

-----Class 1-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][012][021]]$   
-----

--  
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  $L=[[000][001][010][011][012][100]]$   
-----

--  
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 3-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][012][101]]$   
-----

--  
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 4-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][012][102]]$   
-----

--  
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 5-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][012][110]]$   
-----

-----  
--  
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 6-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][012][120]]$   
-----

--  
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 7-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][012][201]]$   
-----

--  
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 8-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][012][210]]$   
-----

--  
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 9-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][021][100]]$   
-----

--

Rules of T[L]:

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

R2)  $0, 0, \rightarrow$

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

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

10-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][021][101]]$

--

Rules of T[L]:

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

R2)  $0, 0, \rightarrow$

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

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

11-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][021][102]]$

--

Rules of T[L]:

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

R2)  $0, 0, \rightarrow$

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

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

12-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][021][110]]$

--

Rules of T[L]:

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

R2)  $0, 0, \rightarrow$

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

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
13-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][010][011][021][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
14-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][010][011][021][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
15-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][010][011][021][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
16-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][010][011][100][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

17-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][100][102]]$

--  
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

18-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][100][110]]$

--  
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

19-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][100][120]]$

--  
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

20-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][100][201]]$

-----  
--  
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

21-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][100][210]]$

-----  
--  
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

22-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][101][102]]$

-----  
--  
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

23-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][101][110]]$

-----  
--  
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

24-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][101][120]]$

--  
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

25-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][101][201]]$

--  
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

26-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][101][210]]$

--  
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

27-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][102][110]]$

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

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

R2)  $0, 0, \rightarrow$

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

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

28-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][102][120]]$

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

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

R2)  $0, 0, \rightarrow$

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

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

29-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][102][201]]$

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

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

R2)  $0, 0, \rightarrow$

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

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

30-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][102][210]]$

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

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

R2)  $0, 0, \rightarrow$

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

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

31-----

Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][010][011][110][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

32-----

Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][010][011][110][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

33-----

Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][010][011][110][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

34-----

Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][010][011][120][201]]

-----

Rules of T[L]:

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

R2)  $0, 0, \rightarrow$

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

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

35-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][120][210]]$

--

Rules of T[L]:

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

R2)  $0, 0, \rightarrow$

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

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

36-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][011][201][210]]$

--

Rules of T[L]:

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

R2)  $0, 0, \rightarrow$

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

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

37-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][012][021][100]]$

--

Rules of T[L]:

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

R2)  $0, 0, \rightarrow$

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

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
38-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][010][012][021][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
39-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][010][012][021][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
40-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][010][012][021][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
41-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][010][012][021][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

42-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][012][021][201]]$

--  
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

43-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][012][021][210]]$

--  
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

44-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][012][100][101]]$

--  
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

45-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][012][100][102]]$

-----  
--  
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  
46-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][012][100][110]]$

-----  
--  
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  
47-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][012][100][120]]$

-----  
--  
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  
48-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][012][100][201]]$

-----  
--  
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

49-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][010][012][100][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

50-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][010][012][101][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

51-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][010][012][101][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

52-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][010][012][101][120]]

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

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

R2)  $0, 0, \rightarrow$

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

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  $L=[[000][001][010][012][101][201]]$

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

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

R2)  $0, 0, \rightarrow$

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

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  $L=[[000][001][010][012][101][210]]$

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

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

R2)  $0, 0, \rightarrow$

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

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

55-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][012][102][110]]$

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

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

R2)  $0, 0, \rightarrow$

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

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

56-----

Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][010][012][102][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

57-----

Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][010][012][102][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

58-----

Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][010][012][102][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

59-----

Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][010][012][110][120]]

-----



Rules of T[L]:

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

R2)  $0, 0, \rightarrow$

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

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

60-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][012][110][201]]$

--

Rules of T[L]:

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

R2)  $0, 0, \rightarrow$

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

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

61-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][012][110][210]]$

--

Rules of T[L]:

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

R2)  $0, 0, \rightarrow$

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

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

62-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][012][120][201]]$

--

Rules of T[L]:

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

R2)  $0, 0, \rightarrow$

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

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
63-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][010][012][120][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
64-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][010][012][201][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
65-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][010][021][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
66-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][010][021][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

67-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][010][021][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

68-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][010][021][100][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

69-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][010][021][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

70-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][010][021][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

71-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][021][101][102]]$

--  
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

72-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][021][101][110]]$

--  
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

73-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][021][101][120]]$

--  
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

74-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][021][101][201]]$

```
--
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
75-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][010][021][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
76-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][010][021][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
77-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][010][021][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
78-----
```

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][021][102][201]]$

-----  
--  
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  
79-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][021][102][210]]$

-----  
--  
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  
80-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][021][110][120]]$

-----  
--  
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  
81-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][021][110][201]]$

-----  
--  
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  
82-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][021][110][210]]$   
-----

--  
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  
83-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][021][120][201]]$   
-----

--  
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  
84-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][021][120][210]]$   
-----

--  
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  
85-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][021][201][210]]$   
-----

--  
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

86-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][100][101][102]]$

-----

--  
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

87-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][100][101][110]]$

-----

--  
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

88-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][100][101][120]]$

-----

--  
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

89-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][100][101][201]]$

-----

--  
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

90-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][010][100][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

91-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][010][100][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

92-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][010][100][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

93-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][010][100][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

94-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][100][102][210]]$

--  
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

95-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][100][110][120]]$

--  
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

96-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][100][110][201]]$

--  
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

97-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][100][110][210]]$

--

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

98-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][100][120][201]]$

--

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

99-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][100][120][210]]$

--

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

100-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][100][201][210]]$

--

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

101-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][101][102][110]]$

```

-----
--
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
102-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][010][101][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
103-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][010][101][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
104-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][010][101][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

```

105-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][101][110][120]]$

--  
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

106-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][101][110][201]]$

--  
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

107-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][101][110][210]]$

--  
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

108-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][101][120][201]]$

--  
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  
109-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][101][120][210]]$

-----  
--  
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  
110-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][101][201][210]]$

-----  
--  
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  
111-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][102][110][120]]$

-----  
--  
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  
112-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][010][102][110][201]]$

-----  
--  
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

113-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][001][010][102][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

114-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][001][010][102][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

115-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][001][010][102][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

116-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][001][010][102][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

117-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][010][110][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

118-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][010][110][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

119-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][010][110][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

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

121-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][012][021][100]]$

--  
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

122-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][012][021][101]]$

--  
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

123-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][012][021][102]]$

--  
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

124-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][012][021][110]]$

-----  
--  
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

125-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][012][021][120]]$

-----  
--  
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

126-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][012][021][201]]$

-----  
--  
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

127-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][012][021][210]]$

-----  
--  
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

128-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][011][012][100][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

129-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][011][012][100][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

130-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][011][012][100][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

131-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][011][012][100][120]]

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

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

R2)  $0, 0, \rightarrow$

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

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

132-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][012][100][201]]$

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

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

R2)  $0, 0, \rightarrow$

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

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

133-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][012][100][210]]$

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

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

R2)  $0, 0, \rightarrow$

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

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

134-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][012][101][102]]$

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

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

R2)  $0, 0, \rightarrow$

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

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

135-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][001][011][012][101][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

136-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][001][011][012][101][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

137-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][001][011][012][101][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

138-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][001][011][012][101][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

139-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][012][102][110]]$

--  
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

140-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][012][102][120]]$

--  
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

141-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][012][102][201]]$

--  
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
142-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][011][012][102][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
143-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][011][012][110][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
144-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][011][012][110][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
145-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][011][012][110][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

146-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][012][120][201]]$

--  
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

147-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][012][120][210]]$

--  
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

148-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][012][201][210]]$

--  
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



149-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][021][100][101]]$

-----  
--  
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  
150-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][021][100][102]]$

-----  
--  
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  
151-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][021][100][110]]$

-----  
--  
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  
152-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][021][100][120]]$

-----  
--  
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

153-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][011][021][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

154-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][011][021][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

155-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][011][021][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

156-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][011][021][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

157-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][021][101][120]]$

--  
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

158-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][021][101][201]]$

--  
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

159-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][021][101][210]]$

--  
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

160-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][021][102][110]]$

-----  
--  
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

161-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][021][102][120]]$

-----  
--  
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

162-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][021][102][201]]$

-----  
--  
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

163-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][021][102][210]]$

-----  
--  
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

164-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][011][021][110][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

165-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][011][021][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

166-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][011][021][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

167-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][011][021][120][201]]

-----  
--

Rules of T[L]:

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

R2)  $0, 0, \rightarrow$

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

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

168-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][021][120][210]]$

--

Rules of T[L]:

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

R2)  $0, 0, \rightarrow$

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

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

169-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][021][201][210]]$

--

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

170-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][100][101][102]]$

--

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

171-----

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

172-----

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

173-----

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

174-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][001][011][100][101][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

175-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][100][102][110]]$

--

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

176-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][100][102][120]]$

--

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

177-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][100][102][201]]$

--

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  
178-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][100][102][210]]$   
-----

--  
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  
179-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][100][110][120]]$   
-----

--  
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  
180-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][100][110][201]]$   
-----

--  
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  
181-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][100][110][210]]$   
-----

--  
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

182-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][100][120][201]]$

--  
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

183-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][100][120][210]]$

--  
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

184-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][100][201][210]]$

--  
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
185-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][011][101][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
186-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][011][101][102][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
187-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][011][101][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
188-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][011][101][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

189-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][011][101][110][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

190-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][011][101][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

191-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][011][101][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

192-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][011][101][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
193-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][011][101][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
194-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][011][101][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
195-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][011][102][110][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

196-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][102][110][201]]$

--  
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

197-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][102][110][210]]$

--  
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

198-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][102][120][201]]$

--  
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
199-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][011][102][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
200-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][011][102][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
201-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][011][110][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
202-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][011][110][120][210]]
-----
--

```

Rules of T[L]:

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

R2)  $0, 0, \rightarrow$

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

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

203-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][110][201][210]]$

--

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

204-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][011][120][201][210]]$

--

Rules of T[L]:

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

R2)  $0, 0, \rightarrow$

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

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

205-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][021][100][101]]$

--

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

206-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][021][100][102]]$

--  
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

207-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][021][100][110]]$

--  
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

208-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][021][100][120]]$

--  
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

209-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][021][100][201]]$

-----

--

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

210-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][021][100][210]]$

-----

--

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

211-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][021][101][102]]$

-----

--

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  
212-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][021][101][110]]$

-----  
--  
Rules of  $T[L]$ :  
R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$   
R2)  $0, 0, \rightarrow$   
R3)  $0, 1, \rightarrow 0, 0, \rightarrow 0, 0, \rightarrow$   
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  
213-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][021][101][120]]$

-----  
--  
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  
214-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][021][101][201]]$

-----  
--  
Rules of  $T[L]$ :  
R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$   
R2)  $0, 0, \rightarrow$   
R3)  $0, 1, \rightarrow 0, 0, \rightarrow 0, 1, 1, \rightarrow$   
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  
215-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][021][101][210]]$

```

--
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

216-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][021][102][110]]$

```

--
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

217-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][021][102][120]]$

```

--
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

218-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][021][102][201]]$

```

--
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

219-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][021][102][210]]$

--  
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

220-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][021][110][120]]$

--  
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

221-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][021][110][201]]$

--  
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

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

-----Class

222-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][021][110][210]]$

-----

--

Rules of T[L]:

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

R2)  $0,0, \rightarrow$

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

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

223-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][021][120][201]]$

-----

--

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

224-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][021][120][210]]$

-----

--

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

225-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][021][201][210]]$

-----  
--  
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

226-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][100][101][102]]$

-----  
--  
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

227-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][100][101][110]]$

-----  
--  
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

228-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][100][101][120]]$

-----  
--  
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

229-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][100][101][201]]$

--  
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

230-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][100][101][210]]$

--  
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

231-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][100][102][110]]$

--  
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

232-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][100][102][120]]$

--  
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

233-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][100][102][201]]$

--  
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

234-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][100][102][210]]$

--  
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

235-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][012][100][110][120]]

-----  
--  
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

236-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][012][100][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

237-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][012][100][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

238-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][012][100][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

239-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][100][120][210]]$

```

--
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

240-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][100][201][210]]$

```

--
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

241-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][101][102][110]]$

```

--
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

242-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][101][102][120]]$

--  
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

243-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][101][102][201]]$

--  
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

244-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][101][102][210]]$

--  
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

245-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][101][110][120]]$

--  
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

246-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][101][110][201]]$

--  
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

247-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][101][110][210]]$

--  
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

248-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][101][120][201]]$

-----  
--  
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

249-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][101][120][210]]$

-----  
--  
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

250-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][101][201][210]]$

-----  
--  
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

251-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][102][110][120]]$

```
--
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
252-----
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][102][110][201]]$ 
-----
```

```
--
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
253-----
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][102][110][210]]$ 
-----
```

```
--
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
254-----
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][102][120][201]]$ 
-----
```

```
--
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

255-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][102][120][210]]$

--

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

256-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][102][201][210]]$

--

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

257-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][110][120][201]]$

--

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  
258-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][110][120][210]]$

-----  
--  
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  
259-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][110][201][210]]$

-----  
--  
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  
260-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][012][120][201][210]]$

-----  
--  
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  
261-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][021][100][101][102]]$

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

```

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

```

262-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][021][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,--
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

```

263-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][021][100][101][120]]
-----

```

```

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

```

264-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][021][100][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

265-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][021][100][101][210]]$

--  
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

266-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][021][100][102][110]]$

--  
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

267-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][021][100][102][120]]$

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

268-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][021][100][102][201]]$

--

Rules of T[L]:

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

269-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][021][100][102][210]]$

--

Rules of T[L]:

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

270-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][021][100][110][120]]$

--

Rules of T[L]:

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

271-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][021][100][110][201]]$

-----

--

Rules of T[L]:

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

R2)  $0,0, \rightarrow$

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

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

272-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][021][100][110][210]]$

-----

--

Rules of T[L]:

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

R2)  $0,0, \rightarrow$

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

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

273-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][021][100][120][201]]$

-----

--

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

List of different nodes in T[L]

LEN=1)  $0, :$

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

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

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

-----Class

274-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][021][100][120][210]]$

```

-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->
R3) 0,1,-->0,0,--0,1,1,--0,1,2,--
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
275-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][021][100][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
276-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][021][101][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
277-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][021][101][102][120]]
-----

```

```

--
Rules of T[L]:

```

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

278-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][021][101][102][201]]$

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

279-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][021][101][102][210]]$

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

280-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][021][101][110][120]]$

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

```

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

```

281-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][021][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,--
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

```

282-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][021][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,--
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

```

283-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][021][101][120][201]]
-----

```

```

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

284-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][001][021][101][120][210]]

-----

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

285-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][001][021][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,--  
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

286-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][001][021][102][110][120]]

-----

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

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

-----Class

287-----

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

288-----

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

289-----

Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][001][021][102][120][201]]

-----

--  
Rules of T[L]:

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

R2) 0,0,-->

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

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

290-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][021][102][120][210]]$

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

291-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][021][102][201][210]]$

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

292-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][021][110][120][201]]$

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

293-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][021][110][120][210]]$

```

-----
--
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,--0,1,2,--
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
294-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][021][110][201][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
295-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][021][120][201][210]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->
R3) 0,1,-->0,0,--0,1,1,--0,1,2,--
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
296-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][100][101][102][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,--0,0,--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,--  
 R11)  
 0,1,2,3,4,5,6,7,8,9,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--  
 0,1,2,3,4,5,6,7,8,9,10,--

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, :  
 LEN=11) 0,1,2,3,4,5,6,7,8,9,10, :

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

-----Class

297-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][100][101][102][120]]$

-----

--

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

298-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][100][101][102][201]]$

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

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

R2)  $0, 0, \rightarrow$

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

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)

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

--

R18)

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

R19)

$0, 1, 2, 3, 4, 5, 6, 7, 8, 9, \rightarrow 0, 0, \rightarrow 0, 1, 1, \rightarrow 0, 1, 2, 2, \rightarrow 0, 1, 2, 3, 3, \rightarrow 0, 1, 2, 3, 4, 4, \rightarrow 0, 1, 2, 3, 4, 5, 5, \rightarrow 0, 1, 2, 3, 4, 5, 6, 6, \rightarrow 0, 1, 2, 3, 4, 5, 6, 7, 7, \rightarrow 0, 1, 2, 3, 4, 5, 6, 7, 8, 8, \rightarrow 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 9, \rightarrow 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, \rightarrow$

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, :  
 LEN=11) 0,1,2,3,4,5,6,7,8,9,9, : 0,1,2,3,4,5,6,7,8,9,10, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

299-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][100][101][102][210]]$

--

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, --
- 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, --
- R18) 0,1,2,3,4,5,6,7,8,8, -->0,0, --0,0, --0,0, --0,0, --0,0, --0,0, --0,0, --
- R19)  
 0,1,2,3,4,5,6,7,8,9, -->0,0, --0,0, --0,0, --0,0, --0,0, --0,0, --0,0, --0,0, --0,1,2,3,4,5,6,7,8,9,9, --0,1,2,3,4,5,6,7,8,9,10, --

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, :
- LEN=11) 0,1,2,3,4,5,6,7,8,9,9, : 0,1,2,3,4,5,6,7,8,9,10, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

```
-----Class
300-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][100][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
301-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][001][100][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,--0,1,2,3,4,5,6,7,
```

```
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,--
```

```
R11)
```

```
0,1,2,3,4,5,6,7,8,9,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--
```

```
0,1,2,3,4,5,6,7,8,9,10,--
```

```
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,:
```

```
LEN=11) 0,1,2,3,4,5,6,7,8,9,10,:
```



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

-----Class

302-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][100][101][110][210]]$

-----

--

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)

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

R10)

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

R11)

$0,1,2,3,4,5,6,7,8,9, \rightarrow 0,0, \rightarrow 0,0, \rightarrow 0,0, \rightarrow 0,0, \rightarrow 0,0, \rightarrow 0,0, \rightarrow 0,0, \rightarrow 0,0, \rightarrow 0,0, \rightarrow 0,0, \rightarrow 0,0, \rightarrow 0,1,2,3,4,5,6,7,8,9,10, \rightarrow$

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, :

LEN=11) 0,1,2,3,4,5,6,7,8,9,10, :

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

-----Class

303-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][100][101][120][201]]$

-----

--

Rules of T[L]:

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

R2)  $0,0, \rightarrow$

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

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

304-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][100][101][120][210]]$

-----  
--  
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

305-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][100][101][201][210]]$

-----  
--  
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, --0,0, --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, --0,0, --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, --  
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, --

R18) 0,1,2,3,4,5,6,7,8,8,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--

R19) 0,1,2,3,4,5,6,7,8,9,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,7,8,9,9,--0,1,2,3,4,5,6,7,8,9,10,--

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,:

LEN=11) 0,1,2,3,4,5,6,7,8,9,9,: 0,1,2,3,4,5,6,7,8,9,10,:

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

-----Class

306-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][100][102][110][120]]$

-----

--

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

307-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][100][102][110][201]]$

-----

--

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,--0,1,2,3,4,5,6,7,8,--

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,--

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,--

R11)

0,1,2,3,4,5,6,7,8,9,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,7,8,9,10,--

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,:

LEN=11) 0,1,2,3,4,5,6,7,8,9,10,:

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

-----Class

308-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][100][102][110][210]]$

-----

--

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,--0,1,2,3,--

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,--0,1,2,3,4,5,6,7,8,--

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,--

R11)

0,1,2,3,4,5,6,7,8,9,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,3,4,5,6,7,8,9,10,--

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, :  
LEN=11) 0,1,2,3,4,5,6,7,8,9,10, :  
Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,1,

-----Class

309-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][100][102][120][201]]$

-----  
--  
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

310-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][100][102][120][210]]$

-----  
--  
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

311-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][100][102][201][210]]$

-----  
--  
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,--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,--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,--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,--0,1,2,3,4,5,6,  
 7,8,8,--0,1,2,3,4,5,6,7,8,9,--  
 R18) 0,1,2,3,4,5,6,7,8,8,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--  
 R19)  
 0,1,2,3,4,5,6,7,8,9,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,  
 3,4,5,6,7,8,9,9,--0,1,2,3,4,5,6,7,8,9,10,--

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, :  
 LEN=11) 0,1,2,3,4,5,6,7,8,9,9, : 0,1,2,3,4,5,6,7,8,9,10, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

312-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][100][110][120][201]]$

-----

--

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

313-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][100][110][120][210]]$

-----  
--  
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

314-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][100][110][201][210]]$

-----  
--  
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,--0,1,2,3,--

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,--0,1,2,3,4,5,6,7,  
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,--

R11)

0,1,2,3,4,5,6,7,8,9,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--  
0,1,2,3,4,5,6,7,8,9,10,--

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,:

LEN=11) 0,1,2,3,4,5,6,7,8,9,10,:

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





R11)  
0,1,2,3,4,5,6,7,8,9,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--  
0,1,2,3,4,5,6,7,8,9,10,--  
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, :  
LEN=11) 0,1,2,3,4,5,6,7,8,9,10, :  
Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,1,1,

-----Class

318-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][101][102][110][210]]$

-----

--

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,--0,1,2,3,--  
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,--0,1,2,3,  
4,5,6,7,8,9,--  
R11)  
0,1,2,3,4,5,6,7,8,9,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--  
0,1,2,3,4,5,6,7,8,9,10,--

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, :  
LEN=11) 0,1,2,3,4,5,6,7,8,9,10, :  
Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,1,

-----Class

319-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][101][102][120][201]]$

--

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

320-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][101][102][120][210]]$

--

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

321-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][101][102][201][210]]$

--

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,--0,0,--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,--  
 R18) 0,1,2,3,4,5,6,7,8,8,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--  
 R19)  
 0,1,2,3,4,5,6,7,8,9,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,1,2,  
 3,4,5,6,7,8,9,9,--0,1,2,3,4,5,6,7,8,9,10,--

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, :  
 LEN=11) 0,1,2,3,4,5,6,7,8,9,9, : 0,1,2,3,4,5,6,7,8,9,10, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

322-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][101][110][120][201]]$

-----

--

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

323-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][101][110][120][210]]$

```

-----
--
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

324-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][101][110][201][210]]$

```

-----
--
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,--0,1,2,3,--
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,--0,1,2,3,4,5,6,7,
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,--
R11)
0,1,2,3,4,5,6,7,8,9,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--
0,1,2,3,4,5,6,7,8,9,10,--
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,:
LEN=11) 0,1,2,3,4,5,6,7,8,9,10,:
Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,1,1,

```

-----Class

325-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][101][120][201][210]]$

-----  
--  
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  
326-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][102][110][120][201]]$

-----  
--  
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  
327-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][102][110][120][210]]$

-----  
--  
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  
328-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][102][110][201][210]]$

-----  
--  
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,--0,1,2,3,--  
 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,--  
 R11)  
 0,1,2,3,4,5,6,7,8,9,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--  
 0,1,2,3,4,5,6,7,8,9,10,--

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, :  
 LEN=11) 0,1,2,3,4,5,6,7,8,9,10, :

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

-----Class

329-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][102][120][201][210]]$

-----

--

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

330-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][001][110][120][201][210]]$

-----

--

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

331-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][012][021][100]]$

--  
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

332-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][012][021][101]]$

--  
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

333-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][012][021][102]]$

--  
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
334-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][010][011][012][021][110]]
-----
--
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
335-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][010][011][012][021][120]]
-----
--
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
336-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][010][011][012][021][201]]
-----
--
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
337-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][010][011][012][021][210]]
-----
--
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

338-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][012][100][101]]$

--  
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

339-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][012][100][102]]$

--  
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

340-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][012][100][110]]$

--  
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

341-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][010][011][012][100][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

342-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][010][011][012][100][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

343-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][010][011][012][100][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

344-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][012][101][102]]$

--

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

345-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][012][101][110]]$

--

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

346-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][012][101][120]]$

--

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

347-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][012][101][201]]$

-----

--

Rules of  $T[L]$ :

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

R2)  $0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow$

R3)  $0,1, \rightarrow$

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

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

348-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][012][101][210]]$

-----

--

Rules of  $T[L]$ :

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

R2)  $0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow$

R3)  $0,1, \rightarrow$

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

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

349-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][012][102][110]]$

-----

--

Rules of  $T[L]$ :

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

R2)  $0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow$

R3)  $0,1, \rightarrow$

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

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

350-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][012][102][120]]$

-----  
--  
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

351-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][012][102][201]]$

-----  
--  
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

352-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][012][102][210]]$

-----  
--  
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

353-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][012][110][120]]$

```

-----
--
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
354-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][010][011][012][110][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
355-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][010][011][012][110][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
356-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][010][011][012][120][201]]
-----

```

```

--

```

Rules of T[L]:

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

R2)  $0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow$

R3)  $0, 1, \rightarrow$

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

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

357-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][012][120][210]]$

--

Rules of T[L]:

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

R2)  $0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow$

R3)  $0, 1, \rightarrow$

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

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

358-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][012][201][210]]$

--

Rules of T[L]:

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

R2)  $0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow$

R3)  $0, 1, \rightarrow$

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

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

359-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][021][100][101]]$

--

Rules of T[L]:

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

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

360-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][010][011][021][100][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

361-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][010][011][021][100][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

362-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][010][011][021][100][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

363-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][010][011][021][100][201]]

--



Rules of T[L]:

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

R2)  $0, 1, \rightarrow 0, 1, \rightarrow$

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

364-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][021][100][210]]$

--

Rules of T[L]:

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

R2)  $0, 1, \rightarrow 0, 1, \rightarrow$

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

365-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][021][101][102]]$

--

Rules of T[L]:

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

R2)  $0, 1, \rightarrow 0, 1, \rightarrow$

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

366-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][021][101][110]]$

--

Rules of T[L]:

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

R2)  $0, 1, \rightarrow 0, 1, \rightarrow$

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

367-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][021][101][120]]$

```

-----
--
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
368-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][010][011][021][101][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
369-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][010][011][021][101][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
370-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][010][011][021][102][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

```

371-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][021][102][120]]$

-----  
--  
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

372-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][021][102][201]]$

-----  
--  
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

373-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][021][102][210]]$

-----  
--  
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

374-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][021][110][120]]$

-----  
--  
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  
375-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][021][110][201]]$

-----  
--  
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  
376-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][021][110][210]]$

-----  
--  
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  
377-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][021][120][201]]$

-----  
--  
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  
378-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][021][120][210]]$

-----  
--  
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

379-----

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

380-----

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

381-----

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

382-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][100][101][120]]$

-----  
--  
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

383-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][100][101][201]]$

-----  
--  
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

384-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][100][101][210]]$

-----  
--  
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

385-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][100][102][110]]$

-----  
--  
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

386-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][100][102][120]]$

-----  
 --  
 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

387-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][100][102][201]]$

-----  
 --  
 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

388-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][100][102][210]]$

-----  
 --  
 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

389-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][100][110][120]]$

--  
 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

390-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][100][110][201]]$

--  
 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

391-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][100][110][210]]$

--  
 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

392-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][010][011][100][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

393-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][010][011][100][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

394-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][010][011][100][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

395-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][010][011][101][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

```

396-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][010][011][101][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

```

397-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][010][011][101][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
398-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][010][011][101][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
399-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][010][011][101][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
400-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][010][011][101][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
401-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][010][011][101][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

```
402-----
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][101][120][201]]$ 
-----
```

```
--
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

```
403-----
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][101][120][210]]$ 
-----
```

```
--
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

```
404-----
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][101][201][210]]$ 
-----
```

```
--
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

405-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][102][110][120]]$

-----

--

Rules of  $T[L]$ :

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

R2)  $0,0, \rightarrow 0,0, \rightarrow 0,0,2, \rightarrow$

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

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

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

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

406-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][102][110][201]]$

-----

--

Rules of  $T[L]$ :

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

R2)  $0,0, \rightarrow 0,0, \rightarrow 0,0,2, \rightarrow$

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

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

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

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

407-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][102][110][210]]$

-----

--

Rules of  $T[L]$ :

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

R2)  $0,0, \rightarrow 0,0, \rightarrow 0,0,2, \rightarrow$

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

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

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

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

408-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][102][120][201]]$

--  
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,--0,1,--  
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

409-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][102][120][210]]$

--  
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,--0,1,--  
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

410-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][102][201][210]]$

--  
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

411-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][110][120][201]]$

--  
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

412-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][110][120][210]]$

--  
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

413-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][110][201][210]]$

--  
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

414-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][011][120][201][210]]$

-----

--  
Rules of  $T[L]$ :

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

R2)  $0,0, \rightarrow 0,0, \rightarrow 0, \rightarrow$

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

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

415-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][021][100][101]]$

-----

--  
Rules of  $T[L]$ :

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

R2)  $0,0, \rightarrow 0,1, \rightarrow 0,1, \rightarrow$

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

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

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, DONE

-----Class

416-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][021][100][102]]$

-----

--  
Rules of  $T[L]$ :

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

R2)  $0,0, \rightarrow 0,1, \rightarrow 0,1, \rightarrow$

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

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

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, DONE

-----Class

417-----



Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][021][100][110]]$

-----  
--  
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

418-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][021][100][120]]$

-----  
--  
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

419-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][021][100][201]]$

-----  
--  
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

420-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][021][100][210]]$

```

--
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

```

421-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][010][012][021][101][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

```

422-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][010][012][021][101][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

```

423-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][010][012][021][101][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

424-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][021][101][201]]$

--  
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

425-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][021][101][210]]$

--  
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

426-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][021][102][110]]$

--  
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

427-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][021][102][120]]$

--  
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

428-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][021][102][201]]$

--  
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

429-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][021][102][210]]$

--  
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

430-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][021][110][120]]$

--  
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

431-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][021][110][201]]$

--  
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

432-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][021][110][210]]$

--  
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

433-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][021][120][201]]$

--  
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

434-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][021][120][210]]$

--  
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

435-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][021][201][210]]$

--  
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

436-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][100][101][102]]$

-----

--  
Rules of  $T[L]$ :

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

R2)  $0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow$

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

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

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

List of different nodes in  $T[L]$

LEN=1)  $0, :$

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

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

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

-----Class

437-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][100][101][110]]$

-----

--  
Rules of  $T[L]$ :

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

R2)  $0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow$

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

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

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

List of different nodes in  $T[L]$

LEN=1)  $0, :$

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

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

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

-----Class

438-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][100][101][120]]$

-----

--  
Rules of  $T[L]$ :

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

R2)  $0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow$

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

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

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

List of different nodes in  $T[L]$

LEN=1)  $0, :$

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

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

-----Class

439-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][010][012][100][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,-->0,1,1,--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

440-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][010][012][100][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,-->0,1,1,--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

441-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][010][012][100][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,-->0,1,1,--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

442-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][100][102][120]]$

--  
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,-->0,1,1,--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

443-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][100][102][201]]$

--  
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,-->0,1,1,--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

444-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][100][102][210]]$

--  
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,-->0,1,1,--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

445-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][100][110][120]]$

--

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, -->0,1,1, --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

446-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][100][110][201]]$

--

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, -->0,1,1, --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

447-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][100][110][210]]$

--

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, -->0,1,1, --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

448-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][100][120][201]]$

--  
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, -->0,1,1, --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

449-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][100][120][210]]$

--  
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, -->0,1,1, --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

450-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][100][201][210]]$

--  
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, -->0,1,1, --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

451-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][101][102][110]]$

--  
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

452-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][101][102][120]]$

--  
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

453-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][101][102][201]]$

--  
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

454-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][101][102][210]]$

--  
 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

455-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][101][110][120]]$

--  
 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

456-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][101][110][201]]$

--

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

457-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][101][110][210]]$

--

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

458-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][101][120][201]]$

--

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

459-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][101][120][210]]$

-----

--

Rules of  $T[L]$ :

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

R2)  $0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow$

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

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

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

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

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

460-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][101][201][210]]$

-----

--

Rules of  $T[L]$ :

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

R2)  $0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow$

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

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

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

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

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

461-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][102][110][120]]$

-----

--

Rules of  $T[L]$ :

