0,0,0,0,0,5,8,--

R83)

0,0,0,0,0,0,2,6,-->0,1,2,0,--0,1,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,0,  
0,0,0,0,0,6,7,--0,0,0,0,0,0,6,8,--

R84)

0,0,0,0,0,0,2,7,-->0,1,2,0,--0,1,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,  
--0,0,0,0,0,0,7,8,--

R85)

0,0,0,0,0,0,3,4,-->0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,0,0,0,  
4,5,--0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,7,--0,0,0,0,0,0,4,8,--

R86)

0,0,0,0,0,0,3,5,-->0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,0,  
0,0,0,5,6,--0,0,0,0,0,0,5,7,--0,0,0,0,0,0,5,8,--

R87)

0,0,0,0,0,0,3,6,-->0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,  
0,0,0,0,0,6,7,--0,0,0,0,0,0,6,8,--

R88)

0,0,0,0,0,0,3,7,-->0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,  
0,--0,0,0,0,0,0,7,8,--

R89)

0,0,0,0,0,0,4,5,-->0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,0,--0,0,0,0,--0,0,0,  
0,0,0,0,5,6,--0,0,0,0,0,0,5,7,--0,0,0,0,0,0,5,8,--

R90)

0,0,0,0,0,0,4,6,-->0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,0,--0,1,0,--0,0,0,--

0,0,0,0,0,0,0,6,7,--0,0,0,0,0,0,6,8,--

R91)

0,0,0,0,0,0,4,7,-->0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,0,--0,1,0,--0,1,0,--  
0,0,--0,0,0,0,0,0,7,8,--

R92)

0,0,0,0,0,0,5,6,-->0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,0,--0,0,0,  
--0,0,0,0,0,0,6,7,--0,0,0,0,0,0,6,8,--

R93)

0,0,0,0,0,0,5,7,-->0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,0,--0,1,0,  
--0,0,--0,0,0,0,0,0,7,8,--

R94)

0,0,0,0,0,0,6,7,-->0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,  
0,--0,0,--0,0,0,0,0,0,7,8,--

R95)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R96)

0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,  
0,0,1,3,--0,0,0,0,0,0,0,0,1,4,--0,0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,0,1,6,--0,0,0,0,  
,0,0,0,0,1,7,--0,0,0,0,0,0,0,0,1,8,--0,0,0,0,0,0,0,0,1,9,--

R97)

0,0,0,0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,0,0,0,0,2,3,--0,0,0,  
0,0,0,0,0,2,4,--0,0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,0,2,7,--0,  
,0,0,0,0,0,0,0,2,8,--0,0,0,0,0,0,0,0,2,9,--

R98)

0,0,0,0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,0,0,0,3,4,--  
0,0,0,0,0,0,0,0,3,5,--0,0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,0,3,  
,8,--0,0,0,0,0,0,0,0,3,9,--

R99)

0,0,0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,0,0,0,0,  
4,5,--0,0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,0,4,8,--0,0,0,0,0,0,  
,0,0,4,9,--

R100)

0,0,0,0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,0,  
0,0,0,5,6,--0,0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,0,5,8,--0,0,0,0,0,0,0,0,5,9,--

R101)

0,0,0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,  
0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,0,6,9,--

R102)

0,0,0,0,0,0,0,0,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,  
--0,0,0,0,0,0,0,0,7,8,--0,0,0,0,0,0,0,0,7,9,--

R103)

0,0,0,0,0,0,0,0,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,  
--0,0,--0,0,0,0,0,0,0,8,9,--

R104)

0,0,0,0,0,0,0,1,2,-->0,1,2,0,--0,1,0,--0,0,0,0,0,0,0,0,0,0,0,2,3,--0,0,  
0,0,0,0,0,0,2,4,--0,0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,0,2,7,-  
-0,0,0,0,0,0,0,2,8,--0,0,0,0,0,0,0,0,2,9,--

R105)

0,0,0,0,0,0,0,1,3,-->0,1,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,3,4,  
--0,0,0,0,0,0,0,0,3,5,--0,0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,0,0  
,3,8,--0,0,0,0,0,0,0,0,3,9,--

R106)

0,0,0,0,0,0,0,1,4,-->0,1,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,0,0,  
0,4,5,--0,0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,0,4,8,--0,0,0,0,0,  
,0,0,0,4,9,--

R107)

0,0,0,0,0,0,0,1,5,-->0,1,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,  
0,0,0,0,5,6,--0,0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,0,5,8,--0,0,0,0,0,0,0,0,5,9,--

R108)

0,0,0,0,0,0,0,1,6,-->0,1,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,--0,  
0,0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,0,6,9,--

R109)

0,0,0,0,0,0,0,1,7,-->0,1,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,  
0,--0,0,0,0,0,0,0,7,8,--0,0,0,0,0,0,0,0,7,9,--

R110)

0,0,0,0,0,0,0,1,8,-->0,1,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,  
0,--0,0,--0,0,0,0,0,0,8,9,--

R111)

0,0,0,0,0,0,0,2,3,-->0,1,2,0,--0,1,2,0,--0,1,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,3,  
4,--0,0,0,0,0,0,0,0,3,5,--0,0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,  
,0,3,8,--0,0,0,0,0,0,0,0,3,9,--

R112)

0,0,0,0,0,0,0,2,4,-->0,1,2,0,--0,1,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,0,  
0,0,4,5,--0,0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,0,4,8,--0,0,0,0,  
,0,0,0,0,4,9,--

R113)

0,0,0,0,0,0,0,2,5,-->0,1,2,0,--0,1,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,--0,0,0,  
0,0,0,0,5,6,--0,0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,0,5,8,--0,0,0,0,0,0,0,0,5,9,--

R114)

0,0,0,0,0,0,0,2,6,-->0,1,2,0,--0,1,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,--  
0,0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,0,6,9,--

R115)