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

R2)  $0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow$

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

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

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

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

-----Class

462-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][102][110][201]]$

--  
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

463-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][102][110][210]]$

--  
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

464-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][102][120][201]]$

--  
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

465-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][102][120][210]]$

--  
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

466-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][102][201][210]]$

--  
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

467-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][110][120][201]]$

```

-----
--
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,--0,1,1,--
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

```

468-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][010][012][110][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,--0,1,1,--
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

```

469-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][010][012][110][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,--0,1,1,--
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

```

470-----

```

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][012][120][201][210]]$

-----  
--  
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

471-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][100][101][102]]$

-----  
--  
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,--  
R10)  
0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :  
LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :  
Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

472-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][100][101][110]]$

-----

--

Rules of  $T[L]$ :

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

R2)  $0, 0, \rightarrow 0, 0, 1, \rightarrow 0, \rightarrow$

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

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

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

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

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

R8)  $0, 0, 1, 1, 2, 2, 3, 3, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, \rightarrow 0, 0, 1, 1, 2, 2, 3, \rightarrow 0, 0, 1, 1, 2, \rightarrow 0, 0, 1, \rightarrow 0, \rightarrow$

R9)

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

R10)

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

List of different nodes in  $T[L]$

LEN=1)  $0, :$

LEN=2)  $0, 0, :$

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

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

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

LEN=11)  $0, 0, 1, 1, 2, 2, 3, 3, 4, 4, 5, :$

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

-----Class

473-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][100][101][120]]$

-----

--

Rules of  $T[L]$ :

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

R2)  $0, 0, \rightarrow 0, 0, 1, \rightarrow 0, \rightarrow$

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

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

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

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

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

R8)  $0, 0, 1, 1, 2, 2, 3, 3, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, \rightarrow 0, 0, 1, 1, 2, 2, 3, \rightarrow 0, 0, 1, 1, 2, \rightarrow 0, 0, 1, \rightarrow 0, \rightarrow$

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,--

R10)

0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :

LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :

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

-----Class

474-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][100][101][201]]$

-----

--

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,--

R10)

0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :

LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :  
Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

475-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][100][101][210]]$

-----  
--

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,--

R10)

0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :

LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :

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

-----Class

476-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][100][102][110]]$

-----  
--

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,--  
R10)  
0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :  
LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :  
Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

477-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][100][102][120]]$

-----

--

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,--  
R10)  
0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :  
 Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

478-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][100][102][201]]$

-----  
 --  
 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,--  
 R10)  
 0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :  
 Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

479-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][100][102][210]]$

-----  
 --  
 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,--  
 R10)  
 0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :  
 Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class  
 480-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][100][110][120]]$   
 -----

--  
 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,--  
 R10)  
 0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :  
 Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

481-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][100][110][201]]$

-----

--

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,--
- R10) 0,0,1,1,2,2,3,3,4,4, -->0,0,1,1,2,2,3,3,4,4,5,--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, :
- LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :  
 Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

482-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][100][110][210]]$

-----

--

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,--  
R10)  
0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :  
LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :

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

-----Class

483-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][100][120][201]]$

-----

--  
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,--  
R10)  
0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :  
 Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

484-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][100][120][210]]$

-----  
 --  
 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,--  
 R10) 0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :  
 Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

485-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][100][201][210]]$

-----  
 --  
 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, :  
LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :

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

-----Class

486-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][101][102][110]]$

-----

--

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,--

R10)  
0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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,:  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5,:  
 Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

487-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][101][102][120]]$

--

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,--
- R10) 0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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,:  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5,:  
 Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

488-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][101][102][201]]$

--

Rules of T[L]:

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

R2)  $0, 0, \rightarrow 0, 0, 1, \rightarrow 0, \rightarrow$

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

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

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

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

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

R8)  $0, 0, 1, 1, 2, 2, 3, 3, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, \rightarrow 0, 0, 1, 1, 2, 2, 3, \rightarrow 0, 0, 1, 1, 2, \rightarrow 0, 0, 1, \rightarrow 0, \rightarrow$

R9)

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

$1, 1, 2, \rightarrow 0, 0, 1, \rightarrow 0, \rightarrow$

R10)

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

$0, 0, 1, 1, 2, \rightarrow 0, 0, 1, \rightarrow 0, \rightarrow$

List of different nodes in T[L]

LEN=1)  $0, :$

LEN=2)  $0, 0, :$

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

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

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

LEN=11)  $0, 0, 1, 1, 2, 2, 3, 3, 4, 4, 5, :$

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

-----Class

489-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[000][010][021][101][102][210]$

-----

--

Rules of T[L]:

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

R2)  $0, 0, \rightarrow 0, 0, 1, \rightarrow 0, \rightarrow$

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

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

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

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

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

R8)  $0, 0, 1, 1, 2, 2, 3, 3, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, \rightarrow 0, 0, 1, 1, 2, 2, 3, \rightarrow 0, 0, 1, 1, 2, \rightarrow 0, 0, 1, \rightarrow 0, \rightarrow$

R9)

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

$1, 1, 2, \rightarrow 0, 0, 1, \rightarrow 0, \rightarrow$

R10)

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

$0, 0, 1, 1, 2, \rightarrow 0, 0, 1, \rightarrow 0, \rightarrow$

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, :  
 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, :  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :  
 Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

490-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][101][110][120]]$

-----

--

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,--
- R10) 0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :  
 Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

491-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][101][110][201]]$



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

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

R2)  $0, 0, \rightarrow 0, 0, 1, \rightarrow 0, \rightarrow$

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

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

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

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

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

R8)  $0, 0, 1, 1, 2, 2, 3, 3, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, \rightarrow 0, 0, 1, 1, 2, 2, 3, \rightarrow 0, 0, 1, 1, 2, \rightarrow 0, 0, 1, \rightarrow 0, \rightarrow$

R9)

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

R10)

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

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, :

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, :

LEN=11) 0, 0, 1, 1, 2, 2, 3, 3, 4, 4, 5, :

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

-----Class

492-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][101][110][210]]$

-----

Rules of T[L]:

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

R2)  $0, 0, \rightarrow 0, 0, 1, \rightarrow 0, \rightarrow$

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

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

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

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

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

R8)  $0, 0, 1, 1, 2, 2, 3, 3, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, \rightarrow 0, 0, 1, 1, 2, 2, 3, \rightarrow 0, 0, 1, 1, 2, \rightarrow 0, 0, 1, \rightarrow 0, \rightarrow$

R9)

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

R10)

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

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, :

LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :

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

-----Class

493-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][010][021][101][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,--

R10)

0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :

LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :

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

-----Class

494-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][101][120][210]]$

-----

--

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,--

R10)

0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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,:

LEN=11) 0,0,1,1,2,2,3,3,4,4,5,:

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

-----Class

495-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][101][201][210]]$

-----

--

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,--

R10)  
0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :
- LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :

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

-----Class

496-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][102][110][120]]$

-----

--

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,--
- R10)  
0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :
- LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :

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

-----Class

497-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][102][110][201]]$

-----

--

Rules of  $T[L]$ :

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

R2)  $0, 0, \rightarrow 0, 0, 1, \rightarrow 0, \rightarrow$

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

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

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

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

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

R8)  $0, 0, 1, 1, 2, 2, 3, 3, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, \rightarrow 0, 0, 1, 1, 2, 2, 3, \rightarrow 0, 0, 1, 1, 2, \rightarrow 0, 0, 1, \rightarrow 0, \rightarrow$

R9)

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

R10)

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

List of different nodes in  $T[L]$

LEN=1)  $0, :$

LEN=2)  $0, 0, :$

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

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

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

LEN=11)  $0, 0, 1, 1, 2, 2, 3, 3, 4, 4, 5, :$

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

-----Class

498-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][102][110][210]]$

-----

--

Rules of  $T[L]$ :

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

R2)  $0, 0, \rightarrow 0, 0, 1, \rightarrow 0, \rightarrow$

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

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

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

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

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

R8)  $0, 0, 1, 1, 2, 2, 3, 3, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, \rightarrow 0, 0, 1, 1, 2, 2, 3, \rightarrow 0, 0, 1, 1, 2, \rightarrow 0, 0, 1, \rightarrow 0, \rightarrow$

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,--

R10)

0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :

LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :

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

-----Class

499-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][102][120][201]]$

-----

--

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,--

1,1,2,--0,0,1,--0,--

R10)

0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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,--

0,0,1,1,2,--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, :

LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :  
Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

500-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][010][021][102][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,--
- R10) 0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :
- LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :  
Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

501-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][010][021][102][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,--  
R10) 0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :  
LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :  
Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

502-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][110][120][201]]$

-----

--

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,--  
R10) 0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :  
 Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

503-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][110][120][210]]$

--  
 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,--  
 R10)  
 0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :  
 Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

504-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][110][201][210]]$

--  
 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,--  
 R10)  
 0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :  
 Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

505-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][021][120][201][210]]$

-----

--

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,--  
 R10)  
 0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :  
 Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,

-----Class

506-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][100][101][102][110]]$

-----

--

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, -->
- 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, -->0,0,2,1, --0,0,1,1, --0,0,1,1,3, --0,0,1,1,3,5, --
- R9) 0,0,1,1,4, -->0,0,1,1,4,2, --0,0,1,1,4,2, --0,0, --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) 0,0,1,1,3,5, -->0,0,2,1, --0,0,1,1,4,2, --0,0, --0,0,1,1,3,5, --
- R12) 0,0,1,1,4,2, -->0,0,2,1, --
- R13) 0,0,1,1,2,2,3, -->0,0,1,1,2,2,3,3, --0,0,1,1,2,2,3, --0,0,1,1,2,2,4, --0,0,1,1,2,2,5, --0,0,1,1,2,2,6, --
- R14) 0,0,1,1,2,2,4, -->0,0,2,1, --0,0,1,1,2,2, --0,0,1,1,2,2,4, --0,0,1,1,2,2,4,6, --0,0,1,1,2,2,4,7, --
- R15) 0,0,1,1,2,2,5, -->0,0,1,1,4,2, --0,0,1,1,4,2, --0,0,1,1, --0,0,1,1,2,2,5, --0,0,1,1,2,2,5,7, --
- R16) 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, --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) 0,0,1,1,2,2,4,6, -->0,0,2,1, --0,0,1,1,4,2, --0,0,1,1, --0,0,1,1,2,2,4,6, --0,0,1,1,2,2,4,6,8, --
- R19) 0,0,1,1,2,2,4,7, -->0,0,2,1, --0,0,1,1,2,2,6,4, --0,0,1,1,2,2,6,4, --0,0, --0,0,1,1,2,2,4,7, --
- R20) 0,0,1,1,2,2,5,7, -->0,0,1,1,4,2, --0,0,1,1,4,2, --0,0,1,1,2,2,6,3, --0,0, --0,0,1,1,2,2,5,7, --

R21) 0,0,1,1,2,2,6,3,-->0,0,1,1,4,2,--0,0,1,1,4,2,--  
 R22) 0,0,1,1,2,2,6,4,-->0,0,2,1,--0,0,1,1,4,2,--  
 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,--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)  
 0,0,1,1,2,2,3,3,5,-->0,0,2,1,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,  
 3,5,7,--0,0,1,1,2,2,3,3,5,8,--0,0,1,1,2,2,3,3,5,9,--  
 R25)  
 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,--0,0,1,1,2,2,3,3,6,--  
 0,0,1,1,2,2,3,3,6,8,--0,0,1,1,2,2,3,3,6,9,--  
 R26)  
 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,  
 --0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,7,9,--  
 R27)  
 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,--0,0,1,1,2,2,3,3,8,--  
 R28)  
 0,0,1,1,2,2,4,6,8,-->0,0,2,1,--0,0,1,1,4,2,--0,0,1,1,2,2,6,4,--0,0,--0,0,1,1,2,2,4,  
 6,8,--  
 R29)  
 0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--0,0,1,1,2,2,3,3,4,4,6,--0,0,1,1,2,2,  
 3,3,4,4,7,--0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,  
 --  
 R30)  
 0,0,1,1,2,2,3,3,5,7,-->0,0,2,1,--0,0,1,1,4,2,--0,0,1,1,2,2,--0,0,1,1,2,2,3,3,5,7,--  
 0,0,1,1,2,2,3,3,5,7,9,--0,0,1,1,2,2,3,3,5,7,10,--  
 R31)  
 0,0,1,1,2,2,3,3,5,8,-->0,0,2,1,--0,0,1,1,2,2,6,4,--0,0,1,1,2,2,6,4,--0,0,1,1,--0,0,  
 1,1,2,2,3,3,5,8,--0,0,1,1,2,2,3,3,5,8,10,--  
 R32)  
 0,0,1,1,2,2,3,3,5,9,-->0,0,2,1,--0,0,1,1,2,2,3,3,8,5,--0,0,1,1,2,2,3,3,5,9,7,--0,0,  
 1,1,2,2,3,3,8,5,--0,0,--0,0,1,1,2,2,3,3,5,9,--  
 R33)  
 0,0,1,1,2,2,3,3,6,8,-->0,0,1,1,4,2,--0,0,1,1,4,2,--0,0,1,1,2,2,6,3,--0,0,1,1,--0,0,  
 1,1,2,2,3,3,6,8,--0,0,1,1,2,2,3,3,6,8,10,--  
 R34)  
 0,0,1,1,2,2,3,3,6,9,-->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,--0,0,1,1,2,2,3,3,6,9,--  
 R35)  
 0,0,1,1,2,2,3,3,7,9,-->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,--0,0,1,1,2,2,3,3,7,9,--  
 R36) 0,0,1,1,2,2,3,3,8,4,-->0,0,1,1,2,2,6,3,--0,0,1,1,2,2,6,4,--0,0,1,1,2,2,6,3,--  
 R37) 0,0,1,1,2,2,3,3,8,5,-->0,0,2,1,--0,0,1,1,2,2,6,4,--0,0,1,1,2,2,6,4,--  
 R38) 0,0,1,1,2,2,3,3,8,6,-->0,0,1,1,4,2,--0,0,1,1,4,2,--0,0,1,1,2,2,6,3,--

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,:  
 LEN=6) 0,0,1,1,2,2,: 0,0,1,1,3,5,: 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,:  
 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,:  
 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,:  
 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,:  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5,: 0,0,1,1,2,2,3,3,4,4,6,: 0,0,1,1,2,2,3,3,4,4,7,:  
 0,0,1,1,2,2,3,3,4,4,8,: 0,0,1,1,2,2,3,3,4,4,9,: 0,0,1,1,2,2,3,3,4,4,10,:  
 0,0,1,1,2,2,3,3,5,7,9,: 0,0,1,1,2,2,3,3,5,7,10,: 0,0,1,1,2,2,3,3,5,8,10,:  
 0,0,1,1,2,2,3,3,5,9,7,: 0,0,1,1,2,2,3,3,6,8,10,:  
 Number new nodes in level n is given by : 1,1,2,2,3,3,4,6,6,10,11,

-----Class

507-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][100][101][102][120]]$

-----

--

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,-->
- 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,--0,0,1,1,4,2,--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) 0,0,1,1,3,3,-->0,0,2,1,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--
- R13) 0,0,1,1,4,2,-->0,0,2,1,--
- R14) 0,0,1,1,4,4,-->0,0,1,1,4,2,--0,0,1,1,4,2,--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,-->0,0,2,1,--0,0,1,1,2,2,4,4,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--
- R17) 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,--0,0,2,--
- R18) 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,--
- 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,-->0,0,2,1,--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,--  
 R21)  
 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,--0,0,1,1,3,--0,0,1,1,4,--  
 R22) 0,0,1,1,2,2,6,3,-->0,0,1,1,4,2,--0,0,1,1,4,2,--  
 R23) 0,0,1,1,2,2,6,4,-->0,0,2,1,--0,0,2,1,--  
 R24)  
 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,--0,  
 0,2,--  
 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,--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)  
 0,0,1,1,2,2,3,3,5,-->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,--  
 R27)  
 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,--  
 0,0,1,1,3,--0,0,1,1,4,--  
 R28)  
 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,--0,0,2,--  
 R29)  
 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,--  
 R30)  
 0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--0,0,1,1,2,2,3,3,4,4,6,--0,0,1,1,2,2,  
 3,3,4,4,7,--0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,  
 --  
 R31)  
 0,0,1,1,2,2,3,3,5,5,-->0,0,2,1,--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,--  
 R32)  
 0,0,1,1,2,2,3,3,6,6,-->0,0,1,1,4,2,--0,0,1,1,4,2,--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,--  
 R33)  
 0,0,1,1,2,2,3,3,7,7,-->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,--0,0,1,1,3,--0,0,1,1,4,--  
 R34) 0,0,1,1,2,2,3,3,8,4,-->0,0,1,1,2,2,6,3,--0,0,1,1,2,2,6,4,--0,0,1,1,2,2,6,3,--  
 R35) 0,0,1,1,2,2,3,3,8,5,-->0,0,2,1,--0,0,1,1,4,2,--0,0,1,1,4,2,--  
 R36) 0,0,1,1,2,2,3,3,8,6,-->0,0,1,1,4,2,--0,0,1,1,4,2,--0,0,2,1,--  
 R37)  
 0,0,1,1,2,2,3,3,8,8,-->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,--0,0,2,--  
 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, : 0,0,2,2, :

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,:  
 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,:  
 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,: 0,0,1,1,2,2,3,3,8,8,:  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5,: 0,0,1,1,2,2,3,3,4,4,6,: 0,0,1,1,2,2,3,3,4,4,7,:  
 0,0,1,1,2,2,3,3,4,4,8,: 0,0,1,1,2,2,3,3,4,4,9,: 0,0,1,1,2,2,3,3,4,4,10,:  
 Number new nodes in level n is given by : 1,1,2,3,3,4,4,6,5,8,6,

-----Class

508-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][100][101][102][201]]$

-----  
 --  
 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,-->  
 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)  
 0,0,1,1,2,2,-->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) 0,0,1,1,3,3,-->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,--  
 R13) 0,0,1,1,4,3,-->0,0,2,1,--  
 R14) 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,--  
 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,-->0,0,2,1,--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,--  
 R17)  
 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,--  
 R18)  
 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,--  
 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,-->0,0,2,1,--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,--

R21)

0,0,1,1,2,2,5,5,-->0,0,2,1,--0,0,1,1,4,3,--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,--

R22) 0,0,1,1,2,2,6,5,-->0,0,2,1,--0,0,1,1,4,3,--

R23)

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,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

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,-->0,0,2,1,--0,0,1,1,2,2,3,3,5,5,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R26)

0,0,1,1,2,2,3,3,6,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,3,3,6,6,--0,0,1,1,2,2,3,3,6,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R27)

0,0,1,1,2,2,3,3,7,-->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,--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--

R28)

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,--

R29)

0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--0,0,1,1,2,2,3,3,4,4,6,--0,0,1,1,2,2,3,3,4,4,7,--0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,--

R30)

0,0,1,1,2,2,3,3,5,5,-->0,0,2,1,--0,0,1,1,2,2,3,3,4,4,6,--0,0,1,1,2,2,3,3,4,4,7,--0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,--

R31)

0,0,1,1,2,2,3,3,6,6,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,3,3,4,4,7,--0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,--

R32)

0,0,1,1,2,2,3,3,7,7,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,6,5,--0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,--

R33) 0,0,1,1,2,2,3,3,8,7,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,6,5,--

R34)

0,0,1,1,2,2,3,3,8,8,-->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,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,--

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, : 0,0,1,1,3,3, : 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, :



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, :  
 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, :  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5, : 0,0,1,1,2,2,3,3,4,4,6, : 0,0,1,1,2,2,3,3,4,4,7, :  
 0,0,1,1,2,2,3,3,4,4,8, : 0,0,1,1,2,2,3,3,4,4,9, : 0,0,1,1,2,2,3,3,4,4,10, :  
 Number new nodes in level n is given by : 1,1,2,3,3,4,4,5,5,6,6,

-----Class

509-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][100][101][102][210]]$

-----

--

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,--
- 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,--0,0,2,1,--0,0,1,1,4,4,--0,0,1,1,4,--
- R11) 0,0,2,2,4,-->0,0,2,1,--0,0,2,1,--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,--0,0,2,1,--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,--0,0,2,1,--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,--0,0,2,1,--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,--0,0,1,1,4,2,--0,0,2,1,--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,--0,0,2,1,--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,--0,0,1,1,4,2,--0,0,2,1,--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,--0,0,2,1,--0,0,2,1,--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,--0,0,2,1,--0,0,2,1,--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,--0,0,2,1,--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,--

R28) 0,0,1,1,2,2,6,3,-->0,0,1,1,4,2,--0,0,2,1,--

R29)

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,--

R30)

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,--

R31)

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,--

R32)

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,--

R33)

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,--

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,--0,0,1,1,2,2,3,3,5,--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,--

R36)

0,0,1,1,2,2,3,3,6,-->0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,3,3,6,6,--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,--

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,--0,0,1,1,2,2,3,3,7,7,  
--0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,6,6,8,--

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,  
--0,0,1,1,2,2,3,3,8,8,--0,0,1,1,2,2,3,3,8,--

R39)

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,--

R40)

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,--

R41)

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,--

R42)

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,--

R43)

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,--

R44)

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,--

R45)

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,--

R46)

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,--

R47)

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,--

R48)

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,--

R49)

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,--

R50)

0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--0,0,1,1,2,2,3,3,4,4,6,--0,0,1,1,2,2,3,3,4,4,7,--0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,--

R51)

0,0,1,1,2,2,3,3,5,5,-->0,0,2,1,--0,0,1,1,2,2,3,3,4,4,6,--0,0,1,1,2,2,3,3,5,5,7,--0,0,1,1,2,2,3,3,5,5,8,--0,0,1,1,2,2,3,3,5,5,9,--0,0,1,1,2,2,3,3,5,5,10,--

R52)

0,0,1,1,2,2,3,3,6,6,-->0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,3,3,4,4,7,--0,0,1,1,2,2,3,3,6,6,8,--0,0,1,1,2,2,3,3,6,6,9,--0,0,1,1,2,2,3,3,6,6,10,--

R53)

0,0,1,1,2,2,3,3,7,7,-->0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,7,7,9,--0,0,1,1,2,2,3,3,7,7,10,--

R54) 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,--

R55)

0,0,1,1,2,2,3,3,8,8,-->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,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,8,8,10,--

R56)

0,0,1,1,2,2,4,4,6,6,-->0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,3,3,5,5,7,--0,0,1,1,2,2,4,4,6,6,8,--0,0,1,1,2,2,4,4,6,6,9,--0,0,1,1,2,2,4,4,6,6,10,--

R57)

0,0,1,1,2,2,4,4,7,7,-->0,0,2,1,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,3,3,5,5,8,--0,  
0,1,1,2,2,4,4,7,7,9,--0,0,1,1,2,2,4,4,7,7,10,--

R58)

0,0,1,1,2,2,4,4,8,8,-->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,  
2,2,3,3,5,5,9,--0,0,1,1,2,2,4,4,8,8,10,--

R59)

0,0,1,1,2,2,5,5,7,7,-->0,0,1,1,4,2,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,3,3,6,6,8,--0,  
0,1,1,2,2,5,5,7,7,9,--0,0,1,1,2,2,5,5,7,7,10,--

R60)

0,0,1,1,2,2,5,5,8,8,-->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,  
3,3,6,6,9,--0,0,1,1,2,2,5,5,8,8,10,--

R61)

0,0,1,1,2,2,6,6,8,8,-->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,  
2,2,3,3,7,7,9,--0,0,1,1,2,2,6,6,8,8,10,--

R62)

0,0,1,1,3,3,5,5,7,7,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,4,4,6,6,8,--0,0,1,  
1,3,3,5,5,7,7,9,--0,0,1,1,3,3,5,5,7,7,10,--

R63)

0,0,1,1,3,3,5,5,8,8,-->0,0,2,1,--0,0,2,1,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,2,2,4,4,  
6,6,9,--0,0,1,1,3,3,5,5,8,8,10,--

R64)

0,0,1,1,3,3,6,6,8,8,-->0,0,2,1,--0,0,1,1,4,2,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,4,4,  
7,7,9,--0,0,1,1,3,3,6,6,8,8,10,--

R65)

0,0,1,1,4,4,6,6,8,8,-->0,0,1,1,4,2,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,5,5,  
7,7,9,--0,0,1,1,4,4,6,6,8,8,10,--

R66)

0,0,2,2,4,4,6,6,8,8,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,1,3,3,5,5,7,7,  
9,--0,0,2,2,4,4,6,6,8,8,10,--

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, :

0,0,1,1,2,2,6,6, : 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, : 0,0,1,1,2,2,3,3,8,8, :

0,0,1,1,2,2,4,4,6,6, : 0,0,1,1,2,2,4,4,7,7, : 0,0,1,1,2,2,4,4,8,8, :

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, :

$0,0,1,1,3,3,5,5,7,7, : 0,0,1,1,3,3,5,5,8,8, : 0,0,1,1,3,3,6,6,8,8, :$   
 $0,0,1,1,4,4,6,6,8,8, : 0,0,2,2,4,4,6,6,8,8, :$   
 LEN=11)  $0,0,1,1,2,2,3,3,4,4,5, : 0,0,1,1,2,2,3,3,4,4,6, : 0,0,1,1,2,2,3,3,4,4,7, :$   
 $0,0,1,1,2,2,3,3,4,4,8, : 0,0,1,1,2,2,3,3,4,4,9, : 0,0,1,1,2,2,3,3,4,4,10, :$   
 $0,0,1,1,2,2,3,3,5,5,7, : 0,0,1,1,2,2,3,3,5,5,8, : 0,0,1,1,2,2,3,3,5,5,9, :$   
 $0,0,1,1,2,2,3,3,5,5,10, : 0,0,1,1,2,2,3,3,6,6,8, : 0,0,1,1,2,2,3,3,6,6,9, :$   
 $0,0,1,1,2,2,3,3,6,6,10, : 0,0,1,1,2,2,3,3,7,7,9, : 0,0,1,1,2,2,3,3,7,7,10, :$   
 $0,0,1,1,2,2,3,3,8,8,10, : 0,0,1,1,2,2,4,4,6,6,8, : 0,0,1,1,2,2,4,4,6,6,9, :$   
 $0,0,1,1,2,2,4,4,6,6,10, : 0,0,1,1,2,2,4,4,7,7,9, : 0,0,1,1,2,2,4,4,7,7,10, :$   
 $0,0,1,1,2,2,4,4,8,8,10, : 0,0,1,1,2,2,5,5,7,7,9, : 0,0,1,1,2,2,5,5,7,7,10, :$   
 $0,0,1,1,2,2,5,5,8,8,10, : 0,0,1,1,2,2,6,6,8,8,10, : 0,0,1,1,3,3,5,5,7,7,9, :$   
 $0,0,1,1,3,3,5,5,7,7,10, : 0,0,1,1,3,3,5,5,8,8,10, : 0,0,1,1,3,3,6,6,8,8,10, :$   
 $0,0,1,1,4,4,6,6,8,8,10, : 0,0,2,2,4,4,6,6,8,8,10, :$   
 Number new nodes in level n is given by : 1,1,2,3,4,5,8,9,16,17,32,

-----Class

510-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][100][101][110][120]]$   
 -----

--  
 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)  $0,0,2, -->0,0, --0,0, --0, --$
- 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)  $0,0,1,1,3, -->0,0,1,1, --0,0,1,1, --0,0,1, --0,0,2, --$
- R8)  $0,0,1,1,4, -->0,0,1, --0,0,1, --0,0, --0, --$
- 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)  $0,0,1,1,2,2,4, -->0,0,1,1,2,2, --0,0,1,1,2,2, --0,0,1,1,2, --0,0,1,1,3, --0,0,1,1,4, --$
- R12)  $0,0,1,1,2,2,5, -->0,0,1,1,2, --0,0,1,1,2, --0,0,1,1, --0,0,1, --0,0,2, --$
- R13)  $0,0,1,1,2,2,6, -->0,0,1,1,2,2,6,3, --0,0,1,1,2,2,6,4, --0,0,1,1,2,2,6,3, --0,0, --0, --$
- 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)  $0,0,1,1,2,2,6,3, -->0,0,1,1,2, --0,0,1,1,2, --0,0,1, --0,0,2, --$
- R16)  $0,0,1,1,2,2,6,4, -->0,0,1,1,2, --0,0,1,1, --0,0,1, --0,0,2, --$
- R17)  $0,0,1,1,2,2,3,3,4, -->0,0,1,1,2,2,3,3,4,4, --0,0,1,1,2,2,3,3,4, --0,0,1,1,2,2,3,3,5, --$   
 $0,0,1,1,2,2,3,3,6, --0,0,1,1,2,2,3,3,7, --0,0,1,1,2,2,3,3,8, --$
- R18)  $0,0,1,1,2,2,3,3,5, -->0,0,1,1,2,2,3,3, --0,0,1,1,2,2,3,3, --0,0,1,1,2,2,3, --0,0,1,1,2,$   
 $2,4, --0,0,1,1,2,2,5, --0,0,1,1,2,2,6, --$
- R19)  $0,0,1,1,2,2,3,3,5, -->0,0,1,1,2,2,3,3, --0,0,1,1,2,2,3,3, --0,0,1,1,2,2,3, --0,0,1,1,2,$   
 $2,4, --0,0,1,1,2,2,5, --0,0,1,1,2,2,6, --$

0,0,1,1,2,2,3,3,6,-->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,--0,0,1,1,3,--0,0,1,1,4,--

R20)

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,--0,0,1,1,2,2,3,3,7,4,--0,0,1,1,--0,0,1,--0,0,2,--

R21)

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,--0,--

R22)

0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--0,0,1,1,2,2,3,3,4,4,6,--0,0,1,1,2,2,3,3,4,4,7,--0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,--

R23)

0,0,1,1,2,2,3,3,7,4,-->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,--

R24)

0,0,1,1,2,2,3,3,7,5,-->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,--

R25)

0,0,1,1,2,2,3,3,8,4,-->0,0,1,1,2,2,3,3,7,4,--0,0,1,1,2,2,3,3,7,5,--0,0,1,1,2,2,3,3,7,4,--0,0,1,--0,0,2,--

R26)

0,0,1,1,2,2,3,3,8,5,-->0,0,1,1,2,2,3,3,7,4,--0,0,1,1,2,--0,0,1,1,2,--0,0,1,--0,0,2,--

R27)

0,0,1,1,2,2,3,3,8,6,-->0,0,1,1,2,2,3,3,7,5,--0,0,1,1,2,2,3,3,7,5,--0,0,1,1,--0,0,1,--0,0,2,--

List of different nodes in T[L]

LEN=1) 0,:

LEN=2) 0,0,:

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,: 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,: 0,0,1,1,2,2,3,3,7,4,: 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,:

LEN=11) 0,0,1,1,2,2,3,3,4,4,5,: 0,0,1,1,2,2,3,3,4,4,6,: 0,0,1,1,2,2,3,3,4,4,7,:

0,0,1,1,2,2,3,3,4,4,8,: 0,0,1,1,2,2,3,3,4,4,9,: 0,0,1,1,2,2,3,3,4,4,10,:

Number new nodes in level n is given by : 1,1,2,1,3,1,4,3,5,6,6,

-----Class

511-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][010][100][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,--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,--0,0,1,1,4,3,--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) 0,0,1,1,4,3,-->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,--0,0,1,1,2,2,5,4,--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,--0,0,1,1,4,3,--0,0,1,1,2,2,6,5,--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)  
0,0,1,1,2,2,5,4,-->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)  
0,0,1,1,2,2,6,5,-->0,0,1,1,--0,0,1,1,2,2,5,4,--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,--0,0,1,1,2,2,3,3,6,5,--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,--  
R21)  
0,0,1,1,2,2,3,3,7,-->0,0,1,1,--0,0,1,1,2,2,5,4,--0,0,1,1,2,2,3,3,7,6,--0,0,1,1,--0,  
0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--  
R22)  
0,0,1,1,2,2,3,3,8,-->0,0,--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,--  
R23)  
0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--0,0,1,1,2,2,3,3,4,4,6,--0,0,1,1,2,2,  
3,3,4,4,7,--0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,  
--  
R24)  
0,0,1,1,2,2,3,3,6,5,-->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,--  
R25)

$0,0,1,1,2,2,3,3,7,6, \rightarrow 0,0,1,1,2,2, \rightarrow 0,0,1,1,2,2,3,3,6,5, \rightarrow 0,0,1,1,2,2,3,3,6, \rightarrow 0,0,1,1,2,2,3,3,7, \rightarrow 0,0,1,1,2,2,3,3,8, \rightarrow$   
 R26)  
 $0,0,1,1,2,2,3,3,8,7, \rightarrow 0,0,1,1, \rightarrow 0,0,1,1,2,2,5,4, \rightarrow 0,0,1,1,2,2,3,3,7,6, \rightarrow 0,0,1,1,2,2,3,3,7, \rightarrow 0,0,1,1,2,2,3,3,8, \rightarrow$   
 List of different nodes in  $T[L]$   
 LEN=1)  $0, :$   
 LEN=2)  $0,0, :$   
 LEN=3)  $0,0,1, : 0,0,2, :$   
 LEN=4)  $0,0,1,1, :$   
 LEN=5)  $0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, :$   
 LEN=6)  $0,0,1,1,2,2, : 0,0,1,1,4,3, :$   
 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)  $0,0,1,1,2,2,3,3, : 0,0,1,1,2,2,5,4, : 0,0,1,1,2,2,6,5, :$   
 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)  $0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,6,5, : 0,0,1,1,2,2,3,3,7,6, : 0,0,1,1,2,2,3,3,8,7, :$   
 LEN=11)  $0,0,1,1,2,2,3,3,4,4,5, : 0,0,1,1,2,2,3,3,4,4,6, : 0,0,1,1,2,2,3,3,4,4,7, : 0,0,1,1,2,2,3,3,4,4,8, : 0,0,1,1,2,2,3,3,4,4,9, : 0,0,1,1,2,2,3,3,4,4,10, :$   
 Number new nodes in level  $n$  is given by :  $1,1,2,1,3,2,4,3,5,4,6,$

-----Class

512-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][100][101][110][210]]$

-----

--

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)  $0,0,2, \rightarrow 0,0, \rightarrow 0,0, \rightarrow 0,0,2, \rightarrow$
- 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)  $0,0,1,1,2, \rightarrow 0,0,1,1,2,2, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1,1,3, \rightarrow 0,0,1,1,4, \rightarrow$
- R7)  $0,0,1,1,3, \rightarrow 0,0,1,1, \rightarrow 0,0,1,1, \rightarrow 0,0,1,1,3, \rightarrow 0,0,1,1,4, \rightarrow$
- R8)  $0,0,1,1,4, \rightarrow 0,0,1,1,4,2, \rightarrow 0,0, \rightarrow 0,0, \rightarrow 0,0,1,1,4, \rightarrow$
- R9)  $0,0,1,1,2,2, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2,2,4, \rightarrow 0,0,1,1,2,2,5, \rightarrow 0,0,1,1,2,2,6, \rightarrow$
- R10)  $0,0,1,1,4,2, \rightarrow 0,0,1,1, \rightarrow 0,0,1,1,3, \rightarrow 0,0,1,1,4, \rightarrow$
- R11)  $0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2,2,3,3, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2,2,4, \rightarrow 0,0,1,1,2,2,5, \rightarrow 0,0,1,1,2,2,6, \rightarrow$
- R12)  $0,0,1,1,2,2,4, \rightarrow 0,0,1,1,2,2, \rightarrow 0,0,1,1,2,2, \rightarrow 0,0,1,1,2,2,4, \rightarrow 0,0,1,1,2,2,5, \rightarrow 0,0,1,1,2,2,6, \rightarrow$
- R13)  $0,0,1,1,2,2,5, \rightarrow 0,0,1,1,2,2,5,3, \rightarrow 0,0,1,1, \rightarrow 0,0,1,1, \rightarrow 0,0,1,1,2,2,5, \rightarrow 0,0,1,1,2,2,6, \rightarrow$
- R14)  $0,0,1,1,2,2,6, \rightarrow 0,0,1,1,2,2,6,3, \rightarrow 0,0,1,1,4,2, \rightarrow 0,0, \rightarrow 0,0, \rightarrow 0,0,1,1,2,2,6, \rightarrow$
- R15)  $0,0,1,1,2,2,3,3, \rightarrow 0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3,3,5, \rightarrow 0,0,1,1,2,2,3,3,6, \rightarrow 0,0,$



1,1,2,2,3,3,7,--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,--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,--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,--0,0,1,1,2,2,5,3,--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,--  
 R22)  
 0,0,1,1,2,2,3,3,8,-->0,0,1,1,2,2,3,3,8,4,--0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,--0,  
 0,--0,0,1,1,2,2,3,3,8,--  
 R23)  
 0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--0,0,1,1,2,2,3,3,4,4,6,--0,0,1,1,2,2,  
 3,3,4,4,7,--0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,  
 --  
 R24)  
 0,0,1,1,2,2,3,3,6,4,-->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,--  
 R25)  
 0,0,1,1,2,2,3,3,7,4,-->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,--  
 R26)  
 0,0,1,1,2,2,3,3,8,4,-->0,0,1,1,2,2,3,3,7,4,--0,0,1,1,2,2,5,3,--0,0,1,1,--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, : 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, :  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5, : 0,0,1,1,2,2,3,3,4,4,6, : 0,0,1,1,2,2,3,3,4,4,7, :  
 0,0,1,1,2,2,3,3,4,4,8, : 0,0,1,1,2,2,3,3,4,4,9, : 0,0,1,1,2,2,3,3,4,4,10, :  
 Number new nodes in level n is given by : 1,1,2,1,3,2,4,3,5,4,6,

-----Class

513-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][100][101][120][201]]$

-----  
--

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

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

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

R8)  $0, 0, 1, 1, 4, \rightarrow 0, 0, \rightarrow 0, 0, 1, \rightarrow 0, 0, 1, 1, 3, \rightarrow 0, \rightarrow$

R9)  $0, 0, 1, 1, 2, 2, \rightarrow 0, 0, 1, 1, 2, 2, 3, \rightarrow 0, 0, 1, 1, 2, 2, 4, \rightarrow 0, 0, 1, 1, 2, 2, 5, \rightarrow 0, 0, 1, 1, 2, 2, 6, \rightarrow$

R10)

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

$0, 0, 1, 1, 2, 2, 6, \rightarrow$

R11)

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

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

R13)  $0, 0, 1, 1, 2, 2, 6, \rightarrow 0, 0, \rightarrow 0, 0, 1, \rightarrow 0, 0, 1, 1, 3, \rightarrow 0, 0, 1, 1, 2, 2, 5, \rightarrow 0, \rightarrow$

R14)

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

$1, 1, 2, 2, 3, 3, 7, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 8, \rightarrow$

R15)

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

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

R16)

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

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

R17)

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

$0, 0, 1, 1, 3, \rightarrow 0, 0, 1, 1, 4, \rightarrow$

R18)

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

$1, \rightarrow 0, 0, 2, \rightarrow$

R19)

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

$0, \rightarrow$

R20)

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

$3, 3, 4, 4, 7, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, 4, 8, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, 4, 9, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, 4, 10,$

--

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,:  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5,: 0,0,1,1,2,2,3,3,4,4,6,: 0,0,1,1,2,2,3,3,4,4,7,:  
 0,0,1,1,2,2,3,3,4,4,8,: 0,0,1,1,2,2,3,3,4,4,9,: 0,0,1,1,2,2,3,3,4,4,10,:  
 Number new nodes in level n is given by : 1,1,2,1,3,1,4,1,5,1,6,

-----Class

514-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][100][101][120][210]]$

--

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,--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,--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,--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,--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,--0,0,--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,--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,--0,0,1,1,2,2,--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,-->0,0,1,1,2,2,5,5,--0,0,1,1,2,--0,0,1,1,--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,-->0,0,1,1,2,2,6,6,--0,0,1,1,4,4,--0,0,1,--0,0,--0,0,1,1,2,2,3,3,  
8,8,--0,--

R23)

0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--0,0,1,1,2,2,3,3,4,4,6,--0,0,1,1,2,2,  
3,3,4,4,7,--0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,  
--

R24)

0,0,1,1,2,2,3,3,6,6,-->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,--

R25)

0,0,1,1,2,2,3,3,7,7,-->0,0,1,1,2,2,3,3,6,6,--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,--

R26)

0,0,1,1,2,2,3,3,8,8,-->0,0,1,1,2,2,3,3,7,7,--0,0,1,1,2,2,5,5,--0,0,1,1,2,--0,0,1,1,  
--0,0,1,--0,0,2,--

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,:

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,:

LEN=11) 0,0,1,1,2,2,3,3,4,4,5,: 0,0,1,1,2,2,3,3,4,4,6,: 0,0,1,1,2,2,3,3,4,4,7,:

0,0,1,1,2,2,3,3,4,4,8,: 0,0,1,1,2,2,3,3,4,4,9,: 0,0,1,1,2,2,3,3,4,4,10,:

Number new nodes in level n is given by : 1,1,2,1,3,2,4,3,5,4,6,

-----Class

515-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][100][101][201][210]]$

-----

--

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,--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,--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,--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,--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,--0,0,--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,--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,--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,--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,--0,0,1,1,--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,--0,0,--0,0,--0,0,--0,0,1,1,2,2,3,3,8,8,--0,0,1,1,2,2,3,3,

8,--

R26)

0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--0,0,1,1,2,2,3,3,4,4,6,--0,0,1,1,2,2,

3,3,4,4,7,--0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,

--

R27)

0,0,1,1,2,2,3,3,5,5,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,4,6,--0,0,1,1,2,2,3,

3,4,4,7,--0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,--

R28)

0,0,1,1,2,2,3,3,6,6,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,4,4,7,--

$0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,--$   
 R29)  
 $0,0,1,1,2,2,3,3,7,7,-->0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,--$   
 R30)  
 $0,0,1,1,2,2,3,3,8,8,-->0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,--$   
 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)  $0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,5,5, : 0,0,1,1,2,2,3,3,6,6, :$   
 $0,0,1,1,2,2,3,3,7,7, : 0,0,1,1,2,2,3,3,8,8, :$   
 LEN=11)  $0,0,1,1,2,2,3,3,4,4,5, : 0,0,1,1,2,2,3,3,4,4,6, : 0,0,1,1,2,2,3,3,4,4,7, :$   
 $0,0,1,1,2,2,3,3,4,4,8, : 0,0,1,1,2,2,3,3,4,4,9, : 0,0,1,1,2,2,3,3,4,4,10, :$   
 Number new nodes in level n is given by : 1,1,2,2,3,3,4,4,5,5,6,

-----Class

516-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][100][102][110][120]]$

-----

--

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)  $0,0,2,-->0,0,2,1,--0,0,--0,--$
- R5)  $0,0,1,1,-->0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--$
- R6)  $0,0,2,1,-->0,0,2,1,2,--$
- 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)  $0,0,1,1,3,-->0,0,2,1,--0,0,1,1,--0,0,1,--0,0,2,--$
- R9)  $0,0,1,1,4,-->0,0,1,1,4,2,--0,0,1,1,4,3,--0,0,--0,--$
- R10)  $0,0,2,1,2,-->$
- 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)  $0,0,1,1,4,2,-->0,0,2,1,--0,0,2,1,2,--$
- R13)  $0,0,1,1,4,3,-->0,0,2,1,2,--0,0,2,1,2,--$
- 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)  $0,0,1,1,2,2,4,-->0,0,2,1,--0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--$
- R16)  $0,0,1,1,2,2,5,-->0,0,1,1,4,2,--0,0,1,1,4,3,--0,0,1,1,--0,0,1,--0,0,2,--$
- R17)

$0,0,1,1,2,2,6, \rightarrow 0,0,1,1,2,2,6,3, \rightarrow 0,0,1,1,2,2,6,4, \rightarrow 0,0,1,1,2,2,6,5, \rightarrow 0,0, \rightarrow 0, \rightarrow$   
R18)  
 $0,0,1,1,2,2,3,3, \rightarrow 0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3,3,5, \rightarrow 0,0,1,1,2,2,3,3,6, \rightarrow 0,0,1,1,2,2,3,3,7, \rightarrow 0,0,1,1,2,2,3,3,8, \rightarrow$   
R19)  $0,0,1,1,2,2,6,3, \rightarrow 0,0,1,1,4,2, \rightarrow 0,0,1,1,4,3, \rightarrow 0,0,2,1,2, \rightarrow$   
R20)  $0,0,1,1,2,2,6,4, \rightarrow 0,0,2,1,2, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1,2, \rightarrow$   
R21)  $0,0,1,1,2,2,6,5, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1,2, \rightarrow$   
R22)  
 $0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3,3,4,4, \rightarrow 0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3,3,5, \rightarrow$   
 $0,0,1,1,2,2,3,3,6, \rightarrow 0,0,1,1,2,2,3,3,7, \rightarrow 0,0,1,1,2,2,3,3,8, \rightarrow$   
R23)  
 $0,0,1,1,2,2,3,3,5, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,2,2,3,3, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2,2,4, \rightarrow 0,0,1,1,2,2,5, \rightarrow 0,0,1,1,2,2,6, \rightarrow$   
R24)  
 $0,0,1,1,2,2,3,3,6, \rightarrow 0,0,1,1,4,2, \rightarrow 0,0,1,1,4,3, \rightarrow 0,0,1,1,2,2, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1,1,3, \rightarrow 0,0,1,1,4, \rightarrow$   
R25)  
 $0,0,1,1,2,2,3,3,7, \rightarrow 0,0,1,1,2,2,6,3, \rightarrow 0,0,1,1,2,2,6,4, \rightarrow 0,0,1,1,2,2,6,5, \rightarrow 0,0,1,1, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$   
R26)  
 $0,0,1,1,2,2,3,3,8, \rightarrow 0,0,1,1,2,2,3,3,8,4, \rightarrow 0,0,1,1,2,2,3,3,8,5, \rightarrow 0,0,1,1,2,2,3,3,8,6, \rightarrow 0,0,1,1,2,2,3,3,8,7, \rightarrow 0,0, \rightarrow 0, \rightarrow$   
R27)  
 $0,0,1,1,2,2,3,3,4,4, \rightarrow 0,0,1,1,2,2,3,3,4,4,5, \rightarrow 0,0,1,1,2,2,3,3,4,4,6, \rightarrow 0,0,1,1,2,2,3,3,4,4,7, \rightarrow 0,0,1,1,2,2,3,3,4,4,8, \rightarrow 0,0,1,1,2,2,3,3,4,4,9, \rightarrow 0,0,1,1,2,2,3,3,4,4,10, \rightarrow$   
R28)  
 $0,0,1,1,2,2,3,3,8,4, \rightarrow 0,0,1,1,2,2,6,3, \rightarrow 0,0,1,1,2,2,6,4, \rightarrow 0,0,1,1,2,2,6,5, \rightarrow 0,0,2,1,2, \rightarrow$   
R29)  $0,0,1,1,2,2,3,3,8,5, \rightarrow 0,0,2,1,2, \rightarrow 0,0,1,1,4,2, \rightarrow 0,0,1,1,4,3, \rightarrow 0,0,2,1,2, \rightarrow$   
R30)  $0,0,1,1,2,2,3,3,8,6, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1,2, \rightarrow$   
R31)  $0,0,1,1,2,2,3,3,8,7, \rightarrow 0,0,1,1,2,2,3,3,8,7,4, \rightarrow 0,0,1,1,4,3, \rightarrow 0,0,1,1,2,2,3,3,8,7,4, \rightarrow 0,0,2,1,2, \rightarrow$

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)  $0,0,1,1,2, : 0,0,1,1,3, : 0,0,1,1,4, : 0,0,2,1,2, :$   
LEN=6)  $0,0,1,1,2,2, : 0,0,1,1,4,2, : 0,0,1,1,4,3, :$   
LEN=7)  $0,0,1,1,2,2,3, : 0,0,1,1,2,2,4, : 0,0,1,1,2,2,5, : 0,0,1,1,2,2,6, :$   
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)  $0,0,1,1,2,2,3,3,4, : 0,0,1,1,2,2,3,3,5, : 0,0,1,1,2,2,3,3,6, :$   
 $0,0,1,1,2,2,3,3,7, : 0,0,1,1,2,2,3,3,8, :$   
LEN=10)  $0,0,1,1,2,2,3,3,4,4, : 0,0,1,1,2,2,3,3,8,4, : 0,0,1,1,2,2,3,3,8,5, :$   
 $0,0,1,1,2,2,3,3,8,6, : 0,0,1,1,2,2,3,3,8,7, :$   
LEN=11)  $0,0,1,1,2,2,3,3,4,4,5, : 0,0,1,1,2,2,3,3,4,4,6, : 0,0,1,1,2,2,3,3,4,4,7, :$   
 $0,0,1,1,2,2,3,3,4,4,8, : 0,0,1,1,2,2,3,3,4,4,9, : 0,0,1,1,2,2,3,3,4,4,10, :$   
 $0,0,1,1,2,2,3,3,8,7,4, :$

Number new nodes in level n is given by : 1,1,2,2,4,3,4,4,5,5,7,

-----Class

517-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][100][102][110][201]]$

-----

--

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

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

R8)  $0,0,1,1,2, \rightarrow 0,0,1,1,2,2, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1,1,3, \rightarrow 0,0,1,1,4, \rightarrow$

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

R10)  $0,0,1,1,4, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,4,3, \rightarrow 0,0, \rightarrow 0,0,1,1,4,5, \rightarrow$

R11)  $0,0,2,1,2, \rightarrow$

R12)

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

R13)  $0,0,1,1,3,4, \rightarrow 0,0,2,1,2, \rightarrow 0,0,1,1, \rightarrow 0,0,1,1,3,4, \rightarrow 0,0,1,1,3,5, \rightarrow$

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

R15)  $0,0,1,1,4,3, \rightarrow 0,0,2,1,2, \rightarrow 0,0,2,1,2, \rightarrow$

R16)  $0,0,1,1,4,5, \rightarrow 0,0,2,1,2, \rightarrow 0,0,2,1, \rightarrow 0,0, \rightarrow 0,0,1,1,4,5, \rightarrow$

R17)

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

$0,0,1,1,2,2,6, \rightarrow$

R18)

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

$1,2,2,4,7, \rightarrow$

R19)

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

$7, \rightarrow$

R20)

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

R21)

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

$1,1,2,2,3,3,7, \rightarrow 0,0,1,1,2,2,3,3,8, \rightarrow$

R22)

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

$0,1,1,2,2,4,7, \rightarrow$

R23)

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

$2,5,7, \rightarrow$

R24)

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

$7, \rightarrow$

R25)

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



7, --

R26)

0,0,1,1,2,2,5,7, -->0,0,2,1,2, --0,0,2,1, --0,0,1,1,2,2,6,5, --0,0, --0,0,1,1,2,2,6,7, --

R27) 0,0,1,1,2,2,6,5, -->0,0,2,1,2, --0,0,2,1, --0,0,2,1,2, --

R28)

0,0,1,1,2,2,6,7, -->0,0,2,1,2, --0,0,2,1, --0,0,1,1,2,2,6,7,5, --0,0, --0,0,1,1,2,2,6,7,

--

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, --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, --

R31)

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, --

R32)

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, --

R33)

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, --

R34) 0,0,1,1,2,2,6,7,5, -->0,0,2,1,2, --0,0,2,1, --

R35)

0,0,1,1,2,2,3,3,4,4, -->0,0,1,1,2,2,3,3,4,4,5, --0,0,1,1,2,2,3,3,4,4,6, --0,0,1,1,2,2,

3,3,4,4,7, --0,0,1,1,2,2,3,3,4,4,8, --0,0,1,1,2,2,3,3,4,4,9, --0,0,1,1,2,2,3,3,4,4,10,

--

R36)

0,0,1,1,2,2,3,3,5,6, -->0,0,2,1,2, --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, --

R37)

0,0,1,1,2,2,3,3,5,7, -->0,0,2,1,2, --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, --

R38)

0,0,1,1,2,2,3,3,5,8, -->0,0,2,1,2, --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, --

R39)

0,0,1,1,2,2,3,3,5,9, -->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, --0,0,1,1,2,2,3,3,8,9, --

R40)

0,0,1,1,2,2,3,3,6,7, -->0,0,2,1,2, --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, --

R41)

0,0,1,1,2,2,3,3,6,8, -->0,0,2,1,2, --0,0,2,1, --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, --

R42)

0,0,1,1,2,2,3,3,6,9, -->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, --0,0,1,1,2,2,3,3,8,9, --

R43)

0,0,1,1,2,2,3,3,7,8, -->0,0,2,1,2, --0,0,2,1, --0,0,1,1,2,2,6,7,5, --0,0,1,1, --0,0,1,1,

2,2,3,3,7,8,--0,0,1,1,2,2,3,3,7,9,--  
R44)  
0,0,1,1,2,2,3,3,7,9,-->0,0,2,1,2,--0,0,2,1,--0,0,1,1,2,2,6,7,5,--0,0,1,1,2,2,3,3,8,  
7,--0,0,--0,0,1,1,2,2,3,3,8,9,--  
R45) 0,0,1,1,2,2,3,3,8,7,-->0,0,2,1,2,--0,0,2,1,--0,0,1,1,2,2,6,7,5,--0,0,2,1,2,--  
R46)  
0,0,1,1,2,2,3,3,8,9,-->0,0,2,1,2,--0,0,2,1,--0,0,1,1,2,2,6,7,5,--0,0,1,1,2,2,3,3,8,  
9,7,--0,0,--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, : 0,0,2,3, :  
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, : 0,0,1,1,4,3, : 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, :  
LEN=11) 0,0,1,1,2,2,3,3,4,4,5, : 0,0,1,1,2,2,3,3,4,4,6, : 0,0,1,1,2,2,3,3,4,4,7, :  
0,0,1,1,2,2,3,3,4,4,8, : 0,0,1,1,2,2,3,3,4,4,9, : 0,0,1,1,2,2,3,3,4,4,10, :  
0,0,1,1,2,2,3,3,8,9,7, :  
Number new nodes in level n is given by : 1,1,2,3,4,5,4,8,6,12,7,

-----Class

518-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[000][010][100][102][110][210]$

-----

--

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,-->0,0,2,1,2,--
- 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,--0,0,2,1,--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,--0,0,2,1,--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) 0,0,1,1,4,5,-->0,0,2,1,--0,0,2,1,2,--0,0,--0,0,1,1,4,5,--  
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,--0,0,1,1,2,2,4,5,--0,0,1,1,2,2,4,6,--0,0,1,  
1,2,2,4,7,--  
R19)  
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,--  
R20)  
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,--  
R21) 0,0,1,1,3,5,6,-->0,0,2,1,2,--0,0,2,1,2,--0,0,--0,0,1,1,3,5,6,--  
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,-->0,0,2,1,2,--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,--  
R24)  
0,0,1,1,2,2,4,6,-->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,--  
R25)  
0,0,1,1,2,2,4,7,-->0,0,2,1,2,--0,0,1,1,4,2,--0,0,2,1,--0,0,--0,0,1,1,2,2,4,7,8,--  
R26)  
0,0,1,1,2,2,5,6,-->0,0,2,1,--0,0,2,1,2,--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,--0,0,2,1,2,--0,0,2,1,--0,0,--0,0,1,1,2,2,5,7,8,--  
R28) 0,0,1,1,2,2,6,3,-->0,0,1,1,4,2,--0,0,2,1,--0,0,2,1,2,--  
R29)  
0,0,1,1,2,2,6,7,-->0,0,1,1,4,2,--0,0,2,1,--0,0,2,1,2,--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,-->0,0,1,1,4,2,--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,--  
R33)  
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,--  
R34)  
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,--  
R35)  
0,0,1,1,2,2,4,6,7,-->0,0,2,1,2,--0,0,2,1,2,--0,0,1,1,--0,0,1,1,2,2,4,6,7,--0,0,1,1,  
2,2,4,6,8,--

R36)  
0,0,1,1,2,2,4,6,8,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,--0,0,--0,0,1,1,2,2,4,6,8,9,--  
R37)  
0,0,1,1,2,2,4,7,8,-->0,0,2,1,2,--0,0,2,1,--0,0,2,1,2,--0,0,--0,0,1,1,2,2,4,7,8,--  
R38)  
0,0,1,1,2,2,5,7,8,-->0,0,2,1,--0,0,2,1,2,--0,0,2,1,2,--0,0,--0,0,1,1,2,2,5,7,8,--  
R39)  
0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--0,0,1,1,2,2,3,3,4,4,6,--0,0,1,1,2,2,  
3,3,4,4,7,--0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,  
--  
R40)  
0,0,1,1,2,2,3,3,5,6,-->0,0,2,1,2,--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,--  
R41)  
0,0,1,1,2,2,3,3,5,7,-->0,0,2,1,2,--0,0,2,1,--0,0,1,1,2,2,--0,0,1,1,2,2,3,3,5,7,8,--  
0,0,1,1,2,2,3,3,5,7,9,--0,0,1,1,2,2,3,3,5,7,10,--  
R42)  
0,0,1,1,2,2,3,3,5,8,-->0,0,2,1,2,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,--0,0,1,1,2,2,3,  
3,5,8,9,--0,0,1,1,2,2,3,3,5,8,10,--  
R43)  
0,0,1,1,2,2,3,3,5,9,-->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,--  
0,0,1,1,2,2,3,3,5,9,10,--  
R44)  
0,0,1,1,2,2,3,3,6,7,-->0,0,2,1,--0,0,2,1,2,--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,--  
R45)  
0,0,1,1,2,2,3,3,6,8,-->0,0,2,1,--0,0,2,1,2,--0,0,2,1,--0,0,1,1,--0,0,1,1,2,2,3,3,6,  
8,9,--0,0,1,1,2,2,3,3,6,8,10,--  
R46)  
0,0,1,1,2,2,3,3,6,9,-->0,0,2,1,--0,0,2,1,2,--0,0,1,1,4,2,--0,0,2,1,--0,0,--0,0,1,1,  
2,2,3,3,6,9,10,--  
R47)  
0,0,1,1,2,2,3,3,7,8,-->0,0,1,1,4,2,--0,0,2,1,--0,0,2,1,2,--0,0,1,1,--0,0,1,1,2,2,3,  
3,7,8,--0,0,1,1,2,2,3,3,7,9,--  
R48)  
0,0,1,1,2,2,3,3,7,9,-->0,0,1,1,4,2,--0,0,2,1,--0,0,2,1,2,--0,0,2,1,--0,0,--0,0,1,1,  
2,2,3,3,7,9,10,--  
R49) 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,--0,0,2,1,2,--  
R50)  
0,0,1,1,2,2,3,3,8,9,-->0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,2,1,--0,0,2,1,2,--0,0,--  
0,0,1,1,2,2,3,3,8,9,--  
R51)  
0,0,1,1,2,2,4,6,8,9,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,--0,0,1,1,2,2,4,6,8,  
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, : 0,0,2,3, :  
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,: 0,0,1,1,4,5,:  
 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,: 0,0,1,1,2,2,6,7,:  
 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,:  
 0,0,1,1,2,2,4,7,8,: 0,0,1,1,2,2,5,7,8,:  
 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,:  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5,: 0,0,1,1,2,2,3,3,4,4,6,: 0,0,1,1,2,2,3,3,4,4,7,:  
 0,0,1,1,2,2,3,3,4,4,8,: 0,0,1,1,2,2,3,3,4,4,9,: 0,0,1,1,2,2,3,3,4,4,10,:  
 0,0,1,1,2,2,3,3,5,7,8,: 0,0,1,1,2,2,3,3,5,7,9,: 0,0,1,1,2,2,3,3,5,7,10,:  
 0,0,1,1,2,2,3,3,5,8,9,: 0,0,1,1,2,2,3,3,5,8,10,: 0,0,1,1,2,2,3,3,5,9,10,:  
 0,0,1,1,2,2,3,3,6,8,9,: 0,0,1,1,2,2,3,3,6,8,10,: 0,0,1,1,2,2,3,3,6,9,10,:  
 0,0,1,1,2,2,3,3,7,9,10,:  
 Number new nodes in level n is given by : 1,1,2,3,4,5,5,8,9,13,16,

-----Class

519-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][100][102][120][201]]$

-----

--

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,-->0,0,2,1,2,--
- 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,-->0,0,2,1,--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) 0,0,1,1,4,3,-->0,0,2,1,2,--0,0,2,1,2,--
- R15) 0,0,1,1,4,4,-->0,0,2,1,2,--0,0,2,1,--0,0,1,--0,0,2,--
- 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,--0,0,1,1,3,--0,0,1,1,4,--
- 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,--0,0,2,--
- R19)

$0,0,1,1,2,2,6, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,4,3, \rightarrow 0,0,1,1,2,2,6,5, \rightarrow 0,0,1,1,2,2,6,6, \rightarrow 0, \rightarrow$   
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)  
 $0,0,1,1,2,2,4,4, \rightarrow 0,0,2,1,2, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2,2,4, \rightarrow 0,0,1,1,2,2,5, \rightarrow 0,0,1,1,2,2,6, \rightarrow$   
R22)  $0,0,1,1,2,2,5,5, \rightarrow 0,0,2,1,2, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1,1,3, \rightarrow 0,0,1,1,4, \rightarrow$   
R23)  $0,0,1,1,2,2,6,5, \rightarrow 0,0,2,1,2, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1,2, \rightarrow$   
R24)  $0,0,1,1,2,2,6,6, \rightarrow 0,0,2,1,2, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,2,2,6,6,5, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$   
R25)  
 $0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3,3,4,4, \rightarrow 0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3,3,5, \rightarrow 0,0,1,1,2,2,3,3,6, \rightarrow 0,0,1,1,2,2,3,3,7, \rightarrow 0,0,1,1,2,2,3,3,8, \rightarrow$   
R26)  
 $0,0,1,1,2,2,3,3,5, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,2,2,3,3,5,5, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2,2,4, \rightarrow 0,0,1,1,2,2,5, \rightarrow 0,0,1,1,2,2,6, \rightarrow$   
R27)  
 $0,0,1,1,2,2,3,3,6, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,4,3, \rightarrow 0,0,1,1,2,2,3,3,6,6, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1,1,3, \rightarrow 0,0,1,1,4, \rightarrow$   
R28)  
 $0,0,1,1,2,2,3,3,7, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,4,3, \rightarrow 0,0,1,1,2,2,6,5, \rightarrow 0,0,1,1,2,2,3,3,7,7, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$   
R29)  
 $0,0,1,1,2,2,3,3,8, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,4,3, \rightarrow 0,0,1,1,2,2,6,5, \rightarrow 0,0,1,1,2,2,3,3,8,7, \rightarrow 0,0,1,1,2,2,3,3,8,8, \rightarrow 0, \rightarrow$   
R30)  $0,0,1,1,2,2,6,6,5, \rightarrow 0,0,2,1,2, \rightarrow 0,0,2,1, \rightarrow$   
R31)  
 $0,0,1,1,2,2,3,3,4,4, \rightarrow 0,0,1,1,2,2,3,3,4,4,5, \rightarrow 0,0,1,1,2,2,3,3,4,4,6, \rightarrow 0,0,1,1,2,2,3,3,4,4,7, \rightarrow 0,0,1,1,2,2,3,3,4,4,8, \rightarrow 0,0,1,1,2,2,3,3,4,4,9, \rightarrow 0,0,1,1,2,2,3,3,4,4,10, \rightarrow$   
--  
R32)  
 $0,0,1,1,2,2,3,3,5,5, \rightarrow 0,0,2,1,2, \rightarrow 0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3,3,5, \rightarrow 0,0,1,1,2,2,3,3,6, \rightarrow 0,0,1,1,2,2,3,3,7, \rightarrow 0,0,1,1,2,2,3,3,8, \rightarrow$   
R33)  
 $0,0,1,1,2,2,3,3,6,6, \rightarrow 0,0,2,1,2, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2,2,4, \rightarrow 0,0,1,1,2,2,5, \rightarrow 0,0,1,1,2,2,6, \rightarrow$   
R34)  
 $0,0,1,1,2,2,3,3,7,7, \rightarrow 0,0,2,1,2, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,2,2,6,6,5, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1,1,3, \rightarrow 0,0,1,1,4, \rightarrow$   
R35)  $0,0,1,1,2,2,3,3,8,7, \rightarrow 0,0,2,1,2, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,2,2,6,6,5, \rightarrow 0,0,2,1,2, \rightarrow$   
R36)  
 $0,0,1,1,2,2,3,3,8,8, \rightarrow 0,0,2,1,2, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,2,2,6,6,5, \rightarrow 0,0,1,1,2,2,3,3,8,8,7, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$

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, : 0,0,1,1,4,3, : 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, : 0,0,1,1,2,2,6,5, :  
 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, : 0,0,1,1,2,2,6,6,5, :  
 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, :  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5, : 0,0,1,1,2,2,3,3,4,4,6, : 0,0,1,1,2,2,3,3,4,4,7, :  
 0,0,1,1,2,2,3,3,4,4,8, : 0,0,1,1,2,2,3,3,4,4,9, : 0,0,1,1,2,2,3,3,4,4,10, :  
 0,0,1,1,2,2,3,3,8,8,7, :  
 Number new nodes in level n is given by : 1,1,2,3,4,4,4,5,6,6,7,

-----Class

520-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][100][102][120][210]]$

-----

--

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, -->0,0,2,1, --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, --0,0,2,1, --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) 0,0,1,1,4,4, -->0,0,2,1, --0,0,2,1,2, --0,0,1, --0,0,2, --
- 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, --0,0,1,1,3, --0,0,1,1,4, --
- R18) 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, --0,0,2, --
- R19)
- 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, --
- 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)
- 0,0,1,1,2,2,4,4, -->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, --
- R22) 0,0,1,1,2,2,5,5, -->0,0,2,1, --0,0,2,1,2, --0,0,1,1,2, --0,0,1,1,3, --0,0,1,1,4, --
- R23) 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, --

R24) 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,--0,0,2,--  
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,--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)  
0,0,1,1,2,2,3,3,5,-->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,--  
R27)  
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,--0,0,  
1,1,3,--0,0,1,1,4,--  
R28)  
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,--  
R29)  
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,--  
R30) 0,0,1,1,2,2,6,3,6,-->0,0,2,1,--0,0,2,1,2,--  
R31)  
0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--0,0,1,1,2,2,3,3,4,4,6,--0,0,1,1,2,2,  
3,3,4,4,7,--0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,  
--  
R32)  
0,0,1,1,2,2,3,3,5,5,-->0,0,2,1,2,--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)  
0,0,1,1,2,2,3,3,6,6,-->0,0,2,1,--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,--  
R34)  
0,0,1,1,2,2,3,3,7,7,-->0,0,1,1,2,2,6,3,6,--0,0,2,1,--0,0,2,1,2,--0,0,1,1,2,--0,0,1,  
1,3,--0,0,1,1,4,--  
R35)  
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,  
4,8,--  
R36)  
0,0,1,1,2,2,3,3,8,8,-->0,0,1,1,2,2,3,3,8,4,8,--0,0,1,1,2,2,6,3,6,--0,0,2,1,--0,0,2,  
1,2,--0,0,1,--0,0,2,--

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, : 0,0,2,2, :

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, : 0,0,1,1,4,4, :

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, :  
0,0,1,1,2,2,6,6, :

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, : 0,0,1,1,2,2,6,3,6, :

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, :



LEN=11) 0,0,1,1,2,2,3,3,4,4,5,: 0,0,1,1,2,2,3,3,4,4,6,: 0,0,1,1,2,2,3,3,4,4,7,:  
 0,0,1,1,2,2,3,3,4,4,8,: 0,0,1,1,2,2,3,3,4,4,9,: 0,0,1,1,2,2,3,3,4,4,10,:  
 0,0,1,1,2,2,3,3,8,4,8,:  
 Number new nodes in level n is given by : 1,1,2,3,4,4,4,5,6,6,7,

-----Class

521-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][100][102][201][210]]$

-----

--

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,-->0,0,2,1,2,--
- 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,-->0,0,2,1,--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,--0,0,1,1,4,4,--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) 0,0,1,1,4,4,-->0,0,2,1,2,--0,0,2,1,2,--0,0,1,1,4,4,5,--0,0,1,1,4,4,6,--
- R18) 0,0,1,1,4,5,-->0,0,2,1,2,--0,0,2,1,2,--0,0,1,1,4,4,--0,0,1,1,4,5,--
- R19) 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,--
- R20) 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,--
- R21) 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,--
- R22) 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,--
- R23) 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,--
- R24) 0,0,1,1,3,3,5,-->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,--
- R25) 0,0,1,1,3,3,6,-->0,0,2,1,2,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,6,6,--0,0,1,1,2,2,6,7,  
 --

R26)

0,0,1,1,4,4,5,-->0,0,2,1,2,--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,--

R27)

0,0,1,1,4,4,6,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,--0,0,1,1,2,2,6,6,--0,0,1,1,2,2,6,7,--

R28)

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,--

R29)

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,--

R30)

0,0,1,1,2,2,5,5,-->0,0,2,1,2,--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,--

R31)

0,0,1,1,2,2,6,6,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,1,1,2,2,6,6,7,--0,0,1,1,2,2,6,6,8,--

R32)

0,0,1,1,2,2,6,7,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,1,1,2,2,6,6,--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,--0,0,1,1,2,2,3,3,5,5,--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,--

R35)

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,--

R36)

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,--

R37)

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,--

R38)

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,--

R39)

0,0,1,1,2,2,4,4,6,-->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,--

R40)

0,0,1,1,2,2,4,4,7,-->0,0,2,1,2,--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,--

R41)

0,0,1,1,2,2,4,4,8,-->0,0,2,1,2,--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,--

R42)

0,0,1,1,2,2,5,5,6,-->0,0,2,1,2,--0,0,2,1,2,--0,0,1,1,2,2,3,3,6,6,--0,0,1,1,2,2,5,5,6,--

6,--0,0,1,1,2,2,5,5,7,--0,0,1,1,2,2,5,5,8,--  
R43)  
0,0,1,1,2,2,5,5,7,-->0,0,2,1,2,--0,0,2,1,2,--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,--  
R44)  
0,0,1,1,2,2,5,5,8,-->0,0,2,1,2,--0,0,2,1,2,--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,--  
R45)  
0,0,1,1,2,2,6,6,7,-->0,0,2,1,2,--0,0,2,1,2,--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,--  
R46)  
0,0,1,1,2,2,6,6,8,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,--0,0,1,1,2,2,3,3,  
8,8,--0,0,1,1,2,2,3,3,8,9,--  
R47)  
0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--0,0,1,1,2,2,3,3,4,4,6,--0,0,1,1,2,2,  
3,3,4,4,7,--0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,  
--  
R48)  
0,0,1,1,2,2,3,3,5,5,-->0,0,2,1,2,--0,0,1,1,2,2,3,3,5,5,6,--0,0,1,1,2,2,3,3,5,5,7,--  
0,0,1,1,2,2,3,3,5,5,8,--0,0,1,1,2,2,3,3,5,5,9,--0,0,1,1,2,2,3,3,5,5,10,--  
R49)  
0,0,1,1,2,2,3,3,6,6,-->0,0,2,1,2,--0,0,2,1,2,--0,0,1,1,2,2,3,3,6,6,7,--0,0,1,1,2,2,  
3,3,6,6,8,--0,0,1,1,2,2,3,3,6,6,9,--0,0,1,1,2,2,3,3,6,6,10,--  
R50)  
0,0,1,1,2,2,3,3,7,7,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,1,1,2,2,3,3,7,7,8,--  
0,0,1,1,2,2,3,3,7,7,9,--0,0,1,1,2,2,3,3,7,7,10,--  
R51)  
0,0,1,1,2,2,3,3,8,8,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,1,1,2,2,  
3,3,8,8,9,--0,0,1,1,2,2,3,3,8,8,10,--  
R52)  
0,0,1,1,2,2,3,3,8,9,-->0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--0,0,2,1,2,--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, : 0,0,1,1,4,4, : 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, :  
LEN=11) 0,0,1,1,2,2,3,3,4,4,5, : 0,0,1,1,2,2,3,3,4,4,6, : 0,0,1,1,2,2,3,3,4,4,7, :

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

Number new nodes in level n is given by :  $1,1,2,4,6,4,9,5,14,6,20,$

-----Class

522-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[000][010][100][110][120][201]$

-----

--

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)  $0,0,2, -->0,0,1, --0,0, --0, --$

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)  $0,0,1,1,4, -->0,0,1, --0,0,1,1,3, --0,0, --0, --$

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)  $0,0,1,1,2,2,5, -->0,0,1,1,2, --0,0,1,1,2,2,4, --0,0,1,1, --0,0,1, --0,0,2, --$

R13)  $0,0,1,1,2,2,6, -->0,0,1, --0,0,1,1,3, --0,0,1,1,2,2,5, --0,0, --0, --$

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)

$0,0,1,1,2,2,3,3,4, -->0,0,1,1,2,2,3,3,4,4, --0,0,1,1,2,2,3,3,4, --0,0,1,1,2,2,3,3,5, --$

$0,0,1,1,2,2,3,3,6, --0,0,1,1,2,2,3,3,7, --0,0,1,1,2,2,3,3,8, --$

R16)

$0,0,1,1,2,2,3,3,5, -->0,0,1,1,2,2,3,3,4, --0,0,1,1,2,2,3,3, --0,0,1,1,2,2,3, --0,0,1,1,$

$2,2,4, --0,0,1,1,2,2,5, --0,0,1,1,2,2,6, --$

R17)

$0,0,1,1,2,2,3,3,6, -->0,0,1,1,2,2,3, --0,0,1,1,2,2,3,3,5, --0,0,1,1,2,2, --0,0,1,1,2, --$

$0,0,1,1,3, --0,0,1,1,4, --$

R18)

$0,0,1,1,2,2,3,3,7, -->0,0,1,1,2, --0,0,1,1,2,2,4, --0,0,1,1,2,2,3,3,6, --0,0,1,1, --0,0,$

$1, --0,0,2, --$

R19)

$0,0,1,1,2,2,3,3,8, -->0,0,1, --0,0,1,1,3, --0,0,1,1,2,2,5, --0,0,1,1,2,2,3,3,7, --0,0, --$

$0, --$

R20)

$0,0,1,1,2,2,3,3,4,4, -->0,0,1,1,2,2,3,3,4,4,5, --0,0,1,1,2,2,3,3,4,4,6, --0,0,1,1,2,2,$

3,3,4,4,7,--0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,  
--

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,:

LEN=11) 0,0,1,1,2,2,3,3,4,4,5,: 0,0,1,1,2,2,3,3,4,4,6,: 0,0,1,1,2,2,3,3,4,4,7,:

0,0,1,1,2,2,3,3,4,4,8,: 0,0,1,1,2,2,3,3,4,4,9,: 0,0,1,1,2,2,3,3,4,4,10,:

Number new nodes in level n is given by : 1,1,2,1,3,1,4,1,5,1,6,

-----Class

523-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][100][110][120][210]]$

-----  
--

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,--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,--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,--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,--0,0,1,1,3,--0,0,1,--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)

0,0,1,1,2,2,3,3,4,-->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,--0,0,1,1,  
2,2,4,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--

R17)

$0,0,1,1,2,2,3,3,6, \rightarrow 0,0,1,1,2,2,3,3,5, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2,2, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1,1,3, \rightarrow 0,0,1,1,4, \rightarrow$   
 R18)  
 $0,0,1,1,2,2,3,3,7, \rightarrow 0,0,1,1,2,2,3,3,6, \rightarrow 0,0,1,1,2,2,4, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1,1, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$   
 R19)  
 $0,0,1,1,2,2,3,3,8, \rightarrow 0,0,1,1,2,2,3,3,7, \rightarrow 0,0,1,1,2,2,5, \rightarrow 0,0,1,1,3, \rightarrow 0,0,1, \rightarrow 0,0, \rightarrow 0, \rightarrow$   
 R20)  
 $0,0,1,1,2,2,3,3,4,4, \rightarrow 0,0,1,1,2,2,3,3,4,4,5, \rightarrow 0,0,1,1,2,2,3,3,4,4,6, \rightarrow 0,0,1,1,2,2,3,3,4,4,7, \rightarrow 0,0,1,1,2,2,3,3,4,4,8, \rightarrow 0,0,1,1,2,2,3,3,4,4,9, \rightarrow 0,0,1,1,2,2,3,3,4,4,10, \rightarrow$   
 --

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, :  
 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, :  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5, : 0,0,1,1,2,2,3,3,4,4,6, : 0,0,1,1,2,2,3,3,4,4,7, :  
 0,0,1,1,2,2,3,3,4,4,8, : 0,0,1,1,2,2,3,3,4,4,9, : 0,0,1,1,2,2,3,3,4,4,10, :  
 Number new nodes in level n is given by : 1,1,2,1,3,1,4,1,5,1,6,

-----Class

524-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][100][110][201][210]]$

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)  $0,0,2, \rightarrow 0,0,1, \rightarrow 0,0, \rightarrow 0,0,2, \rightarrow$   
 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)  $0,0,1,1,2, \rightarrow 0,0,1,1,2,2, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1,1,3, \rightarrow 0,0,1,1,4, \rightarrow$   
 R7)  $0,0,1,1,3, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1,1, \rightarrow 0,0,1,1,3, \rightarrow 0,0,1,1,4, \rightarrow$   
 R8)  $0,0,1,1,4, \rightarrow 0,0,1, \rightarrow 0,0,1, \rightarrow 0,0, \rightarrow 0,0,1,1,4, \rightarrow$   
 R9)  $0,0,1,1,2,2, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2,2,4, \rightarrow 0,0,1,1,2,2,5, \rightarrow 0,0,1,1,2,2,6, \rightarrow$   
 R10)  
 $0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2,2,3,3, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2,2,4, \rightarrow 0,0,1,1,2,2,5, \rightarrow 0,0,1,1,2,2,6, \rightarrow$   
 R11)  
 $0,0,1,1,2,2,4, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2,2, \rightarrow 0,0,1,1,2,2,4, \rightarrow 0,0,1,1,2,2,5, \rightarrow 0,0,1,1,2,2,6, \rightarrow$   
 R12)

$0,0,1,1,2,2,5, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1,1, \rightarrow 0,0,1,1,2,2,5, \rightarrow 0,0,1,1,2,2,6, \rightarrow$   
R13)  $0,0,1,1,2,2,6, \rightarrow 0,0,1, \rightarrow 0,0,1, \rightarrow 0,0,1, \rightarrow 0,0, \rightarrow 0,0,1,1,2,2,6, \rightarrow$   
R14)  
 $0,0,1,1,2,2,3,3, \rightarrow 0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3,3,5, \rightarrow 0,0,1,1,2,2,3,3,6, \rightarrow 0,0,$   
 $1,1,2,2,3,3,7, \rightarrow 0,0,1,1,2,2,3,3,8, \rightarrow$   
R15)  
 $0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3,3,4,4, \rightarrow 0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3,3,5, \rightarrow$   
 $0,0,1,1,2,2,3,3,6, \rightarrow 0,0,1,1,2,2,3,3,7, \rightarrow 0,0,1,1,2,2,3,3,8, \rightarrow$   
R16)  
 $0,0,1,1,2,2,3,3,5, \rightarrow 0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3,3, \rightarrow 0,0,1,1,2,2,3,3,5, \rightarrow 0,0,$   
 $1,1,2,2,3,3,6, \rightarrow 0,0,1,1,2,2,3,3,7, \rightarrow 0,0,1,1,2,2,3,3,8, \rightarrow$   
R17)  
 $0,0,1,1,2,2,3,3,6, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2,2, \rightarrow 0,0,1,1,2,2,3,3,$   
 $6, \rightarrow 0,0,1,1,2,2,3,3,7, \rightarrow 0,0,1,1,2,2,3,3,8, \rightarrow$   
R18)  
 $0,0,1,1,2,2,3,3,7, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1,1, \rightarrow 0,0,1,1,2,2,3,3,$   
 $7, \rightarrow 0,0,1,1,2,2,3,3,8, \rightarrow$   
R19)  
 $0,0,1,1,2,2,3,3,8, \rightarrow 0,0,1, \rightarrow 0,0,1, \rightarrow 0,0,1, \rightarrow 0,0,1, \rightarrow 0,0, \rightarrow 0,0,1,1,2,2,3,3,8, \rightarrow$   
R20)  
 $0,0,1,1,2,2,3,3,4,4, \rightarrow 0,0,1,1,2,2,3,3,4,4,5, \rightarrow 0,0,1,1,2,2,3,3,4,4,6, \rightarrow 0,0,1,1,2,2,$   
 $3,3,4,4,7, \rightarrow 0,0,1,1,2,2,3,3,4,4,8, \rightarrow 0,0,1,1,2,2,3,3,4,4,9, \rightarrow 0,0,1,1,2,2,3,3,4,4,10,$   
--

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, :  
LEN=11) 0,0,1,1,2,2,3,3,4,4,5, : 0,0,1,1,2,2,3,3,4,4,6, : 0,0,1,1,2,2,3,3,4,4,7, :  
0,0,1,1,2,2,3,3,4,4,8, : 0,0,1,1,2,2,3,3,4,4,9, : 0,0,1,1,2,2,3,3,4,4,10, :  