0,0,0,0,0,0,0,2,7,-->0,1,2,0,--0,1,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,  
0,0,--0,0,0,0,0,0,0,7,8,--0,0,0,0,0,0,0,0,7,9,--

R116)

0,0,0,0,0,0,0,2,8,-->0,1,2,0,--0,1,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,  
1,0,--0,0,--0,0,0,0,0,0,8,9,--

R117)

0,0,0,0,0,0,0,3,4,-->0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,  
0,0,0,4,5,--0,0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,0,4,8,--0,0,0,  
,0,0,0,0,0,4,9,--

R118)

0,0,0,0,0,0,0,3,5,-->0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,--0,0,  
0,0,0,0,0,0,5,6,--0,0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,0,5,8,--0,0,0,0,0,0,0,0,5,9,--

-

R119)

0,0,0,0,0,0,0,3,6,-->0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,  
--0,0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,0,6,9,--

R120)

0,0,0,0,0,0,0,3,7,-->0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
0,0,0,--0,0,0,0,0,0,0,7,8,--0,0,0,0,0,0,0,7,9,--

R121)

0,0,0,0,0,0,0,3,8,-->0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
0,1,0,--0,0,--0,0,0,0,0,0,0,8,9,--

R122)

0,0,0,0,0,0,0,4,5,-->0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,0,--0,0,0,0,0,--0,  
0,0,0,0,0,0,0,5,6,--0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,5,8,--0,0,0,0,0,0,0,5,9  
,--

R123)

0,0,0,0,0,0,0,4,6,-->0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,0,--0,1,0,--0,0,0,  
0,--0,0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,6,9,--

R124)

0,0,0,0,0,0,0,4,7,-->0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,0,--0,1,0,--0,1,0,  
--0,0,0,--0,0,0,0,0,0,0,7,8,--0,0,0,0,0,0,0,7,9,--

R125)

0,0,0,0,0,0,0,4,8,-->0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,0,--0,1,0,--0,1,0,  
--0,1,0,--0,0,--0,0,0,0,0,0,0,8,9,--

R126)

0,0,0,0,0,0,0,5,6,-->0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,0,--0,0,  
0,0,--0,0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,6,9,--

R127)

0,0,0,0,0,0,0,5,7,-->0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,0,--0,1,  
0,--0,0,0,--0,0,0,0,0,0,0,7,8,--0,0,0,0,0,0,0,7,9,--

R128)

0,0,0,0,0,0,0,5,8,-->0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,0,--0,1,  
0,--0,1,0,--0,0,--0,0,0,0,0,0,0,8,9,--

R129)

0,0,0,0,0,0,0,6,7,-->0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,2,0,--0,  
1,0,--0,0,0,--0,0,0,0,0,0,0,7,8,--0,0,0,0,0,0,0,7,9,--

R130)

0,0,0,0,0,0,0,6,8,-->0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,2,0,--0,  
1,0,--0,1,0,--0,0,--0,0,0,0,0,0,0,8,9,--

R131)

0,0,0,0,0,0,0,7,8,-->0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,2,0,--0,1,2,0,--0,  
1,2,0,--0,1,0,--0,0,--0,0,0,0,0,0,0,8,9,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,: 0,1,0,: 0,1,2,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,: 0,0,1,2,: 0,0,1,3,: 0,0,2,3,:  
0,1,2,0,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,: 0,0,0,1,2,:  
0,0,0,1,3,: 0,0,0,1,4,: 0,0,0,2,3,: 0,0,0,2,4,: 0,0,0,3,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,:  
0,0,0,0,0,5,: 0,0,0,0,1,2,: 0,0,0,0,1,3,: 0,0,0,0,1,4,: 0,0,0,0,1,5,: 0,0,0,0,2,3,:  
0,0,0,0,2,4,: 0,0,0,0,2,5,: 0,0,0,0,3,4,: 0,0,0,0,3,5,: 0,0,0,0,4,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,:  
0,0,0,0,0,0,4,: 0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,: 0,0,0,0,0,1,2,: 0,0,0,0,0,1,3,:



0,0,0,0,0,1,4,: 0,0,0,0,0,1,5,: 0,0,0,0,0,1,6,: 0,0,0,0,0,2,3,: 0,0,0,0,0,2,4,:  
 0,0,0,0,0,2,5,: 0,0,0,0,0,2,6,: 0,0,0,0,0,3,4,: 0,0,0,0,0,3,5,: 0,0,0,0,0,3,6,:  
 0,0,0,0,0,4,5,: 0,0,0,0,0,4,6,: 0,0,0,0,0,5,6,:  
 LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,:  
 0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:  
 0,0,0,0,0,0,1,2,: 0,0,0,0,0,0,1,3,: 0,0,0,0,0,0,1,4,: 0,0,0,0,0,0,1,5,:  
 0,0,0,0,0,0,1,6,: 0,0,0,0,0,0,1,7,: 0,0,0,0,0,0,2,3,: 0,0,0,0,0,0,2,4,:  
 0,0,0,0,0,0,2,5,: 0,0,0,0,0,0,2,6,: 0,0,0,0,0,0,2,7,: 0,0,0,0,0,0,3,4,:  
 0,0,0,0,0,0,3,5,: 0,0,0,0,0,0,3,6,: 0,0,0,0,0,0,3,7,: 0,0,0,0,0,0,4,5,:  
 0,0,0,0,0,0,4,6,: 0,0,0,0,0,0,4,7,: 0,0,0,0,0,0,5,6,: 0,0,0,0,0,0,5,7,:  
 0,0,0,0,0,0,6,7,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:  
 0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,:  
 0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,1,2,: 0,0,0,0,0,0,0,1,3,:  
 0,0,0,0,0,0,0,1,4,: 0,0,0,0,0,0,0,1,5,: 0,0,0,0,0,0,0,1,6,: 0,0,0,0,0,0,0,1,7,:  
 0,0,0,0,0,0,0,1,8,: 0,0,0,0,0,0,0,2,3,: 0,0,0,0,0,0,0,2,4,: 0,0,0,0,0,0,0,2,5,:  
 0,0,0,0,0,0,0,2,6,: 0,0,0,0,0,0,0,2,7,: 0,0,0,0,0,0,0,2,8,: 0,0,0,0,0,0,0,3,4,:  
 0,0,0,0,0,0,0,3,5,: 0,0,0,0,0,0,0,3,6,: 0,0,0,0,0,0,0,3,7,: 0,0,0,0,0,0,0,3,8,:  
 0,0,0,0,0,0,0,4,5,: 0,0,0,0,0,0,0,4,6,: 0,0,0,0,0,0,0,4,7,: 0,0,0,0,0,0,0,4,8,:  
 0,0,0,0,0,0,0,5,6,: 0,0,0,0,0,0,0,5,7,: 0,0,0,0,0,0,0,5,8,: 0,0,0,0,0,0,0,6,7,:  
 0,0,0,0,0,0,0,6,8,: 0,0,0,0,0,0,0,7,8,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,2,:  
 0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,:  
 0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,:  
 0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,0,1,2,: 0,0,0,0,0,0,0,0,1,3,:  
 0,0,0,0,0,0,0,0,1,4,: 0,0,0,0,0,0,0,0,1,5,: 0,0,0,0,0,0,0,0,1,6,:  
 0,0,0,0,0,0,0,0,1,7,: 0,0,0,0,0,0,0,0,1,8,: 0,0,0,0,0,0,0,0,1,9,:  
 0,0,0,0,0,0,0,0,2,3,: 0,0,0,0,0,0,0,0,2,4,: 0,0,0,0,0,0,0,0,2,5,:  
 0,0,0,0,0,0,0,0,2,6,: 0,0,0,0,0,0,0,0,2,7,: 0,0,0,0,0,0,0,0,2,8,:  
 0,0,0,0,0,0,0,0,2,9,: 0,0,0,0,0,0,0,0,3,4,: 0,0,0,0,0,0,0,0,3,5,:  
 0,0,0,0,0,0,0,0,3,6,: 0,0,0,0,0,0,0,0,3,7,: 0,0,0,0,0,0,0,0,3,8,:  
 0,0,0,0,0,0,0,0,3,9,: 0,0,0,0,0,0,0,0,4,5,: 0,0,0,0,0,0,0,0,4,6,:  
 0,0,0,0,0,0,0,0,4,7,: 0,0,0,0,0,0,0,0,4,8,: 0,0,0,0,0,0,0,0,4,9,:  
 0,0,0,0,0,0,0,0,5,6,: 0,0,0,0,0,0,0,0,5,7,: 0,0,0,0,0,0,0,0,5,8,:  
 0,0,0,0,0,0,0,0,5,9,: 0,0,0,0,0,0,0,0,6,7,: 0,0,0,0,0,0,0,0,6,8,:  
 0,0,0,0,0,0,0,0,6,9,: 0,0,0,0,0,0,0,0,7,8,: 0,0,0,0,0,0,0,0,7,9,:  
 0,0,0,0,0,0,0,0,8,9,:

Number new nodes in level n is given by : 1,2,5,8,11,16,22,29,37,46,

-----Class

1280-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[100][102][120][201][210]]$

-----

--

Rules of  $T[L]$ :

R1)  $0, \rightarrow 0,0, \rightarrow 0,1, \rightarrow$

R2)  $0,0, \rightarrow 0,0,0, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$

R3)  $0,1, \rightarrow 0,1,0, \rightarrow 0,0,1, \rightarrow 0,1, \rightarrow$

R4)  $0,0,0, \rightarrow 0,0,0,0, \rightarrow 0,0,0,1, \rightarrow 0,0,0,2, \rightarrow 0,0,0,3, \rightarrow$

R5)  $0,0,1, \rightarrow 0,1,0, \rightarrow 0,0,0,1, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$

R6) 0,0,2,-->0,1,0,--0,1,0,--0,0,0,2,--0,1,--  
R7) 0,1,0,-->0,1,0,--  
R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R9) 0,0,0,1,-->0,1,0,--0,0,0,0,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R10) 0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,2,--0,0,1,--0,0,2,--  
R11) 0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,3,--0,1,--  
R12)  
0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--  
R13)  
0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R14) 0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R15) 0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,3,--0,0,1,--0,0,2,--  
R16) 0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,4,--0,1,--  
R17)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R18)  
0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,  
0,0,0,0,4,--0,0,0,0,0,5,--  
R19)  
0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,2,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--  
0,0,0,0,4,--  
R20)  
0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,3,--0,0,0,1,--0,0,0,2,--0,0,0,3,  
--  
R21)  
0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,4,--0,0,1,--0,0,2,--  
R22) 0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,5,--0,1,--  
R23)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R24)  
0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,  
0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R25)  
0,0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,  
0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,0,5,--  
R26)  
0,0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,3,--0,0,0,0,1,--0,0,0,0,2,--  
0,0,0,0,3,--0,0,0,0,4,--  
R27)  
0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,4,--0,0,0,1,--0,0,0,  
2,--0,0,0,3,--  
R28)  
0,0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,5,--0,0,1,--  
0,0,2,--  
R29)  
0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,6,--  
0,1,--

R30)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R31)

0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

R32)

0,0,0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--

R33)

0,0,0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--

R34)

0,0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--

R35)

0,0,0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--

R36)

0,0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,6,--0,0,0,0,1,--0,0,0,0,2,--

R37)

0,0,0,0,0,0,0,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,7,--0,0,1,--

R38)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,9,--

R39)

0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,8,--

R40)

0,0,0,0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,0,7,--

R41)

0,0,0,0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,0,6,--

R42)

0,0,0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,5,--

R43)

0,0,0,0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--

R44)