Number new nodes in level n is given by : 1,1,2,1,3,1,4,1,5,1,6,

-----Class

525-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][100][120][201][210]]$

-----

--

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)  $0,0,2, \rightarrow 0,0,1, \rightarrow 0,0,1, \rightarrow 0, \rightarrow$   
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) 0,0,1,1,2,-->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,--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,--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,--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,--0,0,1,--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,--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,--0,0,1,1,--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,--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,--0,0,1,1,2,--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,--0,0,1,--0,0,1,--0,0,1,--0,0,1,1,2,2,3,3,8,8,--0,--  
R23)  
0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--0,0,1,1,2,2,3,3,4,4,6,--0,0,1,1,2,2,  
3,3,4,4,7,--0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,  
--  
R24)  
0,0,1,1,2,2,3,3,6,6,-->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,--  
R25)  
0,0,1,1,2,2,3,3,7,7,-->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,  
1,3,--0,0,1,1,4,--  
R26)  
0,0,1,1,2,2,3,3,8,8,-->0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,--0,0,2,--  
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, :



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,:  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5,: 0,0,1,1,2,2,3,3,4,4,6,: 0,0,1,1,2,2,3,3,4,4,7,:  
 0,0,1,1,2,2,3,3,4,4,8,: 0,0,1,1,2,2,3,3,4,4,9,: 0,0,1,1,2,2,3,3,4,4,10,:  
 Number new nodes in level n is given by : 1,1,2,1,3,2,4,3,5,4,6,

-----Class

526-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][101][102][110][120]]$

--  
 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,-->0,0,2,1,--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,-->0,0,2,1,1,--  
 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,-->0,0,2,1,--0,0,1,1,--0,0,1,--0,0,2,--  
 R9) 0,0,1,1,4,-->0,0,1,1,4,2,--0,0,1,1,4,3,--0,0,--0,--  
 R10) 0,0,2,1,1,-->  
 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) 0,0,1,1,4,2,-->0,0,1,1,4,2,2,--0,0,2,1,--  
 R13) 0,0,1,1,4,3,-->0,0,2,1,--0,0,2,1,1,--  
 R14)  
 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--  
 0,0,1,1,2,2,6,--  
 R15) 0,0,1,1,2,2,4,-->0,0,2,1,--0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--  
 R16) 0,0,1,1,2,2,5,-->0,0,1,1,4,2,--0,0,1,1,4,3,--0,0,1,1,--0,0,1,--0,0,2,--  
 R17)  
 0,0,1,1,2,2,6,-->0,0,1,1,2,2,6,3,--0,0,1,1,2,2,6,4,--0,0,1,1,2,2,6,5,--0,0,--0,--  
 R18) 0,0,1,1,4,2,2,-->0,0,2,1,--  
 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) 0,0,1,1,2,2,6,3,-->0,0,1,1,2,2,6,3,3,--0,0,1,1,4,2,--0,0,1,1,4,3,--  
 R21) 0,0,1,1,2,2,6,4,-->0,0,2,1,--0,0,1,1,4,2,2,--0,0,2,1,--  
 R22) 0,0,1,1,2,2,6,5,-->0,0,1,1,4,2,--0,0,1,1,4,3,--0,0,2,1,1,--  
 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,--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)

0,0,1,1,2,2,3,3,5,-->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,--

R25)

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,--0,0,1,1,  
3,--0,0,1,1,4,--

R26)

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,--0,0,2,--

R27)

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,--

R28) 0,0,1,1,2,2,6,3,3,-->0,0,1,1,4,2,--0,0,1,1,4,3,--

R29)

0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--0,0,1,1,2,2,3,3,4,4,6,--0,0,1,1,2,2,  
3,3,4,4,7,--0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,  
--

R30)

0,0,1,1,2,2,3,3,8,4,-->0,0,1,1,2,2,3,3,8,4,4,--0,0,1,1,2,2,6,3,--0,0,1,1,2,2,6,4,--  
0,0,1,1,2,2,6,5,--

R31)

0,0,1,1,2,2,3,3,8,5,-->0,0,2,1,--0,0,1,1,2,2,6,3,3,--0,0,1,1,4,2,--0,0,1,1,4,3,--

R32) 0,0,1,1,2,2,3,3,8,6,-->0,0,1,1,4,2,--0,0,1,1,4,3,--0,0,1,1,4,2,2,--0,0,2,1,--

R33)

0,0,1,1,2,2,3,3,8,7,-->0,0,1,1,2,2,6,3,--0,0,1,1,2,2,6,4,--0,0,1,1,2,2,6,5,--0,0,2,  
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,:

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,: 0,0,1,1,4,2,: 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,:

LEN=11) 0,0,1,1,2,2,3,3,4,4,5,: 0,0,1,1,2,2,3,3,4,4,6,: 0,0,1,1,2,2,3,3,4,4,7,:

0,0,1,1,2,2,3,3,4,4,8,: 0,0,1,1,2,2,3,3,4,4,9,: 0,0,1,1,2,2,3,3,4,4,10,:

0,0,1,1,2,2,3,3,8,4,4,:

Number new nodes in level n is given by : 1,1,2,2,4,3,5,4,6,5,7,

-----Class

527-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][010][101][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, --  
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, -->0,0,2,1, --0,0,1,1, --0,0,1,1,3, --0,0,1,1,4, --  
R9) 0,0,1,1,4, -->0,0,2,1, --0,0,1,1,4,3, --0,0, --0,0,1,1,4, --  
R10) 0,0,2,1,1, -->  
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) 0,0,1,1,4,3, -->0,0,2,1, --0,0,2,1,1, --  
R13)  
0,0,1,1,2,2,3, -->0,0,1,1,2,2,3,3, --0,0,1,1,2,2,3, --0,0,1,1,2,2,4, --0,0,1,1,2,2,5, --  
0,0,1,1,2,2,6, --  
R14)  
0,0,1,1,2,2,4, -->0,0,2,1, --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, --  
R15)  
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, --0,0,1,1,2,2,6, --  
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, --0,0,1,1,2,2,6, --  
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) 0,0,1,1,2,2,6,5, -->0,0,2,1, --0,0,1,1,4,3, --0,0,2,1,1, --  
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, --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, -->0,0,2,1, --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, --  
R21)  
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, --0,0,  
1,1,2,2,3,3,7, --0,0,1,1,2,2,3,3,8, --  
R22)  
0,0,1,1,2,2,3,3,7, -->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, --0,0,1,1,2,2,3,3,8, --  
R23)  
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, --  
R24)  
0,0,1,1,2,2,3,3,4,4, -->0,0,1,1,2,2,3,3,4,4,5, --0,0,1,1,2,2,3,3,4,4,6, --0,0,1,1,2,2,  
3,3,4,4,7, --0,0,1,1,2,2,3,3,4,4,8, --0,0,1,1,2,2,3,3,4,4,9, --0,0,1,1,2,2,3,3,4,4,10,  
--  
R25) 0,0,1,1,2,2,3,3,8,7, -->0,0,2,1, --0,0,1,1,4,3, --0,0,1,1,2,2,6,5, --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,:  
 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,: 0,0,1,1,4,3,:  
 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,: 0,0,1,1,2,2,6,5,:  
 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,: 0,0,1,1,2,2,3,3,8,7,:  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5,: 0,0,1,1,2,2,3,3,4,4,6,: 0,0,1,1,2,2,3,3,4,4,7,:  
 0,0,1,1,2,2,3,3,4,4,8,: 0,0,1,1,2,2,3,3,4,4,9,: 0,0,1,1,2,2,3,3,4,4,10,:  
 Number new nodes in level n is given by : 1,1,2,2,4,2,4,2,5,2,6,

-----Class

528-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][101][102][110][210]]$

-----  
 --  
 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,--  
 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,-->0,0,2,1,--0,0,1,1,--0,0,1,1,3,--0,0,1,1,3,5,--  
 R9) 0,0,1,1,4,-->0,0,1,1,4,2,--0,0,2,1,--0,0,--0,0,1,1,4,--  
 R10) 0,0,2,1,1,-->  
 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) 0,0,1,1,3,5,-->0,0,2,1,--0,0,2,1,--0,0,--0,0,1,1,3,5,--  
 R13) 0,0,1,1,4,2,-->0,0,1,1,4,2,2,--0,0,2,1,--  
 R14)  
 0,0,1,1,2,2,3,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,--0,0,1,1,2,2,4,--0,0,1,1,2,2,5,--  
 0,0,1,1,2,2,6,--  
 R15)  
 0,0,1,1,2,2,4,-->0,0,2,1,--0,0,1,1,2,2,--0,0,1,1,2,2,4,--0,0,1,1,2,2,4,6,--0,0,1,1,  
 2,2,4,7,--  
 R16)  
 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,--0,0,1,1,2,2,5,7,  
 --  
 R17)  
 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,--  
 R18) 0,0,1,1,4,2,2,-->0,0,2,1,--  
 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)  
 0,0,1,1,2,2,4,6,-->0,0,2,1,--0,0,2,1,--0,0,1,1,--0,0,1,1,2,2,4,6,--0,0,1,1,2,2,4,6,

8, --

R21) 0,0,1,1,2,2,4,7, -->0,0,2,1, --0,0,1,1,4,2, --0,0,2,1, --0,0, --0,0,1,1,2,2,4,7, --

R22) 0,0,1,1,2,2,5,7, -->0,0,1,1,4,2, --0,0,2,1, --0,0,2,1, --0,0, --0,0,1,1,2,2,5,7, --

R23) 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, --

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, -->0,0,2,1, --0,0,1,1,2,2,3,3, --0,0,1,1,2,2,3,3,5, --0,0,1,1,2,2,3,

3,5,7, --0,0,1,1,2,2,3,3,5,8, --0,0,1,1,2,2,3,3,5,9, --

R26)

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, --0,0,

1,1,2,2,3,3,6,8, --0,0,1,1,2,2,3,3,6,9, --

R27)

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, --0,0,1,1,2,2,3,3,7,9, --

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, --0,0,2,1,

--0,0, --0,0,1,1,2,2,3,3,8, --

R29) 0,0,1,1,2,2,4,6,8, -->0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0, --0,0,1,1,2,2,4,6,8, --

R30) 0,0,1,1,2,2,6,3,3, -->0,0,1,1,4,2, --0,0,2,1, --

R31)

0,0,1,1,2,2,3,3,4,4, -->0,0,1,1,2,2,3,3,4,4,5, --0,0,1,1,2,2,3,3,4,4,6, --0,0,1,1,2,2,

3,3,4,4,7, --0,0,1,1,2,2,3,3,4,4,8, --0,0,1,1,2,2,3,3,4,4,9, --0,0,1,1,2,2,3,3,4,4,10,

--

R32)

0,0,1,1,2,2,3,3,5,7, -->0,0,2,1, --0,0,2,1, --0,0,1,1,2,2, --0,0,1,1,2,2,3,3,5,7, --0,0,

1,1,2,2,3,3,5,7,9, --0,0,1,1,2,2,3,3,5,7,10, --

R33)

0,0,1,1,2,2,3,3,5,8, -->0,0,2,1, --0,0,1,1,4,2, --0,0,2,1, --0,0,1,1, --0,0,1,1,2,2,3,3,

5,8, --0,0,1,1,2,2,3,3,5,8,10, --

R34)

0,0,1,1,2,2,3,3,5,9, -->0,0,2,1, --0,0,1,1,2,2,6,3, --0,0,1,1,4,2, --0,0,2,1, --0,0, --0,

0,1,1,2,2,3,3,5,9, --

R35)

0,0,1,1,2,2,3,3,6,8, -->0,0,1,1,4,2, --0,0,2,1, --0,0,2,1, --0,0,1,1, --0,0,1,1,2,2,3,3,

6,8, --0,0,1,1,2,2,3,3,6,8,10, --

R36)

0,0,1,1,2,2,3,3,6,9, -->0,0,1,1,4,2, --0,0,2,1, --0,0,1,1,4,2, --0,0,2,1, --0,0, --0,0,1,

1,2,2,3,3,6,9, --

R37)

0,0,1,1,2,2,3,3,7,9, -->0,0,1,1,2,2,6,3, --0,0,1,1,4,2, --0,0,2,1, --0,0,2,1, --0,0, --0,

0,1,1,2,2,3,3,7,9, --

R38)

0,0,1,1,2,2,3,3,8,4, -->0,0,1,1,2,2,3,3,8,4,4, --0,0,1,1,2,2,6,3, --0,0,1,1,4,2, --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,:  
 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,:  
 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,:  
 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,: 0,0,1,1,2,2,6,3,3,:  
 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,:  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5,: 0,0,1,1,2,2,3,3,4,4,6,: 0,0,1,1,2,2,3,3,4,4,7,:  
 0,0,1,1,2,2,3,3,4,4,8,: 0,0,1,1,2,2,3,3,4,4,9,: 0,0,1,1,2,2,3,3,4,4,10,:  
 0,0,1,1,2,2,3,3,5,7,9,: 0,0,1,1,2,2,3,3,5,7,10,: 0,0,1,1,2,2,3,3,5,8,10,:  
 0,0,1,1,2,2,3,3,6,8,10,: 0,0,1,1,2,2,3,3,8,4,4,:  
 Number new nodes in level n is given by : 1,1,2,2,4,3,5,5,7,8,11,

-----Class

529-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][101][102][120][201]]$

-----

--

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

R24) 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,--

R25) 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,--

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,--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)

0,0,1,1,2,2,3,3,5,-->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,--

R28)

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,--

R29)

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,--

R30)

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,--

R31) 0,0,1,1,2,2,6,5,5,-->0,0,2,1,--0,0,1,1,4,3,--

R32)

0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--0,0,1,1,2,2,3,3,4,4,6,--0,0,1,1,2,2,3,3,4,4,7,--0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,--

R33)

0,0,1,1,2,2,3,3,5,5,-->0,0,2,1,--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,--

R34)

0,0,1,1,2,2,3,3,6,6,-->0,0,2,1,--0,0,1,1,4,3,--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,--

R35)

0,0,1,1,2,2,3,3,7,7,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,6,5,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--

R36)

0,0,1,1,2,2,3,3,8,7,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,2,2,6,5,--0,0,1,1,2,2,3,3,8,7,7,--

R37)

0,0,1,1,2,2,3,3,8,8,-->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,--0,0,2,--

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, : 0,0,2,2, :

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, :  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5, : 0,0,1,1,2,2,3,3,4,4,6, : 0,0,1,1,2,2,3,3,4,4,7, :  
 0,0,1,1,2,2,3,3,4,4,8, : 0,0,1,1,2,2,3,3,4,4,9, : 0,0,1,1,2,2,3,3,4,4,10, :  
 0,0,1,1,2,2,3,3,8,7,7, :  
 Number new nodes in level n is given by : 1,1,2,3,4,4,5,5,6,6,7,

-----Class

530-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][101][102][120][210]]$

-----  
--

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, -->0,0,2,1, --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, --0,0,2,1, --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) 0,0,1,1,4,4, -->0,0,1,1,4,2, --0,0,2,1, --0,0,1, --0,0,2, --
- 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, --0,0,1,1,3, --0,0,1,1,4, --
- R18) 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, --0,0,2, --
- R19) 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, --
- R20) 0,0,1,1,4,2,2, -->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, --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,-->0,0,1,1,4,2,--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,-->0,0,1,1,2,2,6,3,3,--0,0,1,1,4,2,--0,0,2,1,--  
 R25) 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,--  
 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,--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) 0,0,1,1,2,2,3,3,5,-->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,--  
 R28) 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,--0,0,1,1,3,--0,0,1,1,4,--  
 R29) 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,--  
 R30) 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,--  
 R31) 0,0,1,1,2,2,6,3,3,-->0,0,1,1,4,2,--0,0,2,1,--  
 R32) 0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--0,0,1,1,2,2,3,3,4,4,6,--0,0,1,1,2,2,3,3,4,4,7,--  
 0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,--  
 --  
 R33) 0,0,1,1,2,2,3,3,5,5,-->0,0,2,1,--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,--  
 R34) 0,0,1,1,2,2,3,3,6,6,-->0,0,1,1,4,2,--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,--  
 R35) 0,0,1,1,2,2,3,3,7,7,-->0,0,1,1,2,2,6,3,--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,--  
 R36) 0,0,1,1,2,2,3,3,8,4,-->0,0,1,1,2,2,3,3,8,4,4,--0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,2,1,--  
 --  
 R37) 0,0,1,1,2,2,3,3,8,8,-->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,--0,0,2,--  
 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, : 0,0,2,2, :  
 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, : 0,0,1,1,4,4, :  
 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, :

0,0,1,1,2,2,6,6,:  
 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,:  
 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,:  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5,: 0,0,1,1,2,2,3,3,4,4,6,: 0,0,1,1,2,2,3,3,4,4,7,:  
 0,0,1,1,2,2,3,3,4,4,8,: 0,0,1,1,2,2,3,3,4,4,9,: 0,0,1,1,2,2,3,3,4,4,10,:  
 0,0,1,1,2,2,3,3,8,4,4,:  
 Number new nodes in level n is given by : 1,1,2,3,4,4,5,5,6,6,7,

-----Class

531-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][101][102][201][210]]$

-----

--

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,--
- 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,--0,0,2,1,--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) 0,0,1,1,4,4,-->0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,5,--0,0,1,1,2,2,6,--
- 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,-->0,0,2,1,--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,--
- R17)
- 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,--0,0,1,1,2,2,
- 6,--
- 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,--0,0,1,1,2,2,6,--
- 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,-->0,0,2,1,--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,--
- R21)
- 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,--  
 R22)  
 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,--  
 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,--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)  
 0,0,1,1,2,2,3,3,5,-->0,0,2,1,--0,0,1,1,2,2,3,3,5,5,--0,0,1,1,2,2,3,3,5,--0,0,1,1,2,2,3,3,6,--  
 0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--  
 R25)  
 0,0,1,1,2,2,3,3,6,-->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,--  
 0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--  
 R26)  
 0,0,1,1,2,2,3,3,7,-->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,--  
 0,0,1,1,2,2,3,3,8,--  
 R27)  
 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,--  
 R28)  
 0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--0,0,1,1,2,2,3,3,4,4,6,--0,0,1,1,2,2,3,3,4,4,7,--  
 0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,--  
 --  
 R29)  
 0,0,1,1,2,2,3,3,5,5,-->0,0,2,1,--0,0,1,1,2,2,3,3,4,4,6,--0,0,1,1,2,2,3,3,4,4,7,--0,0,1,1,2,2,3,3,4,4,8,--  
 0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,--  
 R30)  
 0,0,1,1,2,2,3,3,6,6,-->0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,3,3,4,4,7,--0,0,1,1,2,2,3,3,4,4,8,--  
 0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,--  
 R31)  
 0,0,1,1,2,2,3,3,7,7,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--  
 0,0,1,1,2,2,3,3,4,4,10,--  
 R32)  
 0,0,1,1,2,2,3,3,8,8,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,3,3,4,4,9,--  
 0,0,1,1,2,2,3,3,4,4,10,--  
 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, : 0,0,1,1,4,4, :  
 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, :  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5, : 0,0,1,1,2,2,3,3,4,4,6, : 0,0,1,1,2,2,3,3,4,4,7, :  
 0,0,1,1,2,2,3,3,4,4,8, : 0,0,1,1,2,2,3,3,4,4,9, : 0,0,1,1,2,2,3,3,4,4,10, :

Number new nodes in level n is given by : 1,1,2,3,4,3,4,4,5,5,6,

-----Class

532-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][101][110][120][201]]$

-----

--

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

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

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

R8)  $0,0,1,1,4, \rightarrow 0,0,1, \rightarrow 0,0,1,1,3, \rightarrow 0,0, \rightarrow 0, \rightarrow$

R9)  $0,0,1,1,2,2, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2,2,4, \rightarrow 0,0,1,1,2,2,5, \rightarrow 0,0,1,1,2,2,6, \rightarrow$

R10)

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

$0,0,1,1,2,2,6, \rightarrow$

R11)

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

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

R13)  $0,0,1,1,2,2,6, \rightarrow 0,0,1, \rightarrow 0,0,1,1,3, \rightarrow 0,0,1,1,2,2,5, \rightarrow 0,0, \rightarrow 0, \rightarrow$

R14)

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

$1,1,2,2,3,3,7, \rightarrow 0,0,1,1,2,2,3,3,8, \rightarrow$

R15)

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

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

R16)

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

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

R17)

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

$0,0,1,1,3, \rightarrow 0,0,1,1,4, \rightarrow$

R18)

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

$1, \rightarrow 0,0,2, \rightarrow$

R19)

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

$0, \rightarrow$

R20)

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

$3,3,4,4,7, \rightarrow 0,0,1,1,2,2,3,3,4,4,8, \rightarrow 0,0,1,1,2,2,3,3,4,4,9, \rightarrow 0,0,1,1,2,2,3,3,4,4,10, \rightarrow$

--

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,:  
 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,:  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5,: 0,0,1,1,2,2,3,3,4,4,6,: 0,0,1,1,2,2,3,3,4,4,7,:  
 0,0,1,1,2,2,3,3,4,4,8,: 0,0,1,1,2,2,3,3,4,4,9,: 0,0,1,1,2,2,3,3,4,4,10,:  
 Number new nodes in level n is given by : 1,1,2,1,3,1,4,1,5,1,6,

-----Class

533-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][101][110][120][210]]$

-----

--

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,--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,--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,--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,--0,0,1,1,4,2,--0,0,1,--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,--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,-->0,0,1,1,2,2,3,3,4,--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)  
0,0,1,1,2,2,3,3,6,-->0,0,1,1,2,2,3,3,6,4,--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,--  
R22)  
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,--0,0,1,1,2,--0,0,1,1,--  
0,0,1,--0,0,2,--  
R23)  
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,--0,--  
R24)  
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,--  
R25)  
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,--0,0,1,1,2,--0,0,1,1,3,--  
0,0,1,1,4,--  
R26)  
0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--0,0,1,1,2,2,3,3,4,4,6,--0,0,1,1,2,2,  
3,3,4,4,7,--0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,  
--  
R27)  
0,0,1,1,2,2,3,3,6,4,-->0,0,1,1,2,2,3,3,6,4,4,--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,--  
R28)  
0,0,1,1,2,2,3,3,7,4,-->0,0,1,1,2,2,3,3,7,4,4,--0,0,1,1,2,2,3,3,6,4,--0,0,1,1,2,2,3,  
--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--  
R29)  
0,0,1,1,2,2,3,3,8,4,-->0,0,1,1,2,2,3,3,8,4,4,--0,0,1,1,2,2,3,3,7,4,--0,0,1,1,2,2,5,  
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, :  
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, :  
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, :  
0,0,1,1,2,2,3,3,8,4, :  
LEN=11) 0,0,1,1,2,2,3,3,4,4,5, : 0,0,1,1,2,2,3,3,4,4,6, : 0,0,1,1,2,2,3,3,4,4,7, :  
0,0,1,1,2,2,3,3,4,4,8, : 0,0,1,1,2,2,3,3,4,4,9, : 0,0,1,1,2,2,3,3,4,4,10, :  
0,0,1,1,2,2,3,3,6,4,4, : 0,0,1,1,2,2,3,3,7,4,4, : 0,0,1,1,2,2,3,3,8,4,4, :  
Number new nodes in level n is given by : 1,1,2,1,3,2,5,3,7,4,9,

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][101][110][201][210]]$

--

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)  $0,0,2, -->0,0,1, --0,0, --0,0,2, --$

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)  $0,0,1,1,4, -->0,0,1, --0,0,1, --0,0, --0,0,1,1,4, --$

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)

$0,0,1,1,2,2,5, -->0,0,1,1,2, --0,0,1,1,2, --0,0,1,1, --0,0,1,1,2,2,5, --0,0,1,1,2,2,6, --$

R13)  $0,0,1,1,2,2,6, -->0,0,1, --0,0,1, --0,0,1, --0,0, --0,0,1,1,2,2,6, --$

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)

$0,0,1,1,2,2,3,3,6, -->0,0,1,1,2,2,3, --0,0,1,1,2,2,3, --0,0,1,1,2,2, --0,0,1,1,2,2,3,3,$

$6, --0,0,1,1,2,2,3,3,7, --0,0,1,1,2,2,3,3,8, --$

R18)

$0,0,1,1,2,2,3,3,7, -->0,0,1,1,2, --0,0,1,1,2, --0,0,1,1,2, --0,0,1,1, --0,0,1,1,2,2,3,3,$

$7, --0,0,1,1,2,2,3,3,8, --$

R19)

$0,0,1,1,2,2,3,3,8, -->0,0,1, --0,0,1, --0,0,1, --0,0,1, --0,0, --0,0,1,1,2,2,3,3,8, --$

R20)

$0,0,1,1,2,2,3,3,4,4, -->0,0,1,1,2,2,3,3,4,4,5, --0,0,1,1,2,2,3,3,4,4,6, --0,0,1,1,2,2,$

$3,3,4,4,7, --0,0,1,1,2,2,3,3,4,4,8, --0,0,1,1,2,2,3,3,4,4,9, --0,0,1,1,2,2,3,3,4,4,10,$

--

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,:  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5,: 0,0,1,1,2,2,3,3,4,4,6,: 0,0,1,1,2,2,3,3,4,4,7,:  
 0,0,1,1,2,2,3,3,4,4,8,: 0,0,1,1,2,2,3,3,4,4,9,: 0,0,1,1,2,2,3,3,4,4,10,:  
 Number new nodes in level n is given by : 1,1,2,1,3,1,4,1,5,1,6,

-----Class

535-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][101][120][201][210]]$

-----

--

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,-->0,0,1,--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,--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,--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,--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,--0,0,1,--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,--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,--0,0,1,1,2,--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) 0,0,1,1,2,2,3,3,6,-->0,0,1,1,2,2,3,3,7,--0,0,1,1,2,2,3,3,8,--



0,0,1,1,2,2,3,3,5,-->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,--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,--0,0,1,1,2,--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,--0,0,1,--0,0,1,--0,0,1,1,2,2,3,3,8,8,--0,--

R26)

0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--0,0,1,1,2,2,3,3,4,4,6,--0,0,1,1,2,2,3,3,4,4,7,--0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,--

R27)

0,0,1,1,2,2,3,3,5,5,-->0,0,1,1,2,2,3,3,4,4,5,--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)

0,0,1,1,2,2,3,3,6,6,-->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,--

R29)

0,0,1,1,2,2,3,3,7,7,-->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,--0,0,1,1,3,--0,0,1,1,4,--

R30)

0,0,1,1,2,2,3,3,8,8,-->0,0,1,1,2,--0,0,1,1,2,--0,0,1,1,2,--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,:

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,:

LEN=11) 0,0,1,1,2,2,3,3,4,4,5,: 0,0,1,1,2,2,3,3,4,4,6,: 0,0,1,1,2,2,3,3,4,4,7,:

0,0,1,1,2,2,3,3,4,4,8,: 0,0,1,1,2,2,3,3,4,4,9,: 0,0,1,1,2,2,3,3,4,4,10,:

Number new nodes in level n is given by : 1,1,2,2,3,3,4,4,5,5,6,

-----Class

536-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][010][102][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,-->0,0,2,1,1,--0,0,2,1,2,--  
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,-->0,0,2,1,--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) 0,0,2,1,1,-->0,0,2,1,2,--  
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) 0,0,1,1,4,3,-->0,0,2,1,1,--0,0,2,1,1,--0,0,2,1,2,--  
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,-->0,0,2,1,--0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--  
R16) 0,0,1,1,2,2,5,-->0,0,2,1,--0,0,1,1,4,3,--0,0,1,1,--0,0,1,--0,0,2,--  
R17) 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,--  
R18)  
0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,3,5,--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) 0,0,1,1,2,2,6,5,-->0,0,2,1,1,--0,0,2,1,--0,0,2,1,1,--0,0,2,1,2,--  
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,-->0,0,2,1,--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,--  
R22)  
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,--0,0,1,1,3,--  
0,0,1,1,4,--  
R23)  
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,--0,  
0,2,--  
R24)  
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,--  
R25)  
0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--0,0,1,1,2,2,3,3,4,4,6,--0,0,1,1,2,2,  
3,3,4,4,7,--0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,  
--  
R26)  
0,0,1,1,2,2,3,3,8,7,-->0,0,2,1,1,--0,0,2,1,--0,0,1,1,2,2,3,3,8,7,6,--0,0,2,1,1,--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, :

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,: 0,0,1,1,4,3,:  
 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,: 0,0,1,1,2,2,6,5,:  
 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,: 0,0,1,1,2,2,3,3,8,7,:  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5,: 0,0,1,1,2,2,3,3,4,4,6,: 0,0,1,1,2,2,3,3,4,4,7,:  
 0,0,1,1,2,2,3,3,4,4,8,: 0,0,1,1,2,2,3,3,4,4,9,: 0,0,1,1,2,2,3,3,4,4,10,:  
 0,0,1,1,2,2,3,3,8,7,6,:  
 Number new nodes in level n is given by : 1,1,2,2,5,2,4,2,5,2,7,

-----Class

537-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][102][110][120][210]]$

-----  
--

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,-->0,0,2,1,--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,-->0,0,2,1,1,--0,0,2,1,2,--
- 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,-->0,0,2,1,--0,0,1,1,--0,0,1,--0,0,2,--
- R9) 0,0,1,1,4,-->0,0,1,1,4,2,--0,0,2,1,--0,0,--0,--
- R10) 0,0,2,1,1,-->0,0,2,1,2,--
- 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) 0,0,1,1,4,2,-->0,0,1,1,4,2,2,--0,0,2,1,--0,0,2,1,2,--
- 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,-->0,0,2,1,--0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--
- R16) 0,0,1,1,2,2,5,-->0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,--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,--0,0,2,1,--0,0,--0,--
- R18) 0,0,1,1,4,2,2,-->0,0,2,1,--0,0,2,1,2,--
- 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) 0,0,1,1,2,2,6,3,-->0,0,1,1,2,2,6,3,3,--0,0,1,1,4,2,--0,0,2,1,--0,0,2,1,2,--
- 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,-->0,0,2,1,--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,--
- R23)

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,--0,0,1,1,3,--  
0,0,1,1,4,--

R24)

0,0,1,1,2,2,3,3,7,-->0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--0,0,2,1,--0,0,1,1,--0,0,1,--0,  
0,2,--

R25)

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,--

R26) 0,0,1,1,2,2,6,3,3,-->0,0,1,1,4,2,--0,0,2,1,--0,0,2,1,2,--

R27)

0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--0,0,1,1,2,2,3,3,4,4,6,--0,0,1,1,2,2,  
3,3,4,4,7,--0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,  
--

R28)

0,0,1,1,2,2,3,3,8,4,-->0,0,1,1,2,2,3,3,8,4,4,--0,0,1,1,2,2,6,3,--0,0,1,1,4,2,--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, :

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, :

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, :

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, :

LEN=11) 0,0,1,1,2,2,3,3,4,4,5, : 0,0,1,1,2,2,3,3,4,4,6, : 0,0,1,1,2,2,3,3,4,4,7, :

0,0,1,1,2,2,3,3,4,4,8, : 0,0,1,1,2,2,3,3,4,4,9, : 0,0,1,1,2,2,3,3,4,4,10, :

0,0,1,1,2,2,3,3,8,4,4, :

Number new nodes in level n is given by : 1,1,2,2,5,2,5,2,6,2,7,

-----Class

538-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][102][110][201][210]]$

-----

--

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,--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,--0,0,2,1,--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,--0,0,1,1,4,5,--  
R16) 0,0,1,1,4,5,-->0,0,2,1,1,--0,0,2,1,1,--0,0,--0,0,1,1,4,5,--  
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,--0,0,1,1,2,2,4,5,--0,0,1,1,2,2,4,6,--0,0,1,  
1,2,2,4,7,--  
R19)  
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,--  
R20) 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,--  
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)  
0,0,1,1,2,2,4,5,-->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,--  
R23)  
0,0,1,1,2,2,4,6,-->0,0,2,1,1,--0,0,2,1,--0,0,1,1,--0,0,1,1,2,2,5,6,--0,0,1,1,2,2,5,  
7,--  
R24) 0,0,1,1,2,2,4,7,-->0,0,2,1,1,--0,0,2,1,--0,0,2,1,--0,0,--0,0,1,1,2,2,6,7,--  
R25)  
0,0,1,1,2,2,5,6,-->0,0,2,1,1,--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,--  
R26) 0,0,1,1,2,2,5,7,-->0,0,2,1,1,--0,0,2,1,1,--0,0,2,1,--0,0,--0,0,1,1,2,2,6,7,--  
R27)  
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,--0,0,1,1,2,2,6,7,--  
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,--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,--  
R30)  
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,--  
R31)  
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,--  
R32)  
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,--  
R33)  
0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--0,0,1,1,2,2,3,3,4,4,6,--0,0,1,1,2,2,  
3,3,4,4,7,--0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,

--

R34)

0,0,1,1,2,2,3,3,5,6,-->0,0,2,1,1,--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)

0,0,1,1,2,2,3,3,5,7,-->0,0,2,1,1,--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,--

R36)

0,0,1,1,2,2,3,3,5,8,-->0,0,2,1,1,--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,--

R37)

0,0,1,1,2,2,3,3,5,9,-->0,0,2,1,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,--0,0,1,1,2,2,3,3,8,9,--

R38)

0,0,1,1,2,2,3,3,6,7,-->0,0,2,1,1,--0,0,2,1,1,--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,--

R39)

0,0,1,1,2,2,3,3,6,8,-->0,0,2,1,1,--0,0,2,1,1,--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,--

R40)

0,0,1,1,2,2,3,3,6,9,-->0,0,2,1,1,--0,0,2,1,1,--0,0,2,1,--0,0,2,1,--0,0,--0,0,1,1,2,2,3,3,8,9,--

R41)

0,0,1,1,2,2,3,3,7,8,-->0,0,2,1,1,--0,0,2,1,1,--0,0,2,1,1,--0,0,1,1,--0,0,1,1,2,2,3,3,7,8,--0,0,1,1,2,2,3,3,7,9,--

R42)

0,0,1,1,2,2,3,3,7,9,-->0,0,2,1,1,--0,0,2,1,1,--0,0,2,1,1,--0,0,2,1,--0,0,--0,0,1,1,2,2,3,3,8,9,--

R43)

0,0,1,1,2,2,3,3,8,9,-->0,0,2,1,1,--0,0,2,1,1,--0,0,2,1,1,--0,0,2,1,1,--0,0,--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, : 0,0,2,3, :

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, : 0,0,1,1,4,5, :

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, : 0,0,1,1,2,2,6,7, :

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, : 0,0,1,1,2,2,3,3,5,6, : 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, :

LEN=11) 0,0,1,1,2,2,3,3,4,4,5, : 0,0,1,1,2,2,3,3,4,4,6, : 0,0,1,1,2,2,3,3,4,4,7, : 0,0,1,1,2,2,3,3,4,4,8, : 0,0,1,1,2,2,3,3,4,4,9, : 0,0,1,1,2,2,3,3,4,4,10, :

Number new nodes in level n is given by : 1,1,2,3,5,4,4,7,5,11,6,

-----Class

539-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][102][120][201][210]]$

-----

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

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

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

R8)  $0, 0, 1, 1, 2, \rightarrow 0, 0, 1, 1, 2, 2, \rightarrow 0, 0, 1, 1, 2, \rightarrow 0, 0, 1, 1, 3, \rightarrow 0, 0, 1, 1, 4, \rightarrow$

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

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

R11)  $0, 0, 2, 1, 1, \rightarrow 0, 0, 2, 1, 2, \rightarrow$

R12)  $0, 0, 2, 1, 2, \rightarrow$

R13)

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

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

R15)  $0, 0, 1, 1, 4, 4, \rightarrow 0, 0, 2, 1, 1, \rightarrow 0, 0, 2, 1, 1, \rightarrow 0, 0, 1, \rightarrow 0, 0, 2, \rightarrow$

R16)

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

R17)

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

R18)  $0, 0, 1, 1, 2, 2, 5, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 1, 1, 2, 2, 5, 5, \rightarrow 0, 0, 1, \rightarrow 0, 0, 2, \rightarrow$

R19)  $0, 0, 1, 1, 2, 2, 6, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 1, 1, 2, 2, 6, 6, \rightarrow 0, \rightarrow$

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)

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

R22)

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

R23)  $0, 0, 1, 1, 2, 2, 6, 6, \rightarrow 0, 0, 2, 1, 1, \rightarrow 0, 0, 2, 1, 1, \rightarrow 0, 0, 2, 1, 1, \rightarrow 0, 0, 1, \rightarrow 0, 0, 2, \rightarrow$

R24)

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

R25)

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

R26)

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

R27)

$0, 0, 1, 1, 2, 2, 3, 3, 7, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 7, 7, \rightarrow 0, 0, 1, \rightarrow 0,$

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,--  
R29)  
0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--0,0,1,1,2,2,3,3,4,4,6,--0,0,1,1,2,2,  
3,3,4,4,7,--0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,  
--  
R30)  
0,0,1,1,2,2,3,3,5,5,-->0,0,2,1,1,--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,--  
R31)  
0,0,1,1,2,2,3,3,6,6,-->0,0,2,1,1,--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,--  
R32)  
0,0,1,1,2,2,3,3,7,7,-->0,0,2,1,1,--0,0,2,1,1,--0,0,2,1,1,--0,0,1,1,2,--0,0,1,1,3,--  
0,0,1,1,4,--  
R33)  
0,0,1,1,2,2,3,3,8,8,-->0,0,2,1,1,--0,0,2,1,1,--0,0,2,1,1,--0,0,2,1,1,--0,0,1,--0,0,  
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, : 0,0,2,2, :  
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, : 0,0,1,1,4,4, :  
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, :  
LEN=11) 0,0,1,1,2,2,3,3,4,4,5, : 0,0,1,1,2,2,3,3,4,4,6, : 0,0,1,1,2,2,3,3,4,4,7, :  
0,0,1,1,2,2,3,3,4,4,8, : 0,0,1,1,2,2,3,3,4,4,9, : 0,0,1,1,2,2,3,3,4,4,10, :  
Number new nodes in level n is given by : 1,1,2,3,5,3,4,4,5,5,6,

-----Class

540-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][010][110][120][201][210]]$

-----

--

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,--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,--0,0,2,1,--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)  
0,0,1,1,2,2,3,-->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,-->0,0,1,1,2,2,4,3,--0,0,1,1,2,2,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,  
--  
R14) 0,0,1,1,2,2,5,-->0,0,1,1,3,2,--0,0,1,1,3,2,--0,0,1,1,--0,0,1,--0,0,2,--  
R15) 0,0,1,1,2,2,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,--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)  
0,0,1,1,2,2,4,3,-->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,--  
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,-->0,0,1,1,2,2,3,3,5,4,--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,--  
R20)  
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,--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,-->0,0,1,1,3,2,--0,0,1,1,3,2,--0,0,1,1,3,2,--0,0,1,1,--0,0,1,--0,  
0,2,--  
R22) 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,--  
R23)  
0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--0,0,1,1,2,2,3,3,4,4,6,--0,0,1,1,2,2,  
3,3,4,4,7,--0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,  
--  
R24)  
0,0,1,1,2,2,3,3,5,4,-->0,0,1,1,2,2,3,3,4,4,5,--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,  
,--

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,:  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5,: 0,0,1,1,2,2,3,3,4,4,6,: 0,0,1,1,2,2,3,3,4,4,7,:  
 0,0,1,1,2,2,3,3,4,4,8,: 0,0,1,1,2,2,3,3,4,4,9,: 0,0,1,1,2,2,3,3,4,4,10,:  
 Number new nodes in level n is given by : 1,1,2,2,3,2,4,2,5,2,6,

-----Class

541-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][021][100][101]]$

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

542-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][021][100][102]]$

--  
 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

543-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][021][100][110]]$

--  
 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,--  
 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

544-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][021][100][120]]$

--  
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

545-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][021][100][201]]$

--  
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

546-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][021][100][210]]$

--  
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

547-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][021][101][102]]$

--

Rules of  $T[L]$ :

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

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

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

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

548-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][021][101][110]]$

--

Rules of  $T[L]$ :

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

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

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

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

549-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][021][101][120]]$

--

Rules of  $T[L]$ :

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

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

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

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  
550-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][021][101][201]]$

--  
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  
551-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][021][101][210]]$

--  
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  
552-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][021][102][110]]$

--  
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

553-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][021][102][120]]$

--  
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

554-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][021][102][201]]$

--  
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

555-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][021][102][210]]$

--  
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

556-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][021][110][120]]$

```

-----
--
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,--
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
557-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][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,--
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
558-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][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,--
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
559-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][012][021][120][201]]
-----

```

```

--

```

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

560-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][021][120][210]]$

--

Rules of T[L]:

- R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$
- R2)  $0, 0, \rightarrow 0, 0, 1, \rightarrow 0, 0, 1, \rightarrow$
- 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

561-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][021][201][210]]$

--

Rules of T[L]:

- R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$
- R2)  $0, 0, \rightarrow 0, 0, 1, \rightarrow 0, 0, 1, \rightarrow$
- 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

562-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][100][101][102]]$

--

Rules of T[L]:

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



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

563-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][100][101][110]]$

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

564-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][100][101][120]]$

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

565-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][100][101][201]]$

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

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

566-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][100][101][210]]$

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

567-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][100][102][110]]$

--  
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

568-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][100][102][120]]$

--  
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

569-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][100][102][201]]$

--  
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

570-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][100][102][210]]$

--  
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

571-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][100][110][120]]$

--  
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

572-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][100][110][201]]$

--

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

573-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][100][110][210]]$

--

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

574-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][100][120][201]]$

--

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

575-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][100][120][210]]$

-----  
--

Rules of  $T[L]$ :

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

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

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

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

576-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][100][201][210]]$

-----  
--

Rules of  $T[L]$ :

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

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

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

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

577-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][101][102][110]]$

-----  
--

Rules of  $T[L]$ :

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

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

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

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

578-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][101][102][120]]$

--  
Rules of  $T[L]$ :

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

579-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][101][102][201]]$

--  
Rules of  $T[L]$ :

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

580-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][101][102][210]]$

--  
Rules of  $T[L]$ :

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

581-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][101][110][120]]$

```

-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,1,--0,1,--
R3) 0,1,-->0,0,1,--
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
582-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][012][101][110][201]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,1,--0,1,--
R3) 0,1,-->0,0,1,--
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
583-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][012][101][110][210]]
-----

```

```

--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,1,--0,1,--
R3) 0,1,-->0,0,1,--
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
584-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][012][101][120][201]]
-----

```

```

--

```

Rules of T[L]:

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

585-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][101][120][210]]$

--  
Rules of T[L]:

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

586-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][101][201][210]]$

--  
Rules of T[L]:

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

587-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][102][110][120]]$

--  
Rules of T[L]:

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



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

588-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][102][110][201]]$

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

589-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][102][110][210]]$

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

590-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][102][120][201]]$

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

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

591-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][102][120][210]]$

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

592-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][102][201][210]]$

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

593-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][110][120][201]]$

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

594-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][110][120][210]]$

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

595-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][110][201][210]]$

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

596-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][012][120][201][210]]$

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

597-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][021][100][101][102]]$

-----

--  
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

598-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][021][100][101][110]]$

-----

--  
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

599-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][021][100][101][120]]$

-----

--  
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
600-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][021][100][101][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
601-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][021][100][101][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
602-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][021][100][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
603-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][021][100][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

```

604-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][021][100][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

```

605-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][021][100][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

```

606-----

```

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][021][100][110][120]]$

-----  
--  
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

607-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][021][100][110][201]]$

-----  
--  
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

608-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][021][100][110][210]]$

-----  
--  
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

609-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][021][100][120][201]]$

-----  
--  
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

610-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][021][100][120][210]]$

-----  
--  
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

611-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][021][100][201][210]]$

-----  
--  
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

612-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][021][101][102][110]]$

-----  
--  
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

613-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][021][101][102][120]]$

--  
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

614-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][021][101][102][201]]$

--  
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

615-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][021][101][102][210]]$

--  
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

616-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][021][101][110][120]]$

--  
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

617-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][021][101][110][201]]$

--  
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

618-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][021][101][110][210]]$

--  
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
619-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][021][101][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
620-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][021][101][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
621-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][021][101][201][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
622-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][021][102][110][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

```

623-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][021][102][110][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

```

624-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][021][102][110][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

```

625-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][021][102][120][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,--0,0,2,--
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
626-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][021][102][120][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,--0,0,2,--
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
627-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][021][102][201][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
628-----

```

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][021][110][120][201]]$

-----  
--  
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

629-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][021][110][120][210]]$

-----  
--  
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

630-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][021][110][201][210]]$

-----  
--  
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

631-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][021][120][201][210]]$

-----  
--  
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

632-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][100][101][102][110]]$

--  
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

633-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][100][101][102][120]]$

--  
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

634-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][100][101][102][201]]$

--  
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

635-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][100][101][102][210]]$

--

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

636-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][100][101][110][120]]$

--

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

637-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][100][101][110][201]]$

--

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

638-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][100][101][110][210]]$

--



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

639-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][100][101][120][201]]$

--

Rules of T[L]:

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

R2)  $0, 1, \rightarrow 0, \rightarrow 0, 1, 2, \rightarrow$

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

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0, 1, :

LEN=3) 0, 1, 2, :

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

-----Class

640-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][100][101][120][210]]$

--

Rules of T[L]:

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

R2)  $0, 1, \rightarrow 0, \rightarrow 0, 1, 2, \rightarrow$

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

List of different nodes in T[L]

LEN=1) 0, :

LEN=2) 0, 1, :

LEN=3) 0, 1, 2, :

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

-----Class

641-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][100][101][201][210]]$

--

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

642-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][100][102][110][120]]$

```

-----
--
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

```

643-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][100][102][110][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

```

644-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][100][102][110][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

```

645-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][011][100][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

646-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][100][102][120][210]]$

--  
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

647-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][100][102][201][210]]$

--  
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

648-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][100][110][120][201]]$

--  
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

649-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][100][110][120][210]]$

-----  
--  
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

650-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][100][110][201][210]]$

-----  
--  
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

651-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][100][120][201][210]]$

-----  
--  
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

652-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][101][102][110][120]]$

```

--
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

```

653-----
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding L=[[000][011][101][102][110][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