0,0,0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--

R45)  
 0,0,0,0,0,0,0,0,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,  
 0,0,0,0,0,0,0,7,--0,0,1,--0,0,2,--

R46)  
 0,0,0,0,0,0,0,0,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,  
 --0,0,0,0,0,0,0,8,--0,1,--

List of different nodes in T[L]

LEN=1) 0, :  
 LEN=2) 0,0, : 0,1, :  
 LEN=3) 0,0,0, : 0,0,1, : 0,0,2, : 0,1,0, :  
 LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,2, : 0,0,0,3, :  
 LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, :  
 LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, :  
 0,0,0,0,0,5, :  
 LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :  
 0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, :  
 0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, :  
 0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :  
 0,0,0,0,0,0,0,0,0,9, :

Number new nodes in level n is given by : 1,2,4,4,5,6,7,8,9,10,

-----Class

1281-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[100][110][120][201][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--  
 R3) 0,1,-->0,0,--0,0,--0,1,--  
 R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
 R5) 0,0,1,-->0,0,0,--0,0,0,--0,0,1,--0,0,2,--  
 R6) 0,0,2,-->0,0,--0,0,--0,0,--0,1,--  
 R7) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
 R8) 0,0,0,1,-->0,0,0,0,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
 R9) 0,0,0,2,-->0,0,0,--0,0,0,--0,0,0,--0,0,1,--0,0,2,--  
 R10) 0,0,0,3,-->0,0,--0,0,--0,0,--0,0,--0,1,--  
 R11)  
 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
 0,0,0,0,0,5,--  
 R12)  
 0,0,0,0,1,-->0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,  
 --  
 R13) 0,0,0,0,2,-->0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R14) 0,0,0,0,3,-->0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,1,--0,0,2,--  
R15) 0,0,0,0,4,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,1,--  
R16)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R17)  
0,0,0,0,0,1,-->0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,  
--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R18)  
0,0,0,0,0,2,-->0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,  
3,--0,0,0,0,4,--  
R19)  
0,0,0,0,0,3,-->0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,  
--  
R20) 0,0,0,0,0,4,-->0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,1,--0,0,2,--  
R21) 0,0,0,0,0,5,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,--  
R22)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R23)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,  
0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R24)  
0,0,0,0,0,0,2,-->0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,  
2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R25)  
0,0,0,0,0,0,3,-->0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,1,--0,0,0,  
0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R26)  
0,0,0,0,0,0,4,-->0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,1,--0,0,0,  
2,--0,0,0,3,--  
R27)  
0,0,0,0,0,0,5,-->0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,1,--0,0,2,--  
R28) 0,0,0,0,0,0,6,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,--  
R29)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
0,0,0,0,7,--0,0,0,0,0,0,0,8,--  
R30)  
0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,  
0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,  
0,0,0,0,7,--  
R31)  
0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--  
0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R32)  
0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,  
0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R33)  
0,0,0,0,0,0,0,4,-->0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,--0,0,

0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R34)

0,0,0,0,0,0,0,5,-->0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R35)

0,0,0,0,0,0,0,6,-->0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,1,--0,0,2,--

R36) 0,0,0,0,0,0,0,7,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,--

R37)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,9,--

R38)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R39)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

R40)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R41)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R42)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R43)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,--0,0,0,0,1,--0,0,0,2,--0,0,0,3,--

R44)

0,0,0,0,0,0,0,0,7,-->0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,1,--0,0,2,--

R45)

0,0,0,0,0,0,0,0,8,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1, : 0,0,2, :

LEN=4) 0,0,0,0,: 0,0,0,1, : 0,0,0,2, : 0,0,0,3, :

LEN=5) 0,0,0,0,0,: 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, :

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, : 0,0,0,0,0,5, :

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :

0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, :

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :

0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :

LEN=9) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,6, :  
 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,0,5, :  
 0,0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,0,8, :  
 0,0,0,0,0,0,0,0,0,0,9, :  
 Number new nodes in level n is given by : 1,2,3,4,5,6,7,8,9,10,

-----Class

1282-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[101][102][110][120][201]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--
- R3) 0,1,-->0,1,0,--0,0,--0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R5) 0,0,1,-->0,1,0,--0,0,0,--0,0,1,--0,0,2,--
- R6) 0,0,2,-->0,1,0,--0,0,2,1,--0,0,--0,1,--
- R7) 0,1,0,-->0,1,0,--
- R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R9) 0,0,0,1,-->0,1,0,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R10) 0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,--0,0,1,--0,0,2,--
- R11) 0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,--0,1,--
- R12) 0,0,2,1,-->0,1,0,--0,1,0,--
- R13)  
 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
 0,0,0,0,0,5,--
- R14)  
 0,0,0,0,1,-->0,1,0,--0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R15) 0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R16) 0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,--0,0,1,--0,0,2,--
- R17) 0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,--0,1,--
- R18) 0,0,0,3,2,-->0,1,0,--0,0,2,1,--0,1,0,--
- R19)  
 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
 0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--
- R20)  
 0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,  
 0,0,0,4,--0,0,0,0,0,5,--
- R21)  
 0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,  
 0,0,0,4,--
- R22)  
 0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,  
 --
- R23)  
 0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,--0,0,1,--0,0,2,--

R24)

0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,--0,1,--

R25) 0,0,0,0,4,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,1,0,--

R26)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R27)

0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R28)

0,0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R29)

0,0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R30)

0,0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R31)

0,0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,--0,0,1,--0,0,2,--

R32)

0,0,0,0,0,0,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,6,5,--0,0,--0,1,--

R33) 0,0,0,0,0,5,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,0,--

R34)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R35)

0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R36)

0,0,0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R37)

0,0,0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R38)

0,0,0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R39)

0,0,0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R40)

0,0,0,0,0,0,0,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,6,5,--0,0,0,--0,0,1,--0,0,2,--

R41)