```

654-----
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding L=[[000][011][101][102][110][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

```

655-----
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding L=[[000][011][101][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

656-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][101][102][120][210]]$

--  
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

657-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][101][102][201][210]]$

--  
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

658-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][101][110][120][201]]$

--  
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

659-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][101][110][120][210]]$

--

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

660-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][101][110][201][210]]$

--

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

661-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][101][120][201][210]]$

--

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

662-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][102][110][120][201]]$

--

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

663-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][102][110][120][210]]$

--

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

664-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][102][110][201][210]]$

--

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

665-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][102][120][201][210]]$

--

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,-->  
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

666-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][011][110][120][201][210]]$

-----  
--  
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

667-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][100][101][102]]$

-----  
--  
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

668-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][100][101][110]]$

-----  
--  
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

669-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][100][101][120]]$

-----  
--  
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

670-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][100][101][201]]$

-----  
--  
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

671-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][100][101][210]]$

-----  
--  
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

672-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][100][102][110]]$

-----  
--  
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

673-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][100][102][120]]$

-----  
--  
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

674-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][100][102][201]]$

-----  
--  
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

675-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][100][102][210]]$

--  
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

676-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][100][110][120]]$

--  
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

677-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][100][110][201]]$

--  
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

```

678-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][012][021][100][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

```

679-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][012][021][100][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

```

680-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][012][021][100][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

681-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][100][201][210]]$

--  
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

682-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][101][102][110]]$

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

683-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][101][102][120]]$

--

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

684-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][101][102][201]]$

-----

--

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

685-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][101][102][210]]$

-----

--

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

686-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][101][110][120]]$

-----

```

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

```

687-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][012][021][101][110][201]]
-----

```

```

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

```

688-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][012][021][101][110][210]]
-----

```

```

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

```

689-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][012][021][101][120][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
690-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][012][021][101][120][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
691-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[000][012][021][101][201][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
692-----

```

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][102][110][120]]$

-----  
--  
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

693-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][102][110][201]]$

-----  
--  
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

694-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][102][110][210]]$

-----  
--  
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

695-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][102][120][201]]$

-----  
--  
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  
696-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][102][120][210]]$

-----  
--  
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  
697-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][102][201][210]]$

-----  
--  
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  
698-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][110][120][201]]$

--  
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)  $0, 1, \rightarrow 0, 0, 1, \rightarrow 0, 1, 1, \rightarrow$   
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  
699-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][110][120][210]]$

--  
Rules of T[L]:  
R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$   
R2)  $0, 0, \rightarrow 0, 0, 1, \rightarrow 0, 0, 1, \rightarrow$   
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  
700-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][110][201][210]]$

--  
Rules of T[L]:  
R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$   
R2)  $0, 0, \rightarrow 0, 0, 1, \rightarrow 0, 0, 1, \rightarrow$   
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

701-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][021][120][201][210]]$

-----  
--

Rules of  $T[L]$ :

- R1)  $0, -- \rightarrow 0, 0, -- 0, 0, --$
- R2)  $0, 0, -- \rightarrow 0, 0, 1, -- 0, 0, 1, --$
- R3)  $0, 0, 1, -- \rightarrow 0, 0, 1, 1, --$
- 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

702-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][100][101][102][110]]$

-----  
--

Rules of  $T[L]$ :

- R1)  $0, -- \rightarrow 0, 0, -- 0, 1, --$
- R2)  $0, 0, -- \rightarrow 0, 0, 1, -- 0, 1, --$
- R3)  $0, 1, -- \rightarrow 0, 1, 0, -- 0, 1, 0, --$
- R4)  $0, 0, 1, -- \rightarrow 0, 1, 0, --$
- R5)  $0, 1, 0, -- \rightarrow$

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

703-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][100][101][102][120]]$

-----  
--

Rules of  $T[L]$ :

- R1)  $0, -- \rightarrow 0, 0, -- 0, 1, --$
- R2)  $0, 0, -- \rightarrow 0, 0, 1, -- 0, 1, --$
- R3)  $0, 1, -- \rightarrow 0, 1, 0, -- 0, 0, 1, --$
- R4)  $0, 0, 1, -- \rightarrow 0, 1, 0, --$
- R5)  $0, 1, 0, -- \rightarrow$

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

704-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][100][101][102][201]]$

-----

--

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

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

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

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

705-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][100][101][102][210]]$

-----

--

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

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

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

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

706-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][100][101][110][120]]$

-----

--

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

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

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

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

707-----

Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][012][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,-->0,1,0,--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

708-----

Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][012][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,-->0,1,0,--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

709-----

Inversion Sequences (I\_n=(n+1)!) avoiding L=[[000][012][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,-->0,1,0,--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

710-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][100][101][120][210]]$

--

Rules of T[L]:

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

711-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][100][101][201][210]]$

--

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

712-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][100][102][110][120]]$

--

Rules of T[L]:

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

713-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][100][102][110][201]]$

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

714-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][100][102][110][210]]$

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

715-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][100][102][120][201]]$

--  
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,-->0,0,1,1,--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

716-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][100][102][120][210]]$

--  
 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,-->0,0,1,1,--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

717-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][100][102][201][210]]$

--  
 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,-->0,0,1,1,--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

718-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][100][110][120][201]]$

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

719-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][100][110][120][210]]$

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

720-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][100][110][201][210]]$

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

721-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][100][120][201][210]]$

-----

--  
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,-->0,0,1,1,--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

722-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][101][102][110][120]]$

-----

--  
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,--0,1,0,--
- 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

723-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][101][102][110][201]]$

-----

--  
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,--0,1,0,--
- 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

724-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][101][102][110][210]]$

-----  
--  
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,--0,1,0,--  
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

725-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][101][102][120][201]]$

-----  
--  
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,--0,0,1,--  
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

726-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][101][102][120][210]]$

```

--
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,--0,0,1,--
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

727-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][101][102][201][210]]$

```

--
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,--0,0,1,--
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

728-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][101][110][120][201]]$

```

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

729-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][101][110][120][210]]$

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

730-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][101][110][201][210]]$

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

731-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][101][120][201][210]]$

--  
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,--0,0,1,--  
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

732-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][102][110][120][201]]$

--  
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

733-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][102][110][120][210]]$

--  
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

734-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][102][110][201][210]]$

--  
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

735-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][102][120][201][210]]$

```

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

736-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][012][110][120][201][210]]$

```

--
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,--
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

737-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][100][101][102][110]]$

--

Rules of  $T[L]$ :

- R1)  $0, -- \rightarrow 0, 0, -- 0, 1, --$
- R2)  $0, 0, -- \rightarrow 0, 0, 1, -- 0, 0, 2, --$
- R3)  $0, 1, -- \rightarrow 0, 1, 0, -- 0, 0, -- 0, 1, --$
- 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)  $0, 1, 0, -- \rightarrow$
- R7)  $0, 0, 1, 1, -- \rightarrow 0, 0, 1, 1, 2, -- 0, 0, 1, -- 0, 0, 2, --$
- R8)  $0, 0, 1, 1, 2, -- \rightarrow 0, 0, 1, 1, 2, 2, -- 0, 0, 1, 1, 2, -- 0, 0, 1, -- 0, 0, 2, --$
- R9)  $0, 0, 1, 1, 2, 2, -- \rightarrow 0, 0, 1, 1, 2, 2, 3, -- 0, 0, 1, 1, 2, -- 0, 0, 1, -- 0, 0, 2, --$
- R10)  $0, 0, 1, 1, 2, 2, 3, -- \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, -- 0, 0, 1, 1, 2, 2, 3, -- 0, 0, 1, 1, 2, -- 0, 0, 1, -- 0, 0, 2, --$
- R11)  $0, 0, 1, 1, 2, 2, 3, 3, -- \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, -- 0, 0, 1, 1, 2, 2, 3, -- 0, 0, 1, 1, 2, -- 0, 0, 1, -- 0, 0, 2, --$
- R12)  $0, 0, 1, 1, 2, 2, 3, 3, 4, -- \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, 4, -- 0, 0, 1, 1, 2, 2, 3, 3, 4, -- 0, 0, 1, 1, 2, 2, 3, -- 0, 0, 1, 1, 2, -- 0, 0, 1, -- 0, 0, 2, --$
- R13)  $0, 0, 1, 1, 2, 2, 3, 3, 4, 4, -- \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, 4, 5, -- 0, 0, 1, 1, 2, 2, 3, 3, 4, -- 0, 0, 1, 1, 2, 2, 3, -- 0, 0, 1, 1, 2, -- 0, 0, 1, -- 0, 0, 2, --$

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)  $0, 0, 1, 1, 2, 2, 3, 3, 4, 4, :$
  - LEN=11)  $0, 0, 1, 1, 2, 2, 3, 3, 4, 4, 5, :$
- Number new nodes in level n is given by : 1,2,3,1,1,1,1,1,1,1,1,

-----Class

738-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][100][101][102][120]]$

--

Rules of  $T[L]$ :

- R1)  $0, -- \rightarrow 0, 0, -- 0, 1, --$
- R2)  $0, 0, -- \rightarrow 0, 0, 1, -- 0, 0, 2, --$
- R3)  $0, 1, -- \rightarrow 0, 1, 0, -- 0, 1, 1, -- 0, 0, 2, --$
- 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)  $0, 1, 0, -- \rightarrow$
- R7)  $0, 1, 1, -- \rightarrow 0, 1, 0, -- 0, 0, 1, -- 0, 0, 2, --$

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,--  
 R14)  
 0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :  
 Number new nodes in level n is given by : 1,2,4,1,1,1,1,1,1,1,1,

-----Class

739-----  
 Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][021][100][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,--  
R20)

0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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,--  
R21)

0,1,1,2,2,3,3,4,4,5,-->0,1,0,--0,1,1,2,2,3,3,4,4,5,5,--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,--  
R22)

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, :  
LEN=11) 0,0,1,1,2,2,3,3,4,4,5, : 0,1,1,2,2,3,3,4,4,5,5, :  
Number new nodes in level n is given by : 1,2,4,2,2,2,2,2,2,2,2,

-----Class

740-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][021][100][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)

$0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2,2,3,3, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$   
 R15)  $0,1,1,2,2,3,3, \rightarrow 0,1,0, \rightarrow 0,1,1,2,2,3,3,4, \rightarrow 0,1,1,2,2,3, \rightarrow 0,1,1,2, \rightarrow 0,1, \rightarrow$   
 R16)  
 $0,0,1,1,2,2,3,3, \rightarrow 0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$   
 R17)  
 $0,1,1,2,2,3,3,4, \rightarrow 0,1,0, \rightarrow 0,1,1,2,2,3,3,4,4, \rightarrow 0,1,1,2,2,3,3,4, \rightarrow 0,1,1,2,2,3, \rightarrow 0,1, \rightarrow$   
 $1,2, \rightarrow 0,1, \rightarrow$   
 R18)  
 $0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3,3,4,4, \rightarrow 0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0, \rightarrow$   
 $1,1,2, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$   
 R19)  
 $0,1,1,2,2,3,3,4,4, \rightarrow 0,1,0, \rightarrow 0,1,1,2,2,3,3,4,4,5, \rightarrow 0,1,1,2,2,3,3,4, \rightarrow 0,1,1,2,2,3, \rightarrow$   
 $0,1,1,2, \rightarrow 0,1, \rightarrow$   
 R20)  
 $0,0,1,1,2,2,3,3,4,4, \rightarrow 0,0,1,1,2,2,3,3,4,4,5, \rightarrow 0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3, \rightarrow$   
 $0,0,1,1,2, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$   
 R21)  
 $0,1,1,2,2,3,3,4,4,5, \rightarrow 0,1,0, \rightarrow 0,1,1,2,2,3,3,4,4,5,5, \rightarrow 0,1,1,2,2,3,3,4,4,5, \rightarrow 0,1,1, \rightarrow$   
 $2,2,3,3,4, \rightarrow 0,1,1,2,2,3, \rightarrow 0,1,1,2, \rightarrow 0,1, \rightarrow$

List of different nodes in  $T[L]$

LEN=1)  $0, :$   
 LEN=2)  $0,0, : 0,1, :$   
 LEN=3)  $0,0,1, : 0,0,2, : 0,1,0, : 0,1,1, :$   
 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)  $0,0,1,1,2,2,3,3,4,4, : 0,1,1,2,2,3,3,4,4,5, :$   
 LEN=11)  $0,0,1,1,2,2,3,3,4,4,5, : 0,1,1,2,2,3,3,4,4,5,5, :$

Number new nodes in level n is given by :  $1,2,4,2,2,2,2,2,2,2,2,$

-----Class

741-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][100][101][110][120]]$

-----

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

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

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, :
- LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :

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

-----Class

742-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][100][101][110][201]]$

-----

--

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

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, :  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :  
 Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,

-----Class

743-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][100][101][110][210]]$

-----

--

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,--
- R12) 0,0,1,1,2,2,3,3,4,4, -->0,0,1,1,2,2,3,3,4,4,5,--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, :
- LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :  
 Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,

-----Class

744-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][100][101][120][201]]$

-----

--

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, --
- R12) 0,0,1,1,2,2,3,3,4,4, -->0,0,1,1,2,2,3,3,4,4,5, --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, :
- LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :

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

-----Class

745-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][100][101][120][210]]$

-----

--

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, --



1,1,2,--0,0,1,--0,0,2,--  
R12)  
0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :  
LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :  
Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,

-----Class

746-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][100][101][201][210]]$

-----

--

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,--  
 R19)  
 0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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,--  
 R20)  
 0,1,1,2,2,3,3,4,4,5,-->0,0,1,1,2,2,3,3,4,4,--0,1,1,2,2,3,3,4,4,5,5,--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, :  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5, : 0,1,1,2,2,3,3,4,4,5,5, :  
 Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,2,

-----Class

747-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][100][102][110][120]]$

-----

--

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,--0,0,2,--  
 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,--  
 R14)  
 0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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,:  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5,:  
 Number new nodes in level n is given by : 1,2,3,2,1,1,1,1,1,1,1,

-----Class

748-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][100][102][110][201]]$

--

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,--
- R15)
- 0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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,:
- LEN=11) 0,0,1,1,2,2,3,3,4,4,5,:

Number new nodes in level n is given by : 1,2,4,2,1,1,1,1,1,1,1,

-----Class

749-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][100][102][110][210]]$

-----

--

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,--
- R15) 0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :
- LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :

Number new nodes in level n is given by : 1,2,4,2,1,1,1,1,1,1,1,

-----Class

750-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][100][102][120][201]]$

-----

--

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,--
- R15) 0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :
- LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :

Number new nodes in level n is given by : 1,2,4,2,1,1,1,1,1,1,1,

-----Class

751-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][100][102][120][210]]$

-----

--

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,--  
R15)  
0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :  
LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :

Number new nodes in level n is given by : 1,2,4,2,1,1,1,1,1,1,1,

-----Class

752-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][100][102][201][210]]$

-----

--

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,--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,-->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,-->0,1,0,1,--0,1,1,2,2,3,3,--0,1,1,2,2,3,--0,1,1,2,--0,1,2,--  
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,--0,0,1,--0,0,2,--  
R17) 0,1,1,2,2,3,3,-->0,1,0,1,--0,1,1,2,2,3,3,4,--0,1,1,2,2,3,--0,1,1,2,--0,1,2,--  
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)  
 $0,1,1,2,2,3,3,4,4, \rightarrow 0,1,0,1, \rightarrow 0,1,1,2,2,3,3,4,4,5, \rightarrow 0,1,1,2,2,3,3,4, \rightarrow 0,1,1,2,2,3, \rightarrow 0,1,1,2, \rightarrow 0,1,2, \rightarrow$   
 R22)  
 $0,0,1,1,2,2,3,3,4,4, \rightarrow 0,0,1,1,2,2,3,3,4,4,5, \rightarrow 0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$   
 R23)  
 $0,1,1,2,2,3,3,4,4,5, \rightarrow 0,1,0,1, \rightarrow 0,1,1,2,2,3,3,4,4,5,5, \rightarrow 0,1,1,2,2,3,3,4,4,5, \rightarrow 0,1,1,2,2,3,3,4, \rightarrow 0,1,1,2,2,3, \rightarrow 0,1,1,2, \rightarrow 0,1,2, \rightarrow$

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)  $0,0,1,1,2,2,3,3,4,4, : 0,1,1,2,2,3,3,4,4,5, :$   
 LEN=11)  $0,0,1,1,2,2,3,3,4,4,5, : 0,1,1,2,2,3,3,4,4,5,5, :$

Number new nodes in level  $n$  is given by :  $1,2,5,3,2,2,2,2,2,2,2,$

-----Class

753-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][100][110][120][201]]$

-----

--

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

R12)  
 0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :
- LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :

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

-----Class

754-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][021][100][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,--
- R12)  
 0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :  
LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :  
Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,

-----Class

755-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][100][110][201][210]]$

--

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, --
- R12) 0,0,1,1,2,2,3,3,4,4, -->0,0,1,1,2,2,3,3,4,4,5, --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, :
- LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :  
Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,

-----Class

756-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][100][120][201][210]]$

--

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,--  
 R12)  
 0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :  
 Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,

-----Class

757-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][101][102][110][120]]$

-----

--

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

R13)  
 0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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,:
- LEN=11) 0,0,1,1,2,2,3,3,4,4,5,:

Number new nodes in level n is given by : 1,2,3,1,1,1,1,1,1,1,1,

-----Class

758-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][101][102][110][201]]$

-----

--

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,--
- 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,--
- R13)  
 0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :  
 Number new nodes in level n is given by : 1,2,3,1,1,1,1,1,1,1,1,

-----Class

759-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][101][102][110][210]]$

-----

--  
 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,--
- 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,--
- R13) 0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :
- LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :  
 Number new nodes in level n is given by : 1,2,3,1,1,1,1,1,1,1,1,

-----Class

760-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][101][102][120][201]]$

-----

--

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)  $0, 1, \rightarrow 0, 1, 0, \rightarrow 0, 1, 1, \rightarrow 0, 0, 2, \rightarrow$
- 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)  $0, 1, 0, \rightarrow$
- R7)  $0, 1, 1, \rightarrow 0, 1, 0, \rightarrow 0, 0, 1, \rightarrow 0, 0, 2, \rightarrow$
- R8)  $0, 0, 1, 1, \rightarrow 0, 0, 1, 1, 2, \rightarrow 0, 0, 1, \rightarrow 0, 0, 2, \rightarrow$
- R9)  $0, 0, 1, 1, 2, \rightarrow 0, 0, 1, 1, 2, 2, \rightarrow 0, 0, 1, 1, 2, \rightarrow 0, 0, 1, \rightarrow 0, 0, 2, \rightarrow$
- R10)  $0, 0, 1, 1, 2, 2, \rightarrow 0, 0, 1, 1, 2, 2, 3, \rightarrow 0, 0, 1, 1, 2, \rightarrow 0, 0, 1, \rightarrow 0, 0, 2, \rightarrow$
- R11)  $0, 0, 1, 1, 2, 2, 3, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, \rightarrow 0, 0, 1, 1, 2, 2, 3, \rightarrow 0, 0, 1, 1, 2, \rightarrow 0, 0, 1, \rightarrow 0, 0, 2, \rightarrow$
- R12)  $0, 0, 1, 1, 2, 2, 3, 3, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, \rightarrow 0, 0, 1, 1, 2, 2, 3, \rightarrow 0, 0, 1, 1, 2, \rightarrow 0, 0, 1, \rightarrow 0, 0, 2, \rightarrow$
- R13)  $0, 0, 1, 1, 2, 2, 3, 3, 4, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, 4, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, \rightarrow 0, 0, 1, 1, 2, 2, 3, \rightarrow 0, 0, 1, 1, 2, \rightarrow 0, 0, 1, \rightarrow 0, 0, 2, \rightarrow$
- R14)  $0, 0, 1, 1, 2, 2, 3, 3, 4, 4, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, 4, 5, \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, \rightarrow 0, 0, 1, 1, 2, 2, 3, \rightarrow 0, 0, 1, 1, 2, \rightarrow 0, 0, 1, \rightarrow 0, 0, 2, \rightarrow$

List of different nodes in T[L]

- LEN=1)  $0, :$
- LEN=2)  $0, 0, : 0, 1, :$
- LEN=3)  $0, 0, 1, : 0, 0, 2, : 0, 1, 0, : 0, 1, 1, :$
- 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)  $0, 0, 1, 1, 2, 2, 3, 3, 4, 4, :$
- LEN=11)  $0, 0, 1, 1, 2, 2, 3, 3, 4, 4, 5, :$

Number new nodes in level n is given by : 1,2,4,1,1,1,1,1,1,1,1,

-----Class

761-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[000][021][101][102][120][210]$

-----

--

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)  $0, 1, \rightarrow 0, 1, 0, \rightarrow 0, 1, 1, \rightarrow 0, 0, 2, \rightarrow$
- 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)  $0, 1, 0, \rightarrow$
- R7)  $0, 1, 1, \rightarrow 0, 1, 0, \rightarrow 0, 0, 1, \rightarrow 0, 0, 2, \rightarrow$
- R8)  $0, 0, 1, 1, \rightarrow 0, 0, 1, 1, 2, \rightarrow 0, 0, 1, \rightarrow 0, 0, 2, \rightarrow$
- R9)  $0, 0, 1, 1, 2, \rightarrow 0, 0, 1, 1, 2, 2, \rightarrow 0, 0, 1, 1, 2, \rightarrow 0, 0, 1, \rightarrow 0, 0, 2, \rightarrow$

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,--  
R14) 0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :  
LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :  
Number new nodes in level n is given by : 1,2,4,1,1,1,1,1,1,1,1,

-----Class

762-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][101][102][201][210]]$

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,--  
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,--

R20)

0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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,--

R21)

0,1,1,2,2,3,3,4,4,5,-->0,1,0,--0,1,1,2,2,3,3,4,4,5,5,--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,:

LEN=11) 0,0,1,1,2,2,3,3,4,4,5,: 0,1,1,2,2,3,3,4,4,5,5,:

Number new nodes in level n is given by : 1,2,4,2,2,2,2,2,2,2,2,

-----Class

763-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][101][110][120][201]]$

-----

--

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,--0,0,2,--

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,--

R12)

0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :

LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :

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

-----Class

764-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][021][101][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,--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,--

R12)

0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :

LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :



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

-----Class

765-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][101][110][201][210]]$

-----

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

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)  $0,0,1,1,2,2,3,3,4,4, :$
- LEN=11)  $0,0,1,1,2,2,3,3,4,4,5, :$

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

-----Class

766-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][101][120][201][210]]$

-----

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)  $0,1, \rightarrow 0,0, \rightarrow 0,0,1, \rightarrow 0,0,2, \rightarrow$
- 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,-->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,--  
R12) 0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :  
LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :  
Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,

-----Class

767-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][102][110][120][201]]$

-----

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,--0,0,2,--  
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,--  
R14)

0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :
- LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :

Number new nodes in level n is given by : 1,2,3,2,1,1,1,1,1,1,1,

-----Class

768-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][102][110][120][210]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,0,2,--
- R3) 0,1,-->0,1,0,--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) 0,1,0,-->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,--
- R14)
- 0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :  
 Number new nodes in level n is given by : 1,2,3,2,1,1,1,1,1,1,1,

-----Class

769-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][102][110][201][210]]$

-----

--  
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,--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,--
- R15) 0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :
- LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :

Number new nodes in level n is given by : 1,2,4,2,1,1,1,1,1,1,1,1,

-----Class

770-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][102][120][201][210]]$

--

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

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

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

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

R9)  $0, 1, 0, 1, \rightarrow$

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

R11)  $0, 0, 1, 1, 2, 2, \rightarrow 0, 0, 1, 1, 2, 2, 3, \rightarrow 0, 0, 1, 1, 2, \rightarrow 0, 0, 1, \rightarrow 0, 0, 2, \rightarrow$

R12)

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

R13)

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

R14)

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

R15)

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

List of different nodes in T[L]

LEN=1)  $0, :$

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

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

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

LEN=11)  $0, 0, 1, 1, 2, 2, 3, 3, 4, 4, 5, :$

Number new nodes in level n is given by : 1,2,4,2,1,1,1,1,1,1,1,

-----Class

771-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][021][110][120][201][210]]$

--

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

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,-->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,--  
 R12) 0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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, :  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5, :  
 Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,

-----Class

772-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][100][101][102][110][120]]$

-----

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,-->  
 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,--0,0,1,3,1,--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) 0,0,1,3,1,-->0,1,0,--  
 R11) 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,--  
 R12) 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,--  
 R13) 0,0,1,1,2,4,-->0,0,1,3,1,--0,0,1,3,1,--0,0,1,1,--0,0,1,2,--0,0,1,3,--  
 R14) 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,--  
 R15) 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,--  
 R16) 0,0,1,1,2,5,2,-->0,0,1,3,1,--0,0,1,3,1,--

R17) 0,0,1,1,2,5,3,-->0,1,0,--0,1,0,--  
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,-->0,1,0,--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,--  
R20)  
0,0,1,1,2,2,3,5,-->0,0,1,3,1,--0,0,1,3,1,--0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,  
--0,0,1,1,2,5,--  
R21)  
0,0,1,1,2,2,3,6,-->0,0,1,1,2,5,2,--0,0,1,1,2,5,3,--0,0,1,1,2,5,2,--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) 0,0,1,1,2,2,3,7,3,-->0,0,1,1,2,5,2,--0,0,1,1,2,5,3,--0,0,1,1,2,5,2,--  
R25) 0,0,1,1,2,2,3,7,4,-->0,1,0,--0,0,1,3,1,--0,0,1,3,1,--  
R26) 0,0,1,1,2,2,3,7,5,-->0,0,1,3,1,--0,0,1,3,1,--0,1,0,--  
R27)  
0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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,--  
R28)  
0,0,1,1,2,2,3,3,4,5,-->0,1,0,--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,--  
R29)  
0,0,1,1,2,2,3,3,4,6,-->0,0,1,3,1,--0,0,1,3,1,--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,--  
R30)  
0,0,1,1,2,2,3,3,4,7,-->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,  
--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--  
R31)  
0,0,1,1,2,2,3,3,4,8,-->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,--0,0,1,1,--0,0,1,2,--0,0,1,3,--  
R32)  
0,0,1,1,2,2,3,3,4,9,-->0,0,1,1,2,2,3,3,4,9,4,--0,0,1,1,2,2,3,3,4,9,5,--0,0,1,1,2,2,  
3,3,4,9,6,--0,0,1,1,2,2,3,3,4,9,7,--0,0,1,1,2,2,3,3,4,9,4,--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, : 0,1,0, :  
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, : 0,0,1,1,2,5,2, : 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,: 0,0,1,1,2,2,3,7,3,: 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,:  
LEN=11) 0,0,1,1,2,2,3,3,4,4,5,: 0,0,1,1,2,2,3,3,4,9,4,: 0,0,1,1,2,2,3,3,4,9,5,:  
0,0,1,1,2,2,3,3,4,9,6,: 0,0,1,1,2,2,3,3,4,9,7,:  
Number new nodes in level n is given by : 1,2,2,3,2,4,3,5,4,6,5,

-----Class

773-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[000][100][101][102][110][201]$

-----

--

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,-->
- 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,-->0,1,0,--0,0,1,3,2,--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,--0,1,0,--0,0,1,2,4,3,--0,0,--0,0,1,2,4,5,--
- R14) 0,0,1,3,2,-->0,1,0,--
- R15) 0,0,1,3,4,-->0,1,0,--0,0,1,3,2,--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,-->0,1,0,--0,0,1,3,2,--0,0,1,1,--0,0,1,1,2,4,5,--0,0,1,1,2,4,6,--
- R20) 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,--
- 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,--0,1,0,--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,--0,1,0,--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,-->0,1,0,--0,0,1,3,2,--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,--0,1,0,--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,--

R30)

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,--

R31)

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,--

R32)

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,--

R33) 0,0,1,1,2,5,4,-->0,1,0,--0,0,1,3,2,--

R34)

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,  
--

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,--0,1,0,--0,0,1,2,3,4,6,5,--0,0,--0,0,1,2,3,  
4,6,7,--

R37) 0,0,1,2,3,5,4,-->0,1,0,--0,1,0,--0,1,0,--

R38)

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,--

R39)

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,--

R40)

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,  
--

R41)

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,--

R42)

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,--

R43)

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,--

R44)

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,--

R45)

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,--

R46)

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,--

R47)

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,--

R48)

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,--

R49)

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,--

R50)

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,--

R51)

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,--

R52) 0,0,1,1,2,3,6,5,-->0,1,0,--0,1,0,--0,0,1,2,4,3,--

R53)

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,--

R54)

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,--

R55)

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,--

R56) 0,0,1,1,2,4,6,5,-->0,1,0,--0,0,1,3,2,--0,1,0,--

R57)

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,--

R58)

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,--

R59)

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,--

R60)

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,--

R61) 0,0,1,2,3,4,6,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--

R62)

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,--

R63)

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,--

R64)

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,--

R65)

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,--

R66)

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,--

R67)

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,--

R68)

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,--

R69)

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,--

R70)

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,--

R71)

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,--

R72)

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,--

R73)

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,--

R74)

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,--

R75)

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,--

R76)

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,--

R77) 0,0,1,1,2,2,3,7,6,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--

R78)

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,--

R79)

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,--

R80)

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,--

R81)

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,--

R82)

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,--

R83)

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,--  
R84) 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,--  
R85)  
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,--  
R86)  
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,--  
R87)  
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,--  
R88) 0,0,1,1,2,3,5,7,6,-->0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--  
R89)  
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,--  
R90)  
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,--  
R91)  
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,--  
R92)  
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,--  
R93) 0,0,1,1,2,4,5,7,6,-->0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--  
R94)  
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,--  
R95)  
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,--  
R96)  
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,--  
R97)  
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,--  
R98)  
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,--  
R99) 0,0,1,2,3,4,5,7,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
R100)  
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,--  
R101)  
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,--  
R102)  
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,--

R103)

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,--

R104)

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,--

R105)

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,--

R106)

0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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,--

R107)

0,0,1,1,2,2,3,3,4,5,-->0,1,0,--0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,6,--0,0,1,  
1,2,2,3,3,4,5,7,--0,0,1,1,2,2,3,3,4,5,8,--0,0,1,1,2,2,3,3,4,5,9,--0,0,1,1,2,2,3,3,4,  
,5,10,--

R108)

0,0,1,1,2,2,3,3,4,6,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,4,6,7,  
--0,0,1,1,2,2,3,3,4,6,8,--0,0,1,1,2,2,3,3,4,6,9,--0,0,1,1,2,2,3,3,4,6,10,--

R109)

0,0,1,1,2,2,3,3,4,7,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--0,0,1,1,2,2,--0,0,1,1,2,  
2,3,3,4,7,8,--0,0,1,1,2,2,3,3,4,7,9,--0,0,1,1,2,2,3,3,4,7,10,--

R110)

0,0,1,1,2,2,3,3,4,8,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--0,0,1,1,2,2,3,7,6,--0,0,  
1,1,--0,0,1,1,2,2,3,3,4,8,9,--0,0,1,1,2,2,3,3,4,8,10,--

R111)

0,0,1,1,2,2,3,3,4,9,-->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,  
1,1,2,2,3,3,4,9,8,--0,0,--0,0,1,1,2,2,3,3,4,9,10,--

R112)

0,0,1,1,2,2,3,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,5,  
6,7,--0,0,1,1,2,2,3,4,5,6,8,--0,0,1,1,2,2,3,4,5,6,9,--0,0,1,1,2,2,3,4,5,6,10,--

R113)

0,0,1,1,2,2,3,4,5,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,0,1,1,2,2,--0,0,1,  
1,2,2,3,4,5,7,8,--0,0,1,1,2,2,3,4,5,7,9,--0,0,1,1,2,2,3,4,5,7,10,--

R114)

0,0,1,1,2,2,3,4,5,8,-->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,--  
0,0,1,1,--0,0,1,1,2,2,3,4,5,8,9,--0,0,1,1,2,2,3,4,5,8,10,--

R115)

0,0,1,1,2,2,3,4,5,9,-->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,--  
0,0,1,1,2,2,3,4,5,9,8,--0,0,--0,0,1,1,2,2,3,4,5,9,10,--

R116)

0,0,1,1,2,2,3,4,6,7,-->0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,  
2,2,3,4,6,7,8,--0,0,1,1,2,2,3,4,6,7,9,--0,0,1,1,2,2,3,4,6,7,10,--

R117)

0,0,1,1,2,2,3,4,6,8,-->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,  
0,1,1,--0,0,1,1,2,2,3,4,6,8,9,--0,0,1,1,2,2,3,4,6,8,10,--

R118)