0,0,0,0,0,0,0,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,6,5,--0,0,0,0,0,0,7,6,--0,0,--0,1,--

R42)

0,0,0,0,0,0,6,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,1,0,--

R43)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R44)

0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R45)

0,0,0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R46)

0,0,0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R47)

0,0,0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R48)

0,0,0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R49)

0,0,0,0,0,0,0,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,6,5,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R50)

0,0,0,0,0,0,0,7,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,6,5,--0,0,0,0,0,0,7,6,--0,0,0,--0,0,1,--0,0,2,--

R51)

0,0,0,0,0,0,0,8,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,6,5,--0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,8,7,--0,0,--0,1,--

R52)

0,0,0,0,0,0,0,7,6,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,6,5,--0,1,0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,: 0,1,0,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,: 0,0,2,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,: 0,0,0,3,2,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,:

0,0,0,0,0,5,: 0,0,0,0,4,3,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,:

0,0,0,0,0,0,4,: 0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,: 0,0,0,0,0,5,4,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:

0,0,0,0,0,0,6,5,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:  
 0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,:  
 0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,7,6,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,2,:  
 0,0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,0,5,:  
 0,0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,0,8,:  
 0,0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,0,0,0,8,7,:  
 Number new nodes in level n is given by : 1,2,4,5,6,7,8,9,10,11,

-----Class

1283-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[101][102][110][120][210]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--
- R3) 0,1,-->0,1,0,--0,0,--0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R5) 0,0,1,-->0,1,0,--0,0,0,--0,0,1,--0,0,2,--
- R6) 0,0,2,-->0,0,2,0,--0,1,0,--0,0,--0,1,--
- R7) 0,1,0,-->0,1,0,--
- R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R9) 0,0,0,1,-->0,1,0,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R10) 0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,--0,0,1,--0,0,2,--
- R11) 0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--0,1,--
- R12) 0,0,2,0,-->0,0,2,0,--0,1,0,--
- R13)
- 0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--
- R14)
- 0,0,0,0,1,-->0,1,0,--0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R15) 0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R16) 0,0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,1,--0,0,2,--
- R17) 0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--0,1,--
- R18) 0,0,0,3,0,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--
- R19)
- 0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--
- R20)
- 0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--
- R21)
- 0,0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R22)
- 0,0,0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- 
- R23)

0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,1,--0,0,2,--  
R24)

0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--0,  
1,--

R25) 0,0,0,0,4,0,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--  
R26)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R27) 0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,  
0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R28)

0,0,0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,  
0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R29)

0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--  
0,0,0,0,3,--0,0,0,0,4,--  
R30)

0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,--0,0,0,1,--0,  
0,0,2,--0,0,0,3,--  
R31)

0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,  
--0,0,1,--0,0,2,--  
R32)

0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,  
0,--0,1,0,--0,0,--0,1,--  
R33) 0,0,0,0,0,5,0,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--

R34) 0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--  
R35)

0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,  
7,--  
R36)

0,0,0,0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,  
--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R37)

0,0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,  
0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R38)

0,0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,  
1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R39)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,  
0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R40)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,  
2,0,--0,1,0,--0,0,0,--0,0,1,--0,0,2,--

R41)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,6,0,--0,0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--0,1,--

R42)

0,0,0,0,0,0,6,0,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--

R43)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R44)

0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R45)

0,0,0,0,0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R46)

0,0,0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R47)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R48)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R49)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--

R50)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,--0,0,1,--0,0,2,--

R51)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,8,0,--0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--0,1,--

R52)

0,0,0,0,0,0,0,7,0,-->0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,6,0,--0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,: 0,1,0,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,: 0,0,2,0,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,: 0,0,0,3,0,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,:

0,0,0,0,0,5, : 0,0,0,0,4,0, :

LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :

0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, : 0,0,0,0,0,5,0, :

LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :

0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:  
 0,0,0,0,0,0,6,0,:  
 LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:  
 0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,:  
 0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,7,0,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,2,:  
 0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,:  
 0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,:  
 0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,0,8,0,:  
 Number new nodes in level n is given by : 1,2,4,5,6,7,8,9,10,11,

-----Class

1284-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[101][102][110][201][210]]$

-----  
--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--
- R3) 0,1,-->0,1,0,--0,0,--0,0,2,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R5) 0,0,1,-->0,1,0,--0,0,0,--0,0,0,2,--0,0,0,3,--
- R6) 0,0,2,-->0,1,0,--0,1,0,--0,0,--0,0,0,3,--
- R7) 0,1,0,-->0,1,0,--
- R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R9) 0,0,0,1,-->0,1,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R10) 0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,--0,0,0,0,3,--0,0,0,0,4,--
- R11) 0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,0,0,4,--
- R12)  
0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--
- R13)  
0,0,0,0,1,-->0,1,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,  
0,5,--
- R14)  
0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--
- R15) 0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,0,0,0,0,4,--0,0,0,0,0,5,--
- R16) 0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,0,0,0,5,--
- R17)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--
- R18)  
0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,  
--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--
- R19)  
0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,  
0,0,5,--0,0,0,0,0,0,6,--
- R20)  
0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,  
0,0,0,0,0,6,--

R21)

0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R22) 0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,0,0,0,0,6,--

R23)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R24)

0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R25)

0,0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R26)

0,0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R27)

0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R28)

0,0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R29)

0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,0,0,0,0,0,0,7,--

R30)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R31)

0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R32)

0,0,0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R33)

0,0,0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R34)

0,0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R35)

0,0,0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R36)

0,0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R37)

0,0,0,0,0,0,0,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,  
0,0,0,0,0,0,0,8,--

R38)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R39)

0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,  
0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R40)

0,0,0,0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,0,0,0,0,3,--0,0,0,  
0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,  
0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R41)

0,0,0,0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,0,0,0,0,4,--  
0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,  
8,--0,0,0,0,0,0,0,0,9,--

R42)

0,0,0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,0,0,0,0,  
0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,  
0,0,0,9,--

R43)

0,0,0,0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,0,  
0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R44)

0,0,0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,  
0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R45)

0,0,0,0,0,0,0,0,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,  
--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R46)

0,0,0,0,0,0,0,0,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,  
--0,0,--0,0,0,0,0,0,9,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,: 0,1,0,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,:

0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,:

0,0,0,0,0,0,4,: 0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,:

0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,:  
0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,:  
0,0,0,0,0,0,0,0,0,9,:

Number new nodes in level n is given by : 1,2,4,4,5,6,7,8,9,10,

-----Class

1285-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[101][102][120][201][210]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--
- R3) 0,1,-->0,1,0,--0,0,1,--0,1,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R5) 0,0,1,-->0,1,0,--0,0,0,1,--0,0,1,--0,0,2,--
- R6) 0,0,2,-->0,1,0,--0,1,0,--0,0,0,2,--0,1,--
- R7) 0,1,0,-->0,1,0,--
- R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R9) 0,0,0,1,-->0,1,0,--0,0,0,0,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R10) 0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,2,--0,0,1,--0,0,2,--
- R11) 0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,3,--0,1,--
- R12)  
0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--
- R13)  
0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R14) 0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R15) 0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,3,--0,0,1,--0,0,2,--
- R16) 0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,4,--0,1,--
- R17)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,  
0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--
- R18)  
0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,  
0,0,0,0,4,--0,0,0,0,0,5,--
- R19)  
0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,2,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--  
0,0,0,0,4,--
- R20)  
0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,3,--0,0,0,1,--0,0,0,2,--0,0,0,3,  
--
- R21)  
0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,4,--0,0,1,--0,0,2,--
- R22) 0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,5,--0,1,--
- R23)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--
- R24)  
0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,



0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R25)

0,0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,2,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R26)

0,0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,3,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R27)

0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,4,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R28)

0,0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,5,--0,0,1,--0,0,2,--

R29)

0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,6,--0,1,--

R30)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R31)

0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R32)

0,0,0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R33)

0,0,0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,3,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R34)

0,0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,4,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R35)

0,0,0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,5,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R36)

0,0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,6,--0,0,1,--0,0,2,--

R37)

0,0,0,0,0,0,0,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,7,--0,1,--

R38)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R39)

0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R40)  
0,0,0,0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,1,--0,0,0,  
0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
-0,0,0,0,0,0,7,--

R41)  
0,0,0,0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,1,--  
0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R42)  
0,0,0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,4,--0,0,0,0,  
0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R43)  
0,0,0,0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,5,--  
0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R44)  
0,0,0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,  
0,0,6,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R45)  
0,0,0,0,0,0,0,0,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,  
0,0,0,0,0,0,7,--0,0,1,--0,0,2,--

R46)  
0,0,0,0,0,0,0,0,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,  
--0,0,0,0,0,0,0,0,8,--0,1,--

List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,1, : 0,0,2, : 0,1,0, :  
LEN=4) 0,0,0,0, : 0,0,0,1, : 0,0,0,2, : 0,0,0,3, :  
LEN=5) 0,0,0,0,0, : 0,0,0,0,1, : 0,0,0,0,2, : 0,0,0,0,3, : 0,0,0,0,4, :  
LEN=6) 0,0,0,0,0,0, : 0,0,0,0,0,1, : 0,0,0,0,0,2, : 0,0,0,0,0,3, : 0,0,0,0,0,4, :  
0,0,0,0,0,5, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,0,1, : 0,0,0,0,0,0,2, : 0,0,0,0,0,0,3, :  
0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :  
0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :  
LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, :  
0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, :  
0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :  
0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, :  
0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :  
0,0,0,0,0,0,0,0,0,9, :

Number new nodes in level n is given by : 1,2,4,4,5,6,7,8,9,10,

-----Class

1286-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[101][110][120][201][210]]

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,0,1,--0,0,2,--  
R3) 0,1,-->0,1,0,--0,0,--0,1,--  
R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R5) 0,0,1,-->0,0,1,0,--0,0,0,--0,0,1,--0,0,2,--  
R6) 0,0,2,-->0,1,0,--0,1,0,--0,0,--0,1,--  
R7) 0,1,0,-->0,0,1,0,--0,0,--0,1,--  
R8) 0,0,0,0,-->0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R9) 0,0,0,1,-->0,0,0,1,0,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R10) 0,0,0,2,-->0,0,1,0,--0,0,1,0,--0,0,0,--0,0,1,--0,0,2,--  
R11) 0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,--  
R12) 0,0,1,0,-->0,0,0,1,0,--0,0,0,--0,0,1,--0,0,2,--  
R13)  
0,0,0,0,0,-->0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
0,0,0,0,0,5,--  
R14)  
0,0,0,0,1,-->0,0,0,0,1,0,--0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,  
4,--  
R15) 0,0,0,0,2,-->0,0,0,1,0,--0,0,0,1,0,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R16) 0,0,0,0,3,-->0,0,1,0,--0,0,1,0,--0,0,1,0,--0,0,0,--0,0,1,--0,0,2,--  
R17) 0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,--  
R18) 0,0,0,1,0,-->0,0,0,0,1,0,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R19)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,  
0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--  
R20)  
0,0,0,0,0,1,-->0,0,0,0,0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,  
3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R21)  
0,0,0,0,0,2,-->0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,  
0,0,3,--0,0,0,0,4,--  
R22)  
0,0,0,0,0,3,-->0,0,0,1,0,--0,0,0,1,0,--0,0,0,1,0,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,  
0,0,3,--  
R23)  
0,0,0,0,0,4,-->0,0,1,0,--0,0,1,0,--0,0,1,0,--0,0,1,0,--0,0,0,--0,0,1,--0,0,2,--  
R24) 0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,--  
R25)  
0,0,0,0,1,0,-->0,0,0,0,0,1,0,--0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,  
0,0,4,--  
R26)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R27)  
0,0,0,0,0,0,1,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--  
0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R28)  
0,0,0,0,0,0,2,-->0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,  
0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R29)  
0,0,0,0,0,0,3,-->0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,0,0,--0,0,0,0,1,--