0,0,1,1,2,2,3,4,6,9,-->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,  
0,1,1,2,2,3,4,6,9,8,--0,0,--0,0,1,1,2,2,3,4,6,9,10,--

R119)

0,0,1,1,2,2,3,4,7,8,-->0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,1,1,2,3,6,5,--0,1,0,--0,0,  
1,1,--0,0,1,1,2,2,3,4,7,8,9,--0,0,1,1,2,2,3,4,7,8,10,--

R120)

0,0,1,1,2,2,3,4,7,9,-->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,  
1,1,2,2,3,4,7,9,8,--0,0,--0,0,1,1,2,2,3,4,7,9,10,--

R121) 0,0,1,1,2,2,3,4,8,7,-->0,1,0,--0,1,0,--0,0,1,2,4,3,--0,0,1,1,2,3,6,5,--

R122)

0,0,1,1,2,2,3,4,8,9,-->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,--0,1,0,--0,0,--0,0,1,1,2,2,3,4,8,9,10,--

R123)

0,0,1,1,2,2,3,5,6,7,-->0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,  
2,3,5,6,7,8,--0,0,1,1,2,2,3,5,6,7,9,--0,0,1,1,2,2,3,5,6,7,10,--

R124)

0,0,1,1,2,2,3,5,6,8,-->0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,0,1,1,2,4,5,7,6,--0,0,  
1,1,--0,0,1,1,2,2,3,5,6,8,9,--0,0,1,1,2,2,3,5,6,8,10,--

R125)

0,0,1,1,2,2,3,5,6,9,-->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,  
1,1,2,2,3,5,6,9,8,--0,0,--0,0,1,1,2,2,3,5,6,9,10,--

R126)

0,0,1,1,2,2,3,5,7,8,-->0,1,0,--0,0,1,3,2,--0,1,0,--0,0,1,1,2,4,6,5,--0,1,0,--0,0,1,  
1,--0,0,1,1,2,2,3,5,7,8,9,--0,0,1,1,2,2,3,5,7,8,10,--

R127)

0,0,1,1,2,2,3,5,7,9,-->0,1,0,--0,0,1,3,2,--0,1,0,--0,0,1,1,2,4,6,5,--0,1,0,--0,0,1,  
1,2,2,3,5,7,9,8,--0,0,--0,0,1,1,2,2,3,5,7,9,10,--

R128) 0,0,1,1,2,2,3,5,8,7,-->0,1,0,--0,0,1,3,2,--0,1,0,--0,0,1,1,2,4,6,5,--

R129)

0,0,1,1,2,2,3,5,8,9,-->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,--0,1,0,--0,0,--0,0,1,1,2,2,3,5,8,9,10,--

R130)

0,0,1,1,2,2,3,6,7,8,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--0,1,0,--0,1,0,--0,0,1,1,  
--0,0,1,1,2,2,3,6,7,8,9,--0,0,1,1,2,2,3,6,7,8,10,--

R131)

0,0,1,1,2,2,3,6,7,9,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--0,1,0,--0,1,0,--0,0,1,1,  
2,2,3,6,7,9,8,--0,0,--0,0,1,1,2,2,3,6,7,9,10,--

R132) 0,0,1,1,2,2,3,6,8,7,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--0,1,0,--

R133)

0,0,1,1,2,2,3,6,8,9,-->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,--0,1,0,--0,0,--0,0,1,1,2,2,3,6,8,9,10,--

R134)

0,0,1,1,2,2,3,7,8,9,-->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,--0,1,0,--0,0,--0,0,1,1,2,2,3,7,8,9,10,--

R135)

0,0,1,1,2,3,4,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,2,--0,0,1,  
1,2,3,4,5,6,7,8,--0,0,1,1,2,3,4,5,6,7,9,--0,0,1,1,2,3,4,5,6,7,10,--

R136)

0,0,1,1,2,3,4,5,6,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,5,7,6,--  
0,0,1,1,--0,0,1,1,2,3,4,5,6,8,9,--0,0,1,1,2,3,4,5,6,8,10,--

R137)

0,0,1,1,2,3,4,5,6,9,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,5,7,6,--

0,0,1,1,2,3,4,5,6,9,8,--0,0,--0,0,1,1,2,3,4,5,6,9,10,--  
R138)  
0,0,1,1,2,3,4,5,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,6,5,--0,1,0,--0,  
0,1,1,--0,0,1,1,2,3,4,5,7,8,9,--0,0,1,1,2,3,4,5,7,8,10,--  
R139)  
0,0,1,1,2,3,4,5,7,9,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,6,5,--0,1,0,--0,  
0,1,1,2,3,4,5,7,9,8,--0,0,--0,0,1,1,2,3,4,5,7,9,10,--  
R140) 0,0,1,1,2,3,4,5,8,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,6,5,--  
R141)  
0,0,1,1,2,3,4,5,8,9,-->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,--0,1,0,--0,0,--0,0,1,1,2,3,4,5,8,9,10,--  
R142)  
0,0,1,1,2,3,4,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,1,0,--0,1,0,--0,0,  
1,1,--0,0,1,1,2,3,4,6,7,8,9,--0,0,1,1,2,3,4,6,7,8,10,--  
R143)  
0,0,1,1,2,3,4,6,7,9,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,1,0,--0,1,0,--0,0,  
1,1,2,3,4,6,7,9,8,--0,0,--0,0,1,1,2,3,4,6,7,9,10,--  
R144) 0,0,1,1,2,3,4,6,8,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,5,4,--0,1,0,--  
R145)  
0,0,1,1,2,3,4,6,8,9,-->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,--0,1,0,--0,0,--0,0,1,1,2,3,4,6,8,9,10,--  
R146)  
0,0,1,1,2,3,4,7,8,9,-->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,--0,1,0,--0,0,--0,0,1,1,2,3,4,7,8,9,10,--  
R147)  
0,0,1,1,2,3,5,6,7,8,-->0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,1,0,--0,1,0,--0,0,1,  
1,--0,0,1,1,2,3,5,6,7,8,9,--0,0,1,1,2,3,5,6,7,8,10,--  
R148)  
0,0,1,1,2,3,5,6,7,9,-->0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,1,0,--0,1,0,--0,0,1,  
1,2,3,5,6,7,9,8,--0,0,--0,0,1,1,2,3,5,6,7,9,10,--  
R149) 0,0,1,1,2,3,5,6,8,7,-->0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,1,0,--  
R150)  
0,0,1,1,2,3,5,6,8,9,-->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,--0,1,0,--0,0,--0,0,1,1,2,3,5,6,8,9,10,--  
R151)  
0,0,1,1,2,3,5,7,8,9,-->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,--0,1,0,--0,0,--0,0,1,1,2,3,5,7,8,9,10,--  
R152)  
0,0,1,1,2,3,6,7,8,9,-->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,--0,1,0,--0,0,--0,0,1,1,2,3,6,7,8,9,10,--  
R153)  
0,0,1,1,2,4,5,6,7,8,-->0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,  
--0,0,1,1,2,4,5,6,7,8,9,--0,0,1,1,2,4,5,6,7,8,10,--  
R154)  
0,0,1,1,2,4,5,6,7,9,-->0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,  
2,4,5,6,7,9,8,--0,0,--0,0,1,1,2,4,5,6,7,9,10,--  
R155) 0,0,1,1,2,4,5,6,8,7,-->0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,1,0,--  
R156)  
0,0,1,1,2,4,5,6,8,9,-->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,--0,1,0,--0,0,--0,0,1,1,2,4,5,6,8,9,10,--

R157)

0,0,1,1,2,4,5,7,8,9,-->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,--0,1,0,--0,0,1,1,2,4,5,7,8,9,10,--

R158)

0,0,1,1,2,4,6,7,8,9,-->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,--0,1,0,--0,0,1,1,2,4,6,7,8,9,10,--

R159)

0,0,1,1,2,5,6,7,8,9,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,5,6,7,8,9,10,--

R160)

0,0,1,2,3,4,5,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,2,3,4,5,6,7,8,9,--0,0,1,2,3,4,5,6,7,8,10,--

R161)

0,0,1,2,3,4,5,6,7,9,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,3,4,5,6,7,9,8,--0,0,1,2,3,4,5,6,7,9,10,--

R162) 0,0,1,2,3,4,5,6,8,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--

R163)

0,0,1,2,3,4,5,6,8,9,-->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,--0,1,0,--0,0,1,2,3,4,5,6,8,9,10,--

R164)

0,0,1,2,3,4,5,7,8,9,-->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,--0,1,0,--0,0,1,2,3,4,5,7,8,9,10,--

R165)

0,0,1,2,3,4,6,7,8,9,-->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,--0,1,0,--0,0,1,2,3,4,6,7,8,9,10,--

R166)

0,0,1,2,3,5,6,7,8,9,-->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,--0,1,0,--0,1,0,--0,0,1,2,3,5,6,7,8,9,10,--

R167)

0,0,1,2,4,5,6,7,8,9,-->0,1,0,--0,1,0,--0,0,1,2,4,3,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,4,5,6,7,8,9,10,--

R168)

0,0,1,3,4,5,6,7,8,9,-->0,1,0,--0,0,1,3,2,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,3,4,5,6,7,8,9,10,--

R169)

0,1,2,3,4,5,6,7,8,9,-->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,--0,0,1,2,3,4,5,6,7,8,9,10,--

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, : 0,0,1,3,2, : 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,:  
0,0,1,1,2,5,6,7,: 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,:  
0,0,1,1,2,3,6,7,8,: 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,: 0,0,1,1,2,2,3,7,8,9,: 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,:  
0,0,1,2,3,4,5,6,7,8,: 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,:  
LEN=11) 0,0,1,1,2,2,3,3,4,4,5,: 0,0,1,1,2,2,3,3,4,5,6,: 0,0,1,1,2,2,3,3,4,5,7,:  
0,0,1,1,2,2,3,3,4,5,8,: 0,0,1,1,2,2,3,3,4,5,9,: 0,0,1,1,2,2,3,3,4,5,10,:  
0,0,1,1,2,2,3,3,4,6,7,: 0,0,1,1,2,2,3,3,4,6,8,: 0,0,1,1,2,2,3,3,4,6,9,:  
0,0,1,1,2,2,3,3,4,6,10,: 0,0,1,1,2,2,3,3,4,7,8,: 0,0,1,1,2,2,3,3,4,7,9,:  
0,0,1,1,2,2,3,3,4,7,10,: 0,0,1,1,2,2,3,3,4,8,9,: 0,0,1,1,2,2,3,3,4,8,10,:  
0,0,1,1,2,2,3,3,4,9,8,: 0,0,1,1,2,2,3,3,4,9,10,: 0,0,1,1,2,2,3,4,5,6,7,:  
0,0,1,1,2,2,3,4,5,6,8,: 0,0,1,1,2,2,3,4,5,6,9,: 0,0,1,1,2,2,3,4,5,6,10,:  
0,0,1,1,2,2,3,4,5,7,8,: 0,0,1,1,2,2,3,4,5,7,9,: 0,0,1,1,2,2,3,4,5,7,10,:  
0,0,1,1,2,2,3,4,5,8,9,: 0,0,1,1,2,2,3,4,5,8,10,: 0,0,1,1,2,2,3,4,5,9,8,:  
0,0,1,1,2,2,3,4,5,9,10,: 0,0,1,1,2,2,3,4,6,7,8,: 0,0,1,1,2,2,3,4,6,7,9,:  
0,0,1,1,2,2,3,4,6,7,10,: 0,0,1,1,2,2,3,4,6,8,9,: 0,0,1,1,2,2,3,4,6,8,10,:  
0,0,1,1,2,2,3,4,6,9,8,: 0,0,1,1,2,2,3,4,6,9,10,: 0,0,1,1,2,2,3,4,7,8,9,:

$0,0,1,1,2,2,3,4,7,8,10, : 0,0,1,1,2,2,3,4,7,9,8, : 0,0,1,1,2,2,3,4,7,9,10, :$   
 $0,0,1,1,2,2,3,4,8,9,10, : 0,0,1,1,2,2,3,5,6,7,8, : 0,0,1,1,2,2,3,5,6,7,9, :$   
 $0,0,1,1,2,2,3,5,6,7,10, : 0,0,1,1,2,2,3,5,6,8,9, : 0,0,1,1,2,2,3,5,6,8,10, :$   
 $0,0,1,1,2,2,3,5,6,9,8, : 0,0,1,1,2,2,3,5,6,9,10, : 0,0,1,1,2,2,3,5,7,8,9, :$   
 $0,0,1,1,2,2,3,5,7,8,10, : 0,0,1,1,2,2,3,5,7,9,8, : 0,0,1,1,2,2,3,5,7,9,10, :$   
 $0,0,1,1,2,2,3,5,8,9,10, : 0,0,1,1,2,2,3,6,7,8,9, : 0,0,1,1,2,2,3,6,7,8,10, :$   
 $0,0,1,1,2,2,3,6,7,9,8, : 0,0,1,1,2,2,3,6,7,9,10, : 0,0,1,1,2,2,3,6,8,9,10, :$   
 $0,0,1,1,2,2,3,7,8,9,10, : 0,0,1,1,2,3,4,5,6,7,8, : 0,0,1,1,2,3,4,5,6,7,9, :$   
 $0,0,1,1,2,3,4,5,6,7,10, : 0,0,1,1,2,3,4,5,6,8,9, : 0,0,1,1,2,3,4,5,6,8,10, :$   
 $0,0,1,1,2,3,4,5,6,9,8, : 0,0,1,1,2,3,4,5,6,9,10, : 0,0,1,1,2,3,4,5,7,8,9, :$   
 $0,0,1,1,2,3,4,5,7,8,10, : 0,0,1,1,2,3,4,5,7,9,8, : 0,0,1,1,2,3,4,5,7,9,10, :$   
 $0,0,1,1,2,3,4,5,8,9,10, : 0,0,1,1,2,3,4,6,7,8,9, : 0,0,1,1,2,3,4,6,7,8,10, :$   
 $0,0,1,1,2,3,4,6,7,9,8, : 0,0,1,1,2,3,4,6,7,9,10, : 0,0,1,1,2,3,4,6,8,9,10, :$   
 $0,0,1,1,2,3,4,7,8,9,10, : 0,0,1,1,2,3,5,6,7,8,9, : 0,0,1,1,2,3,5,6,7,8,10, :$   
 $0,0,1,1,2,3,5,6,7,9,8, : 0,0,1,1,2,3,5,6,7,9,10, : 0,0,1,1,2,3,5,6,8,9,10, :$   
 $0,0,1,1,2,3,5,7,8,9,10, : 0,0,1,1,2,3,6,7,8,9,10, : 0,0,1,1,2,4,5,6,7,8,9, :$   
 $0,0,1,1,2,4,5,6,7,8,10, : 0,0,1,1,2,4,5,6,7,9,8, : 0,0,1,1,2,4,5,6,7,9,10, :$   
 $0,0,1,1,2,4,5,6,8,9,10, : 0,0,1,1,2,4,5,7,8,9,10, : 0,0,1,1,2,4,6,7,8,9,10, :$   
 $0,0,1,1,2,5,6,7,8,9,10, : 0,0,1,2,3,4,5,6,7,8,9, : 0,0,1,2,3,4,5,6,7,8,10, :$   
 $0,0,1,2,3,4,5,6,7,9,8, : 0,0,1,2,3,4,5,6,7,9,10, : 0,0,1,2,3,4,5,6,8,9,10, :$   
 $0,0,1,2,3,4,5,7,8,9,10, : 0,0,1,2,3,4,6,7,8,9,10, : 0,0,1,2,3,5,6,7,8,9,10, :$   
 $0,0,1,2,4,5,6,7,8,9,10, : 0,0,1,3,4,5,6,7,8,9,10, : 0,1,2,3,4,5,6,7,8,9,10, :$   
 Number new nodes in level n is given by : 1,2,3,4,6,10,15,25,39,64,102,

-----Class

774-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][100][101][102][110][210]]$

-----

--

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)  $0,1,0, -->$
- 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)  $0,1,2,3, --> 0,1,0, --0,1,0, --0,1,0, --0,0, --0,1,2,3,4, --$
- 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)  $0,0,1,2,4, --> 0,1,0, --0,0,1,3,1, --0,1,0, --0,0, --0,0,1,2,4,5, --$
- R14)  $0,0,1,3,1, --> 0,1,0, --$
- R15)  $0,0,1,3,4, --> 0,0,1,3,1, --0,1,0, --0,1,0, --0,0, --0,0,1,3,4,5, --$
- 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,--0,1,0,--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,--0,0,1,3,1,--0,1,0,--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,--0,1,0,--0,0,--0,0,1,2,3,5,6,--  
R23) 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,--  
R24) 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,--  
R25) 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,--  
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)  
0,0,1,1,2,3,4,-->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,--  
R28)  
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,--  
R29)  
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,  
--  
R30)  
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,--  
R31)  
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,--  
R32) 0,0,1,1,2,5,2,-->0,0,1,3,1,--0,1,0,--  
R33)  
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,  
--  
R34)  
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,--  
R35)  
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,  
--  
R36)  
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,  
--  
R37)  
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,  
--  
R38)  
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,  
--  
R39)  
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,--  
R40)  
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,--

R41)

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,--

R42)

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,--

R43)

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,--

R44)

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,--

R45)

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,--

R46)

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,--

R47)

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,--

R48)

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,--

R49)

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,--

R50)

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,--

R51)

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,--

R52)

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,--

R53)

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,--

R54)

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,--

R55)

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,--

R56)

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,--

R57)

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,--

R58)

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,--

R59)

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,--

R60)

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,--

R61)

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,--

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)

0,0,1,1,2,2,3,4,5,-->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,--

R64)

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,--

R65)

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,--

R66)

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,--

R67)

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,--

R68)

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,--

R69)

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,--

R70)

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,--

R71)

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,--

R72) 0,0,1,1,2,2,3,7,3,-->0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--

R73)

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,--

R74)

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,--

R75)

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,--

R76)

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,--

R77)

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,--

R78)

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,--

R79)

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,--

R80)

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,--

R81)

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,--

R82)

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,--

R83)

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,--

R84)

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,--

R85)

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,--

R86)

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,--

R87)

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,--

R88)

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,--

R89)

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,--

R90)

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,--

R91)

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,--

R92)

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,--

R93)

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,--

R94)

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,--

R95)

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,--

R96)

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,--

R97)

0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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,--

R98)

0,0,1,1,2,2,3,3,4,5,-->0,1,0,--0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,6,--0,0,1,  
1,2,2,3,3,4,5,7,--0,0,1,1,2,2,3,3,4,5,8,--0,0,1,1,2,2,3,3,4,5,9,--0,0,1,1,2,2,3,3,4,  
5,10,--

R99)

0,0,1,1,2,2,3,3,4,6,-->0,0,1,3,1,--0,1,0,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,4,6,7,  
--0,0,1,1,2,2,3,3,4,6,8,--0,0,1,1,2,2,3,3,4,6,9,--0,0,1,1,2,2,3,3,4,6,10,--

R100)

0,0,1,1,2,2,3,3,4,7,-->0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,  
2,3,3,4,7,8,--0,0,1,1,2,2,3,3,4,7,9,--0,0,1,1,2,2,3,3,4,7,10,--

R101)

0,0,1,1,2,2,3,3,4,8,-->0,0,1,1,2,2,3,7,3,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,0,  
1,1,--0,0,1,1,2,2,3,3,4,8,9,--0,0,1,1,2,2,3,3,4,8,10,--

R102)

0,0,1,1,2,2,3,3,4,9,-->0,0,1,1,2,2,3,3,4,9,4,--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,--0,0,1,1,2,2,3,3,4,9,10,--

R103)

0,0,1,1,2,2,3,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,5,  
6,7,--0,0,1,1,2,2,3,4,5,6,8,--0,0,1,1,2,2,3,4,5,6,9,--0,0,1,1,2,2,3,4,5,6,10,--

R104)

0,0,1,1,2,2,3,4,5,7,-->0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,  
2,3,4,5,7,8,--0,0,1,1,2,2,3,4,5,7,9,--0,0,1,1,2,2,3,4,5,7,10,--

R105)

0,0,1,1,2,2,3,4,5,8,-->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,  
--0,0,1,1,2,2,3,4,5,8,9,--0,0,1,1,2,2,3,4,5,8,10,--

R106)

0,0,1,1,2,2,3,4,5,9,-->0,1,0,--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,--0,0,1,1,2,2,3,4,5,9,10,--

R107)

0,0,1,1,2,2,3,4,6,7,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,  
2,3,4,6,7,8,--0,0,1,1,2,2,3,4,6,7,9,--0,0,1,1,2,2,3,4,6,7,10,--

R108)

0,0,1,1,2,2,3,4,6,8,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,1,--0,  
0,1,1,2,2,3,4,6,8,9,--0,0,1,1,2,2,3,4,6,8,10,--

R109)

0,0,1,1,2,2,3,4,6,9,-->0,1,0,--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,--0,0,1,1,2,2,3,4,6,9,10,--

R110)

0,0,1,1,2,2,3,4,7,8,-->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,  
--0,0,1,1,2,2,3,4,7,8,9,--0,0,1,1,2,2,3,4,7,8,10,--

R111)

0,0,1,1,2,2,3,4,7,9,-->0,1,0,--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,--0,0,1,1,2,2,3,4,7,9,10,--

R112)

0,0,1,1,2,2,3,4,8,9,-->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,--0,1,0,--0,0,--0,0,1,1,2,2,3,4,8,9,10,--

R113)

0,0,1,1,2,2,3,5,6,7,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,  
2,3,5,6,7,8,--0,0,1,1,2,2,3,5,6,7,9,--0,0,1,1,2,2,3,5,6,7,10,--

R114)

0,0,1,1,2,2,3,5,6,8,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,1,--0,  
0,1,1,2,2,3,5,6,8,9,--0,0,1,1,2,2,3,5,6,8,10,--

R115)

0,0,1,1,2,2,3,5,6,9,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,  
0,--0,0,--0,0,1,1,2,2,3,5,6,9,10,--

R116)

0,0,1,1,2,2,3,5,7,8,-->0,0,1,3,1,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,1,--0,  
0,1,1,2,2,3,5,7,8,9,--0,0,1,1,2,2,3,5,7,8,10,--

R117)

0,0,1,1,2,2,3,5,7,9,-->0,0,1,3,1,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,3,1,--0,1,0,--  
0,0,--0,0,1,1,2,2,3,5,7,9,10,--

R118)

0,0,1,1,2,2,3,5,8,9,-->0,0,1,3,1,--0,1,0,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,1,  
0,--0,0,--0,0,1,1,2,2,3,5,8,9,10,--

R119)

0,0,1,1,2,2,3,6,7,8,-->0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,  
--0,0,1,1,2,2,3,6,7,8,9,--0,0,1,1,2,2,3,6,7,8,10,--

R120)

0,0,1,1,2,2,3,6,7,9,-->0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,  
0,--0,0,--0,0,1,1,2,2,3,6,7,9,10,--

R121)

0,0,1,1,2,2,3,6,8,9,-->0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,  
0,--0,0,--0,0,1,1,2,2,3,6,8,9,10,--

R122)

0,0,1,1,2,2,3,7,8,9,-->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,--0,1,0,--0,0,--0,0,1,1,2,2,3,7,8,9,10,--

R123)

0,0,1,1,2,3,4,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,2,--0,0,1,  
1,2,3,4,5,6,7,8,--0,0,1,1,2,3,4,5,6,7,9,--0,0,1,1,2,3,4,5,6,7,10,--

R124)

0,0,1,1,2,3,4,5,6,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,1,



--0,0,1,1,2,3,4,5,6,8,9,--0,0,1,1,2,3,4,5,6,8,10,--  
R125)  
0,0,1,1,2,3,4,5,6,9,-->0,1,0,--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,--0,0,1,1,2,3,4,5,6,9,10,--  
R126)  
0,0,1,1,2,3,4,5,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,1,  
--0,0,1,1,2,3,4,5,7,8,9,--0,0,1,1,2,3,4,5,7,8,10,--  
R127)  
0,0,1,1,2,3,4,5,7,9,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,3,1,--0,1,  
0,--0,0,--0,0,1,1,2,3,4,5,7,9,10,--  
R128)  
0,0,1,1,2,3,4,5,8,9,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--  
0,1,0,--0,0,--0,0,1,1,2,3,4,5,8,9,10,--  
R129)  
0,0,1,1,2,3,4,6,7,8,-->0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,  
--0,0,1,1,2,3,4,6,7,8,9,--0,0,1,1,2,3,4,6,7,8,10,--  
R130)  
0,0,1,1,2,3,4,6,7,9,-->0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,  
0,--0,0,--0,0,1,1,2,3,4,6,7,9,10,--  
R131)  
0,0,1,1,2,3,4,6,8,9,-->0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,  
0,--0,0,--0,0,1,1,2,3,4,6,8,9,10,--  
R132)  
0,0,1,1,2,3,4,7,8,9,-->0,1,0,--0,1,0,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,1,0,--  
0,1,0,--0,0,--0,0,1,1,2,3,4,7,8,9,10,--  
R133)  
0,0,1,1,2,3,5,6,7,8,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,  
--0,0,1,1,2,3,5,6,7,8,9,--0,0,1,1,2,3,5,6,7,8,10,--  
R134)  
0,0,1,1,2,3,5,6,7,9,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,  
0,--0,0,--0,0,1,1,2,3,5,6,7,9,10,--  
R135)  
0,0,1,1,2,3,5,6,8,9,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,  
0,--0,0,--0,0,1,1,2,3,5,6,8,9,10,--  
R136)  
0,0,1,1,2,3,5,7,8,9,-->0,1,0,--0,0,1,3,1,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,  
0,--0,0,--0,0,1,1,2,3,5,7,8,9,10,--  
R137)  
0,0,1,1,2,3,6,7,8,9,-->0,1,0,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--  
0,1,0,--0,0,--0,0,1,1,2,3,6,7,8,9,10,--  
R138)  
0,0,1,1,2,4,5,6,7,8,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,  
--0,0,1,1,2,4,5,6,7,8,9,--0,0,1,1,2,4,5,6,7,8,10,--  
R139)  
0,0,1,1,2,4,5,6,7,9,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,  
0,--0,0,--0,0,1,1,2,4,5,6,7,9,10,--  
R140)  
0,0,1,1,2,4,5,6,8,9,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,  
0,--0,0,--0,0,1,1,2,4,5,6,8,9,10,--  
R141)

0,0,1,1,2,4,5,7,8,9,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,  
0,--0,0,--0,0,1,1,2,4,5,7,8,9,10,--

R142)

0,0,1,1,2,4,6,7,8,9,-->0,0,1,3,1,--0,1,0,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,1,  
0,--0,0,--0,0,1,1,2,4,6,7,8,9,10,--

R143)

0,0,1,1,2,5,6,7,8,9,-->0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
0,1,0,--0,0,--0,0,1,1,2,5,6,7,8,9,10,--

R144)

0,0,1,2,3,4,5,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,  
1,1,--0,0,1,2,3,4,5,6,7,8,9,--0,0,1,2,3,4,5,6,7,8,10,--

R145)

0,0,1,2,3,4,5,6,7,9,-->0,1,0,--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,--0,0,1,2,3,4,5,6,7,9,10,--

R146)

0,0,1,2,3,4,5,6,8,9,-->0,1,0,--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,--0,0,1,2,3,4,5,6,8,9,10,--

R147)

0,0,1,2,3,4,5,7,8,9,-->0,1,0,--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,--0,0,1,2,3,4,5,7,8,9,10,--

R148)

0,0,1,2,3,4,6,7,8,9,-->0,1,0,--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,--0,0,1,2,3,4,6,7,8,9,10,--

R149)

0,0,1,2,3,5,6,7,8,9,-->0,1,0,--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,--0,0,1,2,3,5,6,7,8,9,10,--

R150)

0,0,1,2,4,5,6,7,8,9,-->0,1,0,--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,--0,0,1,2,4,5,6,7,8,9,10,--

R151)

0,0,1,3,4,5,6,7,8,9,-->0,0,1,3,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
0,1,0,--0,0,--0,0,1,3,4,5,6,7,8,9,10,--

R152)

0,1,2,3,4,5,6,7,8,9,-->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,--0,1,2,3,4,5,6,7,8,9,10,--

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,: 0,0,1,2,4,5,: 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, : 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, :  
LEN=11) 0,0,1,1,2,2,3,3,4,4,5, : 0,0,1,1,2,2,3,3,4,5,6, : 0,0,1,1,2,2,3,3,4,5,7, :  
0,0,1,1,2,2,3,3,4,5,8, : 0,0,1,1,2,2,3,3,4,5,9, : 0,0,1,1,2,2,3,3,4,5,10, :  
0,0,1,1,2,2,3,3,4,6,7, : 0,0,1,1,2,2,3,3,4,6,8, : 0,0,1,1,2,2,3,3,4,6,9, :  
0,0,1,1,2,2,3,3,4,6,10, : 0,0,1,1,2,2,3,3,4,7,8, : 0,0,1,1,2,2,3,3,4,7,9, :  
0,0,1,1,2,2,3,3,4,7,10, : 0,0,1,1,2,2,3,3,4,8,9, : 0,0,1,1,2,2,3,3,4,8,10, :  
0,0,1,1,2,2,3,3,4,9,4, : 0,0,1,1,2,2,3,3,4,9,10, : 0,0,1,1,2,2,3,4,5,6,7, :  
0,0,1,1,2,2,3,4,5,6,8, : 0,0,1,1,2,2,3,4,5,6,9, : 0,0,1,1,2,2,3,4,5,6,10, :  
0,0,1,1,2,2,3,4,5,7,8, : 0,0,1,1,2,2,3,4,5,7,9, : 0,0,1,1,2,2,3,4,5,7,10, :  
0,0,1,1,2,2,3,4,5,8,9, : 0,0,1,1,2,2,3,4,5,8,10, : 0,0,1,1,2,2,3,4,5,9,10, :  
0,0,1,1,2,2,3,4,6,7,8, : 0,0,1,1,2,2,3,4,6,7,9, : 0,0,1,1,2,2,3,4,6,7,10, :  
0,0,1,1,2,2,3,4,6,8,9, : 0,0,1,1,2,2,3,4,6,8,10, : 0,0,1,1,2,2,3,4,6,9,10, :  
0,0,1,1,2,2,3,4,7,8,9, : 0,0,1,1,2,2,3,4,7,8,10, : 0,0,1,1,2,2,3,4,7,9,10, :  
0,0,1,1,2,2,3,4,8,9,10, : 0,0,1,1,2,2,3,5,6,7,8, : 0,0,1,1,2,2,3,5,6,7,9, :  
0,0,1,1,2,2,3,5,6,7,10, : 0,0,1,1,2,2,3,5,6,8,9, : 0,0,1,1,2,2,3,5,6,8,10, :  
0,0,1,1,2,2,3,5,6,9,10, : 0,0,1,1,2,2,3,5,7,8,9, : 0,0,1,1,2,2,3,5,7,8,10, :  
0,0,1,1,2,2,3,5,7,9,10, : 0,0,1,1,2,2,3,5,8,9,10, : 0,0,1,1,2,2,3,6,7,8,9, :  
0,0,1,1,2,2,3,6,7,8,10, : 0,0,1,1,2,2,3,6,7,9,10, : 0,0,1,1,2,2,3,6,8,9,10, :  
0,0,1,1,2,2,3,7,8,9,10, : 0,0,1,1,2,3,4,5,6,7,8, : 0,0,1,1,2,3,4,5,6,7,9, :  
0,0,1,1,2,3,4,5,6,7,10, : 0,0,1,1,2,3,4,5,6,8,9, : 0,0,1,1,2,3,4,5,6,8,10, :  
0,0,1,1,2,3,4,5,6,9,10, : 0,0,1,1,2,3,4,5,7,8,9, : 0,0,1,1,2,3,4,5,7,8,10, :