0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R30)

0,0,0,0,0,0,4,-->0,0,0,1,0,--0,0,0,1,0,--0,0,0,1,0,--0,0,0,1,0,--0,0,0,0,--0,0,0,1,--  
--0,0,0,2,--0,0,0,3,--

R31)

0,0,0,0,0,0,5,-->0,0,1,0,--0,0,1,0,--0,0,1,0,--0,0,1,0,--0,0,1,0,--0,0,0,--0,0,1,--  
0,0,2,--

R32) 0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,--

R33)

0,0,0,0,0,1,0,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,  
0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R34)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R35)

0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,  
0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,  
,0,0,0,0,0,0,7,--

R36)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,  
1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
-

R37)

0,0,0,0,0,0,0,3,-->0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,0,0,--0,  
0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R38)

0,0,0,0,0,0,0,4,-->0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,0,  
0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R39)

0,0,0,0,0,0,0,5,-->0,0,0,1,0,--0,0,0,1,0,--0,0,0,1,0,--0,0,0,1,0,--0,0,0,1,0,--0,0,  
0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R40)

0,0,0,0,0,0,0,6,-->0,0,1,0,--0,0,1,0,--0,0,1,0,--0,0,1,0,--0,0,1,0,--0,0,1,0,--0,0,  
0,--0,0,1,--0,0,2,--

R41)

0,0,0,0,0,0,0,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,  
1,--

R42)

0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,  
2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R43)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,  
,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R44)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--  
0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,  
,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R45)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R46)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R47)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R48)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R49)

0,0,0,0,0,0,0,0,6,-->0,0,0,1,0,--0,0,0,1,0,--0,0,0,1,0,--0,0,0,1,0,--0,0,0,1,0,--0,0,0,1,0,--0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--

R50)

0,0,0,0,0,0,0,0,7,-->0,0,1,0,--0,0,1,0,--0,0,1,0,--0,0,1,0,--0,0,1,0,--0,0,1,0,--0,0,1,0,--0,0,1,0,--0,0,0,--0,0,1,--0,0,2,--

R51)

0,0,0,0,0,0,0,0,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,--

R52)

0,0,0,0,0,0,0,1,0,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,: 0,1,0,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,: 0,0,1,0,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,: 0,0,0,1,0,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4,: 0,0,0,0,0,5,: 0,0,0,0,1,0,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3,:

0,0,0,0,0,0,4,: 0,0,0,0,0,0,5,: 0,0,0,0,0,0,6,: 0,0,0,0,0,1,0,:

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,2,: 0,0,0,0,0,0,0,3,:

0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,7,:

0,0,0,0,0,0,1,0,:

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,6,:

0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,1,0,:

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,5,:

0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,8,:

0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,0,1,0,:

Number new nodes in level n is given by : 1,2,4,5,6,7,8,9,10,11,

-----Class

1287-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[102][110][120][201][210]]$

-----

--

Rules of  $T[L]$ :

- R1)  $0, -- \rightarrow 0, 0, -- 0, 1, --$
- R2)  $0, 0, -- \rightarrow 0, 0, 0, -- 0, 0, 1, -- 0, 0, 2, --$
- R3)  $0, 1, -- \rightarrow 0, 1, 0, -- 0, 0, -- 0, 1, --$
- R4)  $0, 0, 0, -- \rightarrow 0, 0, 0, 0, -- 0, 0, 0, 1, -- 0, 0, 0, 2, -- 0, 0, 0, 3, --$
- R5)  $0, 0, 1, -- \rightarrow 0, 1, 0, -- 0, 0, 0, -- 0, 0, 1, -- 0, 0, 2, --$
- R6)  $0, 0, 2, -- \rightarrow 0, 1, 0, -- 0, 1, 0, -- 0, 0, -- 0, 1, --$
- R7)  $0, 1, 0, -- \rightarrow 0, 1, 0, -- 0, 1, 0, 1, --$
- R8)  $0, 0, 0, 0, -- \rightarrow 0, 0, 0, 0, 0, -- 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 2, -- 0, 0, 0, 0, 3, -- 0, 0, 0, 0, 4, --$
- R9)  $0, 0, 0, 1, -- \rightarrow 0, 1, 0, -- 0, 0, 0, 0, -- 0, 0, 0, 1, -- 0, 0, 0, 2, -- 0, 0, 0, 3, --$
- R10)  $0, 0, 0, 2, -- \rightarrow 0, 1, 0, -- 0, 1, 0, -- 0, 0, 0, -- 0, 0, 1, -- 0, 0, 2, --$
- R11)  $0, 0, 0, 3, -- \rightarrow 0, 1, 0, -- 0, 1, 0, -- 0, 1, 0, -- 0, 0, -- 0, 1, --$
- R12)  $0, 1, 0, 1, -- \rightarrow 0, 1, 0, 1, --$
- R13)  
 $0, 0, 0, 0, 0, -- \rightarrow 0, 0, 0, 0, 0, 0, -- 0, 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 0, 2, -- 0, 0, 0, 0, 0, 3, -- 0, 0, 0, 0, 0, 4, --$   
 $0, 0, 0, 0, 0, 5, --$
- R14)  
 $0, 0, 0, 0, 1, -- \rightarrow 0, 1, 0, -- 0, 0, 0, 0, 0, 0, -- 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 2, -- 0, 0, 0, 0, 3, -- 0, 0, 0, 0, 4, --$
- R15)  $0, 0, 0, 0, 2, -- \rightarrow 0, 1, 0, -- 0, 1, 0, -- 0, 0, 0, 0, 0, -- 0, 0, 0, 1, -- 0, 0, 0, 2, -- 0, 0, 0, 3, --$
- R16)  $0, 0, 0, 0, 3, -- \rightarrow 0, 1, 0, -- 0, 1, 0, -- 0, 1, 0, -- 0, 0, 0, 0, -- 0, 0, 1, -- 0, 0, 2, --$
- R17)  $0, 0, 0, 0, 4, -- \rightarrow 0, 1, 0, -- 0, 1, 0, -- 0, 1, 0, -- 0, 1, 0, -- 0, 0, -- 0, 1, --$
- R18)  
 $0, 0, 0, 0, 0, 0, -- \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, -- 0, 0, 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 0, 0, 2, -- 0, 0, 0, 0, 0, 0, 3, -- 0, 0,$   
 $0, 0, 0, 0, 4, -- 0, 0, 0, 0, 0, 0, 5, -- 0, 0, 0, 0, 0, 0, 6, --$
- R19)  
 $0, 0, 0, 0, 0, 1, -- \rightarrow 0, 1, 0, -- 0, 0, 0, 0, 0, 0, 0, -- 0, 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 0, 2, -- 0, 0, 0, 0, 0, 3, -- 0, 0,$   
 $0, 0, 0, 4, -- 0, 0, 0, 0, 0, 5, --$
- R20)  
 $0, 0, 0, 0, 0, 2, -- \rightarrow 0, 1, 0, -- 0, 1, 0, -- 0, 0, 0, 0, 0, 0, -- 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 2, -- 0, 0, 0, 0, 3, -- 0, 0,$   
 $0, 0, 4, --$
- R21)  
 $0, 0, 0, 0, 0, 3, -- \rightarrow 0, 1, 0, -- 0, 1, 0, -- 0, 1, 0, -- 0, 0, 0, 0, 0, -- 0, 0, 0, 1, -- 0, 0, 0, 2, -- 0, 0, 0, 3, --$
- R22)  $0, 0, 0, 0, 0, 4, -- \rightarrow 0, 1, 0, -- 0, 1, 0, -- 0, 1, 0, -- 0, 1, 0, -- 0, 0, 0, 0, -- 0, 0, 1, -- 0, 0, 2, --$
- R23)  $0, 0, 0, 0, 0, 5, -- \rightarrow 0, 1, 0, -- 0, 1, 0, -- 0, 1, 0, -- 0, 1, 0, -- 0, 1, 0, -- 0, 0, -- 0, 1, --$
- R24)  
 $0, 0, 0, 0, 0, 0, 0, -- \rightarrow 0,$   
 $0, 3, -- 0, 0, 0, 0, 0, 0, 4, -- 0, 0, 0, 0, 0, 0, 5, -- 0, 0, 0, 0, 0, 0, 6, -- 0, 0, 0, 0, 0, 0, 7, --$
- R25)  
 $0, 0, 0, 0, 0, 0, 1, -- \rightarrow 0, 1, 0, -- 0,$   
 $0, 3, -- 0, 0, 0, 0, 0, 0, 4, -- 0, 0, 0, 0, 0, 0, 5, -- 0, 0, 0, 0, 0, 0, 6, --$
- R26)  
 $0, 0, 0, 0, 0, 0, 2, -- \rightarrow 0, 1, 0, -- 0, 1, 0, -- 0,$   
 $0, 3, -- 0, 0, 0, 0, 0, 4, -- 0, 0, 0, 0, 0, 5, --$
- R27)  
 $0, 0, 0, 0, 0, 0, 3, -- \rightarrow 0, 1, 0, -- 0, 1, 0, -- 0, 1, 0, -- 0,$   
 $0, 3, -- 0, 0, 0, 0, 4, --$

R28)

0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R29)

0,0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,0,1,--0,0,2,--

R30) 0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,--

R31)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R32)

0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R33)

0,0,0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R34)

0,0,0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R35)

0,0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R36)

0,0,0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R37)

0,0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,--0,0,1,--0,0,2,--

R38)

0,0,0,0,0,0,0,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,--0,2,--

R39)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R40)

0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R41)

0,0,0,0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--

R42)

0,0,0,0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R43)

0,0,0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R44)

0,0,0,0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,--0,0,0,0,1,  
--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R45)

0,0,0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,--0,0,  
0,1,--0,0,0,2,--0,0,0,3,--

R46)

0,0,0,0,0,0,0,0,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,  
--0,0,1,--0,0,2,--

R47)

0,0,0,0,0,0,0,0,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,  
--0,0,--0,1,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,: 0,1,:

LEN=3) 0,0,0,: 0,0,1,: 0,0,2,: 0,1,0,:

LEN=4) 0,0,0,0,: 0,0,0,1,: 0,0,0,2,: 0,0,0,3,: 0,1,0,1,:

LEN=5) 0,0,0,0,0,: 0,0,0,0,1,: 0,0,0,0,2,: 0,0,0,0,3,: 0,0,0,0,4,:

LEN=6) 0,0,0,0,0,0,: 0,0,0,0,0,1,: 0,0,0,0,0,2,: 0,0,0,0,0,3,: 0,0,0,0,0,4, :  
0,0,0,0,0,5,:

LEN=7) 0,0,0,0,0,0,0,: 0,0,0,0,0,0,1,: 0,0,0,0,0,0,2,: 0,0,0,0,0,0,3, :  
0,0,0,0,0,0,4, : 0,0,0,0,0,0,5, : 0,0,0,0,0,0,6, :

LEN=8) 0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,2, : 0,0,0,0,0,0,0,3, :  
0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,7, :

LEN=9) 0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,2, :  
0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,6, :  
0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,8, :

LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,2, :  
0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,5, :  
0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :  
0,0,0,0,0,0,0,0,0,9, :

Number new nodes in level n is given by : 1,2,4,5,5,6,7,8,9,10,