$0,0,1,1,2,3,4,5,7,9,10, : 0,0,1,1,2,3,4,5,8,9,10, : 0,0,1,1,2,3,4,6,7,8,9, :$   
 $0,0,1,1,2,3,4,6,7,8,10, : 0,0,1,1,2,3,4,6,7,9,10, : 0,0,1,1,2,3,4,6,8,9,10, :$   
 $0,0,1,1,2,3,4,7,8,9,10, : 0,0,1,1,2,3,5,6,7,8,9, : 0,0,1,1,2,3,5,6,7,8,10, :$   
 $0,0,1,1,2,3,5,6,7,9,10, : 0,0,1,1,2,3,5,6,8,9,10, : 0,0,1,1,2,3,5,7,8,9,10, :$   
 $0,0,1,1,2,3,6,7,8,9,10, : 0,0,1,1,2,4,5,6,7,8,9, : 0,0,1,1,2,4,5,6,7,8,10, :$   
 $0,0,1,1,2,4,5,6,7,9,10, : 0,0,1,1,2,4,5,6,8,9,10, : 0,0,1,1,2,4,5,7,8,9,10, :$   
 $0,0,1,1,2,4,6,7,8,9,10, : 0,0,1,1,2,5,6,7,8,9,10, : 0,0,1,2,3,4,5,6,7,8,9, :$   
 $0,0,1,2,3,4,5,6,7,8,10, : 0,0,1,2,3,4,5,6,7,9,10, : 0,0,1,2,3,4,5,6,8,9,10, :$   
 $0,0,1,2,3,4,5,7,8,9,10, : 0,0,1,2,3,4,6,7,8,9,10, : 0,0,1,2,3,5,6,7,8,9,10, :$   
 $0,0,1,2,4,5,6,7,8,9,10, : 0,0,1,3,4,5,6,7,8,9,10, : 0,1,2,3,4,5,6,7,8,9,10, :$   
 Number new nodes in level n is given by :  $1,2,3,4,6,9,14,22,35,56,90,$

-----Class

775-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][100][101][102][120][201]]$

-----

--

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)  $0,1,0, -->$
- 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)  $0,0,1,3, -->0,1,0, --0,0,1,3,2, --0,0,1,3,3, --0,1, --$
- 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)  $0,0,1,3,2, -->0,1,0, --$
- R13)  $0,0,1,3,3, -->0,1,0, --0,0,1,3,2, --0,0,1, --0,1, --$
- 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)  $0,0,1,1,2,4, -->0,1,0, --0,0,1,3,2, --0,0,1,1,2,4,4, --0,0,1,2, --0,0,1,3, --$
- R17)  $0,0,1,1,2,5, -->0,1,0, --0,0,1,3,2, --0,0,1,1,2,5,4, --0,0,1,1,2,5,5, --0,1, --$
- 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)  $0,0,1,1,2,4,4, -->0,1,0, --0,0,1,3,2, --0,0,1,1,2, --0,0,1,2, --0,0,1,3, --$
- R21)  $0,0,1,1,2,5,4, -->0,1,0, --0,0,1,3,2, --$
- R22)  $0,0,1,1,2,5,5, -->0,1,0, --0,0,1,3,2, --0,0,1,1,2,5,4, --0,0,1, --0,1, --$
- R23)  $0,0,1,1,2,2,3,3, -->0,0,1,1,2,2,3,3,4, --0,0,1,1,2,2,3,4, --0,0,1,1,2,2,3,5, --0,0,1,1,2,2,3,6, --0,0,1,1,2,2,3,7, --$
- R24)  $0,0,1,1,2,2,3,4, -->0,1,0, --0,0,1,1,2,2,3,4,4, --0,0,1,1,2,2,3,4, --0,0,1,1,2,2,3,5, --0,0,1,1,2,2,3,6, --0,0,1,1,2,2,3,7, --$

R25)

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,--

R26)

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,--

R27)

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,--

R28)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,--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,--

R29)

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,--

R30)

0,0,1,1,2,2,3,5,5,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,2,3,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--

R31)

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,--0,0,1,2,--0,0,1,3,--

R32) 0,0,1,1,2,2,3,7,6,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--

R33)

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,--0,1,--

R34)

0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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)

0,0,1,1,2,2,3,3,4,5,-->0,1,0,--0,0,1,1,2,2,3,3,4,5,5,--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,--

R36)

0,0,1,1,2,2,3,3,4,6,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,2,3,3,4,6,6,--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)

0,0,1,1,2,2,3,3,4,7,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--0,0,1,1,2,2,3,3,4,7,7,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--

R38)

0,0,1,1,2,2,3,3,4,8,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--0,0,1,1,2,2,3,7,6,--0,0,1,1,2,2,3,3,4,8,8,--0,0,1,2,--0,0,1,3,--

R39)

0,0,1,1,2,2,3,3,4,9,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--0,0,1,1,2,2,3,7,6,--0,0,1,1,2,2,3,3,4,9,8,--0,0,1,1,2,2,3,3,4,9,9,--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, : 0,0,1,3,2, : 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, :  
 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, :  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5, : 0,0,1,1,2,2,3,3,4,5,5, : 0,0,1,1,2,2,3,3,4,6,6, :  
 0,0,1,1,2,2,3,3,4,7,7, : 0,0,1,1,2,2,3,3,4,8,8, : 0,0,1,1,2,2,3,3,4,9,8, :  
 0,0,1,1,2,2,3,3,4,9,9, :  
 Number new nodes in level n is given by : 1,2,3,3,4,4,5,5,6,6,7,

-----Class

776-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][100][101][102][120][210]]$

-----

--  
 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,-->
- 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,--0,1,0,--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,--0,1,0,--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,--0,1,0,--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,--0,0,1,3,1,--0,1,0,--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,--0,1,0,--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,--0,1,0,--
- R22) 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,--0,1,--
- R23) 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,4,--0,0,1,1,2,2,3,5,--0,0,1,1,2,2,3,6,--0,0,1,1,2,2,3,7,--
- R24) 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,--

R25)

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,--

R26)

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,--

R27)

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,--

R28)

0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,--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,--

R29)

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,--

R30)

0,0,1,1,2,2,3,5,5,-->0,0,1,3,1,--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,--

R31)

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,--0,0,1,2,--0,0,1,3,--

R32) 0,0,1,1,2,2,3,7,3,-->0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--

R33)

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,--0,1,--

R34)

0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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)

0,0,1,1,2,2,3,3,4,5,-->0,1,0,--0,0,1,1,2,2,3,3,4,5,5,--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,--

R36)

0,0,1,1,2,2,3,3,4,6,-->0,0,1,3,1,--0,1,0,--0,0,1,1,2,2,3,3,4,6,6,--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)

0,0,1,1,2,2,3,3,4,7,-->0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,2,3,3,4,7,7,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--

R38)

0,0,1,1,2,2,3,3,4,8,-->0,0,1,1,2,2,3,7,3,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,2,3,3,4,8,8,--0,0,1,2,--0,0,1,3,--

R39)

0,0,1,1,2,2,3,3,4,9,-->0,0,1,1,2,2,3,3,4,9,4,--0,0,1,1,2,2,3,7,3,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,0,1,1,2,2,3,3,4,9,9,--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,:  
 0,0,1,1,2,5,5,:  
 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,: 0,0,1,1,2,2,3,7,7,:  
 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,:  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5,: 0,0,1,1,2,2,3,3,4,5,5,: 0,0,1,1,2,2,3,3,4,6,6,:  
 0,0,1,1,2,2,3,3,4,7,7,: 0,0,1,1,2,2,3,3,4,8,8,: 0,0,1,1,2,2,3,3,4,9,4,:  
 0,0,1,1,2,2,3,3,4,9,9,:

Number new nodes in level n is given by : 1,2,3,3,4,4,5,5,6,6,7,

-----Class

777-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][100][101][102][201][210]]$

-----  
--

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,--0,1,2,--
- 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,--0,1,0,--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) 0,1,2,2,-->0,1,0,--0,1,0,--0,0,1,2,3,--0,1,2,3,--
- R11) 0,1,2,3,-->0,1,0,--0,1,0,--0,1,0,--0,1,2,3,3,--0,1,2,3,4,--
- R12) 0,0,1,1,2,-->0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,2,3,--0,1,2,3,--
- R13) 0,0,1,2,2,-->0,1,0,--0,0,1,1,2,3,--0,0,1,2,3,--0,1,2,3,--
- R14) 0,0,1,2,3,-->0,1,0,--0,1,0,--0,0,1,2,3,3,--0,0,1,2,3,4,--0,1,2,3,4,--
- R15) 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,--
- R16) 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,--
- R17) 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,--
- R18) 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,--
- R19) 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,--0,1,2,3,4,--
- R20) 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,--0,1,2,3,4,5,--
- 
- R21) 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,--
- R22) 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,--
- R23) 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,--



R24)

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,  
--

R25)

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,--0,0,1,2,3,4,5,  
--0,1,2,3,4,5,--

R26)

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,--0,1,2,3,  
4,5,--

R27)

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,  
--0,1,2,3,4,5,6,--

R28)

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,--

R29)

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,--

R30)

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,--

R31)

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,--

R32)

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,--0,0,1,2,3,  
4,5,--0,1,2,3,4,5,--

R33)

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,--  
0,0,1,2,3,4,5,6,--0,1,2,3,4,5,6,--

R34)

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,--0,1,2,3,4,5,6,--

R35)

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,--0,1,2,3,4,5,6,7,--

R36)

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,--

R37)

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,--

R38)

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,--

R39)

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,--0,1,2,3,4,5,--

R40)

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,

0,1,1,2,3,4,5,6,--0,0,1,2,3,4,5,6,--0,1,2,3,4,5,6,--  
 R41)  
 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,--0,0,1,2,3,4,5,6,--0,1,2,3,4,5,6,--  
 R42)  
 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,--0,0,1,2,3,4,5,6,7,--0,1,2,3,4,5,6,7,--  
 R43)  
 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,--0,1,2,3,4,5,6,7,--  
 R44)  
 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,--0,1,2,3,4,5,6,7,8,--  
 R45)  
 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,--  
 R46)  
 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,--  
 R47)  
 0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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,--  
 R48)  
 0,0,1,1,2,2,3,3,4,5,-->0,1,0,--0,0,1,1,2,2,3,3,4,5,5,--0,0,1,1,2,2,3,3,4,5,6,--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,--  
 R49)  
 0,0,1,1,2,2,3,4,5,5,-->0,1,0,--0,1,0,--0,0,1,1,2,2,3,3,4,5,6,--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,--  
 R50)  
 0,0,1,1,2,2,3,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,2,3,4,5,6,6,--0,0,1,1,2,2,  
 3,4,5,6,7,--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,--  
 R51)  
 0,0,1,1,2,3,4,5,6,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,2,3,4,5,6,7,--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,--  
 R52)  
 0,0,1,1,2,3,4,5,6,7,-->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,  
 7,--0,0,1,1,2,3,4,5,6,7,8,--0,0,1,2,3,4,5,6,7,8,--0,1,2,3,4,5,6,7,8,--  
 R53)  
 0,0,1,2,3,4,5,6,7,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,3,  
 4,5,6,7,8,--0,0,1,2,3,4,5,6,7,8,--0,1,2,3,4,5,6,7,8,--  
 R54)  
 0,0,1,2,3,4,5,6,7,8,-->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,  
 1,2,3,4,5,6,7,8,8,--0,0,1,2,3,4,5,6,7,8,9,--0,1,2,3,4,5,6,7,8,9,--  
 R55)  
 0,1,2,3,4,5,6,7,8,8,-->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,--0,0,1,2,3,4,5,6,7,8,9,--0,1,2,3,4,5,6,7,8,9,--  
 R56)  
 0,1,2,3,4,5,6,7,8,9,-->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,--0,1,2,3,4,5,6,7,8,9,9,--0,1,2,3,4,5,6,7,8,9,10,--

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, : 0,1,2,2, : 0,1,2,3, :  
 LEN=5) 0,0,1,1,2, : 0,0,1,2,2, : 0,0,1,2,3, : 0,1,2,3,3, : 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, : 0,0,1,1,2,3,3, : 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, : 0,0,1,1,2,2,3,4,4, : 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, :  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5, : 0,0,1,1,2,2,3,3,4,5,5, : 0,0,1,1,2,2,3,3,4,5,6, :  
 0,0,1,1,2,2,3,4,5,6,6, : 0,0,1,1,2,2,3,4,5,6,7, : 0,0,1,1,2,3,4,5,6,7,7, :  
 0,0,1,1,2,3,4,5,6,7,8, : 0,0,1,2,3,4,5,6,7,8,8, : 0,0,1,2,3,4,5,6,7,8,9, :  
 0,1,2,3,4,5,6,7,8,9,9, : 0,1,2,3,4,5,6,7,8,9,10, :  
 Number new nodes in level n is given by : 1,2,4,4,5,6,7,8,9,10,11,

-----Class

778-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][100][101][110][120][201]]$

-----

--

Rules of  $T[L]$ :

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,1, --0,1, --
- R3) 0,1, -->0,0, --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, --0,0,1,3,2, --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) 0,0,1,3,2, -->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, --0,0,1,1,2,4,3, --0,0,1,1, --0,0,1,2, --0,0,1,3, --
- R13) 0,0,1,1,2,5, -->0,0, --0,0,1,3,2, --0,0,1,1,2,5,4, --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) 0,0,1,1,2,4,3, -->0,0,1,1,2,2, --0,0,1,1,2, --0,0,1,2, --0,0,1,3, --
- R16) 0,0,1,1,2,5,4, -->0,0,1,1, --0,0,1,1,2,4,3, --0,0,1, --0,1, --

R17)

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

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

R19)

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,--

R20)

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,--

R21)

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,--

R22)

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,--

R23)

0,0,1,1,2,2,3,5,4,-->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,--

R24)

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,--0,0,1,2,--0,0,1,3,--

R25)

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,--0,1,--

R26)

0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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)

0,0,1,1,2,2,3,3,4,5,-->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,--0,0,1,1,2,2,3,3,4,6,--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,--

R28)

0,0,1,1,2,2,3,3,4,6,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,4,6,5,--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,--

R29)

0,0,1,1,2,2,3,3,4,7,-->0,0,1,1,2,2,--0,0,1,1,2,2,3,5,4,--0,0,1,1,2,2,3,3,4,7,6,--0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--

R30)

0,0,1,1,2,2,3,3,4,8,-->0,0,1,1,--0,0,1,1,2,4,3,--0,0,1,1,2,2,3,6,5,--0,0,1,1,2,2,3,3,4,8,7,--0,0,1,1,--0,0,1,2,--0,0,1,3,--

R31)

0,0,1,1,2,2,3,3,4,9,-->0,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--0,0,1,1,2,2,3,7,6,--0,0,1,1,2,2,3,3,4,9,8,--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, :

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

LEN=5) 0,0,1,1,2,: 0,0,1,3,2,:  
 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,: 0,0,1,1,2,4,3,: 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,:  
 LEN=9) 0,0,1,1,2,2,3,3,4,: 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,:  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5,: 0,0,1,1,2,2,3,3,4,6,5,: 0,0,1,1,2,2,3,3,4,7,6,:  
 0,0,1,1,2,2,3,3,4,8,7,: 0,0,1,1,2,2,3,3,4,9,8,:  
 Number new nodes in level n is given by : 1,2,1,3,2,4,3,5,4,6,5,

-----Class

779-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][100][101][110][120][210]]$

Rules of  $T[L]$ :  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,1,--0,1,--  
 R3) 0,1,-->0,0,--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,--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,--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,--0,0,1,3,1,--0,0,--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,--0,0,1,--0,1,--  
 R17)  
 0,0,1,1,2,2,3,3,-->0,0,1,1,2,2,3,3,4,--0,0,1,1,2,2,3,4,--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)  
 0,0,1,1,2,2,3,4,-->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,--  
 R19)  
 0,0,1,1,2,2,3,5,-->0,0,1,1,2,2,3,5,3,--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,--  
 R20)  
 0,0,1,1,2,2,3,6,-->0,0,1,1,2,2,3,6,3,--0,0,1,1,2,4,2,--0,0,1,1,--0,0,1,1,--0,0,1,2,

--0,0,1,3,--

R21)

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,--0,0,--0,0,--0,1,  
--

R22)

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,--

R23)

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,--

R24)

0,0,1,1,2,2,3,6,3,-->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,--

R25)

0,0,1,1,2,2,3,7,3,-->0,0,1,1,2,2,3,6,3,--0,0,1,1,2,4,2,--0,0,1,1,--0,0,1,--0,1,--

R26)

0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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)

0,0,1,1,2,2,3,3,4,5,-->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,--0,0,1,1,2,2,3,3,4,6,--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,--

R28)

0,0,1,1,2,2,3,3,4,6,-->0,0,1,1,2,2,3,3,4,6,4,--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,--

R29)

0,0,1,1,2,2,3,3,4,7,-->0,0,1,1,2,2,3,3,4,7,4,--0,0,1,1,2,2,3,5,3,--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,--

R30)

0,0,1,1,2,2,3,3,4,8,-->0,0,1,1,2,2,3,3,4,8,4,--0,0,1,1,2,2,3,6,3,--0,0,1,1,2,4,2,--  
0,0,1,1,--0,0,1,1,--0,0,1,2,--0,0,1,3,--

R31)

0,0,1,1,2,2,3,3,4,9,-->0,0,1,1,2,2,3,3,4,9,4,--0,0,1,1,2,2,3,7,3,--0,0,1,1,2,5,2,--  
0,0,1,3,1,--0,0,--0,0,--0,1,--

List of different nodes in T[L]

LEN=1) 0,:

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

LEN=3) 0,0,1,:

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,:

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,:

0,0,1,1,2,2,3,7,3,:

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,:

LEN=11) 0,0,1,1,2,2,3,3,4,4,5,: 0,0,1,1,2,2,3,3,4,6,4,: 0,0,1,1,2,2,3,3,4,7,4,:

0,0,1,1,2,2,3,3,4,8,4,: 0,0,1,1,2,2,3,3,4,9,4,:

Number new nodes in level n is given by : 1,2,1,3,2,4,3,5,4,6,5,

-----Class

780-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][100][101][110][201][210]]$

-----

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,1,--
- R3) 0,1,-->0,0,--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,--0,0,--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,--0,0,1,1,--0,0,1,2,3,--0,1,2,3,--
- R8) 0,1,2,3,-->0,0,--0,0,--0,0,--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,--0,0,1,1,--0,0,1,1,--0,0,1,2,3,4,--0,1,2,3,4,--
- R11) 0,1,2,3,4,-->0,0,--0,0,--0,0,--0,0,--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,--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,--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,--
- 
- R15) 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,--
- 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,--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,--0,1,2,3,4,5,--
- R18)  
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,--
- 0,1,2,3,4,5,6,--
- R19) 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,--
- 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,--
- 4,--0,1,2,3,4,--
- R21)  
0,0,1,1,2,2,3,4,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,--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,--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,--
- 0,0,1,2,3,4,5,6,--0,1,2,3,4,5,6,--
- R23)  
0,0,1,2,3,4,5,6,-->0,0,1,1,--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,--
- R24)

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,--

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,--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,--

R27)

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,--0,0,1,2,3,4,5,6,7,--0,1,2,3,4,5,6,7,--

R28)

0,0,1,2,3,4,5,6,7,-->0,0,1,1,--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,--

R29)

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,--

R30)

0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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,--

R31)

0,0,1,1,2,2,3,3,4,5,-->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,  
4,5,6,--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,--

R32)

0,0,1,1,2,2,3,4,5,6,-->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,  
1,2,2,3,3,--0,0,1,1,2,2,3,4,5,6,7,--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,--

R33)

0,0,1,1,2,3,4,5,6,7,-->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,--0,0,1,1,2,2,--0,0,1,1,2,3,4,5,6,7,8,--0,0,1,2,3,4,5,6,7,8,--0,1,2,3,4,5,6,  
,7,8,--

R34)

0,0,1,2,3,4,5,6,7,8,-->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,  
0,0,1,1,--0,0,1,1,--0,0,1,2,3,4,5,6,7,8,9,--0,1,2,3,4,5,6,7,8,9,--

R35)

0,1,2,3,4,5,6,7,8,9,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,  
0,1,2,3,4,5,6,7,8,9,10,--

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,:  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5,: 0,0,1,1,2,2,3,3,4,5,6,: 0,0,1,1,2,2,3,4,5,6,7,:  
 0,0,1,1,2,3,4,5,6,7,8,: 0,0,1,2,3,4,5,6,7,8,9,: 0,1,2,3,4,5,6,7,8,9,10,:  
 Number new nodes in level n is given by : 1,2,2,3,3,4,4,5,5,6,6,

-----Class

781-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][100][101][120][201][210]]$

-----

--  
Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,1,--
- R3) 0,1,-->0,0,--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,--0,0,--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,-->0,0,1,1,--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,--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,--0,0,1,1,--0,0,1,1,2,4,4,--0,0,1,2,--0,0,1,3,--
- R15) 0,0,1,1,2,5,-->0,0,--0,0,--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,-->0,0,1,1,2,2,--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,--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,--0,0,1,1,2,2,--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,--0,0,1,1,--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,--0,0,--0,0,--0,0,--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,--

R30)

0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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)

0,0,1,1,2,2,3,3,4,5,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,5,--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,--

R32)

0,0,1,1,2,2,3,3,4,6,-->0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,4,6,6,--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,--

R33)

0,0,1,1,2,2,3,3,4,7,-->0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,--0,0,1,1,2,2,3,3,4,7,7,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--

R34)

0,0,1,1,2,2,3,3,4,8,-->0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,--0,0,1,1,2,2,3,3,4,8,8,--0,0,1,2,--0,0,1,3,--

R35)

0,0,1,1,2,2,3,3,4,9,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,1,1,2,2,3,3,4,9,9,--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, :

LEN=11) 0,0,1,1,2,2,3,3,4,4,5, : 0,0,1,1,2,2,3,3,4,5,5, : 0,0,1,1,2,2,3,3,4,6,6, :

0,0,1,1,2,2,3,3,4,7,7, : 0,0,1,1,2,2,3,3,4,8,8, : 0,0,1,1,2,2,3,3,4,9,9, :

Number new nodes in level n is given by : 1,2,2,3,3,4,4,5,5,6,6,

-----Class

--

Rules of  $T[L]$ :

- R1)  $0, -- \rightarrow 0, 0, -- 0, 1, --$   
R2)  $0, 0, -- \rightarrow 0, 0, 1, -- 0, 1, --$   
R3)  $0, 1, -- \rightarrow 0, 1, 0, -- 0, 0, -- 0, 1, --$   
R4)  $0, 0, 1, -- \rightarrow 0, 0, 1, 1, -- 0, 0, 1, 2, -- 0, 0, 1, 3, --$   
R5)  $0, 1, 0, -- \rightarrow 0, 1, 0, 1, --$   
R6)  $0, 0, 1, 1, -- \rightarrow 0, 0, 1, 1, 2, -- 0, 0, 1, 2, -- 0, 0, 1, 3, --$   
R7)  $0, 0, 1, 2, -- \rightarrow 0, 1, 0, -- 0, 0, 1, 1, -- 0, 0, 1, 2, -- 0, 0, 1, 3, --$   
R8)  $0, 0, 1, 3, -- \rightarrow 0, 1, 0, -- 0, 0, 1, 3, 2, -- 0, 0, -- 0, 1, --$   
R9)  $0, 1, 0, 1, -- \rightarrow$   
R10)  $0, 0, 1, 1, 2, -- \rightarrow 0, 0, 1, 1, 2, 2, -- 0, 0, 1, 1, 2, 3, -- 0, 0, 1, 1, 2, 4, -- 0, 0, 1, 1, 2, 5, --$   
R11)  $0, 0, 1, 3, 2, -- \rightarrow 0, 1, 0, 1, -- 0, 1, 0, 1, --$   
R12)  $0, 0, 1, 1, 2, 2, -- \rightarrow 0, 0, 1, 1, 2, 2, 3, -- 0, 0, 1, 1, 2, 3, -- 0, 0, 1, 1, 2, 4, -- 0, 0, 1, 1, 2, 5, --$   
R13)  $0, 0, 1, 1, 2, 3, -- \rightarrow 0, 1, 0, -- 0, 0, 1, 1, 2, 2, -- 0, 0, 1, 1, 2, 3, -- 0, 0, 1, 1, 2, 4, -- 0, 0, 1, 1, 2, 5, --$   
R14)  $0, 0, 1, 1, 2, 4, -- \rightarrow 0, 1, 0, -- 0, 0, 1, 3, 2, -- 0, 0, 1, 1, -- 0, 0, 1, 2, -- 0, 0, 1, 3, --$   
R15)  $0, 0, 1, 1, 2, 5, -- \rightarrow 0, 1, 0, -- 0, 0, 1, 3, 2, -- 0, 0, 1, 1, 2, 5, 4, -- 0, 0, -- 0, 1, --$   
R16)  $0, 0, 1, 1, 2, 2, 3, -- \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, -- 0, 0, 1, 1, 2, 2, 3, 4, -- 0, 0, 1, 1, 2, 2, 3, 5, -- 0, 0, 1, 1, 2, 2, 3, 6, -- 0, 0, 1, 1, 2, 2, 3, 7, --$   
R17)  $0, 0, 1, 1, 2, 5, 4, -- \rightarrow 0, 1, 0, 1, -- 0, 1, 0, -- 0, 1, 0, 1, --$   
R18)  $0, 0, 1, 1, 2, 2, 3, 3, -- \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, -- 0, 0, 1, 1, 2, 2, 3, 4, -- 0, 0, 1, 1, 2, 2, 3, 5, -- 0, 0, 1, 1, 2, 2, 3, 6, -- 0, 0, 1, 1, 2, 2, 3, 7, --$   
R19)  $0, 0, 1, 1, 2, 2, 3, 4, -- \rightarrow 0, 1, 0, -- 0, 0, 1, 1, 2, 2, 3, 3, -- 0, 0, 1, 1, 2, 2, 3, 4, -- 0, 0, 1, 1, 2, 2, 3, 5, -- 0, 0, 1, 1, 2, 2, 3, 6, -- 0, 0, 1, 1, 2, 2, 3, 7, --$   
R20)  $0, 0, 1, 1, 2, 2, 3, 5, -- \rightarrow 0, 1, 0, -- 0, 0, 1, 3, 2, -- 0, 0, 1, 1, 2, 2, -- 0, 0, 1, 1, 2, 3, -- 0, 0, 1, 1, 2, 4, -- 0, 0, 1, 1, 2, 5, --$   
R21)  $0, 0, 1, 1, 2, 2, 3, 6, -- \rightarrow 0, 1, 0, -- 0, 0, 1, 3, 2, -- 0, 0, 1, 1, 2, 5, 4, -- 0, 0, 1, 1, -- 0, 0, 1, 2, -- 0, 0, 1, 3, --$   
R22)  $0, 0, 1, 1, 2, 2, 3, 7, -- \rightarrow 0, 1, 0, -- 0, 0, 1, 3, 2, -- 0, 0, 1, 1, 2, 5, 4, -- 0, 0, 1, 1, 2, 2, 3, 7, 6, -- 0, 0, -- 0, 1, --$   
R23)  $0, 0, 1, 1, 2, 2, 3, 3, 4, -- \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, 4, -- 0, 0, 1, 1, 2, 2, 3, 3, 4, 5, -- 0, 0, 1, 1, 2, 2, 3, 3, 4, 6, -- 0, 0, 1, 1, 2, 2, 3, 3, 4, 7, -- 0, 0, 1, 1, 2, 2, 3, 3, 4, 8, -- 0, 0, 1, 1, 2, 2, 3, 3, 4, 9, --$   
R24)  $0, 0, 1, 1, 2, 2, 3, 7, 6, -- \rightarrow 0, 1, 0, 1, -- 0, 1, 0, -- 0, 0, 1, 1, 2, 2, 3, 7, 6, 5, -- 0, 1, 0, 1, --$   
R25)  $0, 0, 1, 1, 2, 2, 3, 3, 4, 4, -- \rightarrow 0, 0, 1, 1, 2, 2, 3, 3, 4, 4, 5, -- 0, 0, 1, 1, 2, 2, 3, 3, 4, 5, -- 0, 0, 1, 1, 2, 2, 3, 3, 4, 6, -- 0, 0, 1, 1, 2, 2, 3, 3, 4, 7, -- 0, 0, 1, 1, 2, 2, 3, 3, 4, 8, -- 0, 0, 1, 1, 2, 2, 3, 3, 4, 9, --$   
R26)  $0, 0, 1, 1, 2, 2, 3, 3, 4, 5, -- \rightarrow 0, 1, 0, -- 0, 0, 1, 1, 2, 2, 3, 3, 4, 4, -- 0, 0, 1, 1, 2, 2, 3, 3, 4, 5, -- 0, 0, 1, 1, 2, 2, 3, 3, 4, 6, -- 0, 0, 1, 1, 2, 2, 3, 3, 4, 7, -- 0, 0, 1, 1, 2, 2, 3, 3, 4, 8, -- 0, 0, 1, 1, 2, 2, 3, 3, 4, 9, --$

R27)

0,0,1,1,2,2,3,3,4,6,-->0,1,0,--0,0,1,3,2,--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)

0,0,1,1,2,2,3,3,4,7,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--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)

0,0,1,1,2,2,3,3,4,8,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--0,0,1,1,2,2,3,7,6,--0,0,1,1,--0,0,1,2,--0,0,1,3,--

R30)

0,0,1,1,2,2,3,3,4,9,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--0,0,1,1,2,2,3,7,6,--0,0,1,1,2,2,3,3,4,9,8,--0,0,--0,1,--

R31) 0,0,1,1,2,2,3,7,6,5,-->0,1,0,1,--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,:

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,: 0,0,1,3,2,:

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,: 0,0,1,1,2,5,4,:

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,: 0,0,1,1,2,2,3,7,6,:

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,:

0,0,1,1,2,2,3,7,6,5,:

LEN=11) 0,0,1,1,2,2,3,3,4,4,5,: 0,0,1,1,2,2,3,3,4,9,8,:

Number new nodes in level n is given by : 1,2,2,4,2,4,2,5,2,7,2,

-----Class

783-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[000][100][102][110][120][210]]

-----

--

Rules of T[L]:

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

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

R3) 0,1,-->0,1,0,--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,--0,1,0,--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) 0,0,1,1,2,2,-->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,-->0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--

R14) 0,0,1,1,2,4,-->0,0,1,3,1,--0,1,0,--0,0,1,1,--0,0,1,2,--0,0,1,3,--  
R15) 0,0,1,1,2,5,-->0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--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) 0,0,1,1,2,5,2,-->0,0,1,3,1,--0,1,0,--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,-->0,1,0,--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,--  
R20)  
0,0,1,1,2,2,3,5,-->0,0,1,3,1,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,  
0,1,1,2,5,--  
R21)  
0,0,1,1,2,2,3,6,-->0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--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,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--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) 0,0,1,1,2,2,3,7,3,-->0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,1,0,1,--  
R25)  
0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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)  
0,0,1,1,2,2,3,3,4,5,-->0,1,0,--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)  
0,0,1,1,2,2,3,3,4,6,-->0,0,1,3,1,--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)  
0,0,1,1,2,2,3,3,4,7,-->0,0,1,1,2,5,2,--0,0,1,3,1,--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,--  
R29)  
0,0,1,1,2,2,3,3,4,8,-->0,0,1,1,2,2,3,7,3,--0,0,1,1,2,5,2,--0,0,1,3,1,--0,1,0,--0,0,  
1,1,--0,0,1,2,--0,0,1,3,--  
R30)  
0,0,1,1,2,2,3,3,4,9,-->0,0,1,1,2,2,3,3,4,9,4,--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,--0,1,--  
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, :  
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,:  
 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,:  
 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,:  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5,: 0,0,1,1,2,2,3,3,4,9,4,:  
 Number new nodes in level n is given by : 1,2,2,4,2,4,2,5,2,6,2,

-----Class

784-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][100][102][110][201][210]]$

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

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,1,--
- R3) 0,1,-->0,1,0,--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,--0,1,0,--0,0,--0,1,2,3,--
- 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,--0,1,0,--0,0,--0,1,2,3,4,--
- R15) 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,--
- R16) 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,--
- R17)
- 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,--
- 
- R18) 0,0,1,1,2,4,-->0,1,0,--0,1,0,--0,0,1,1,--0,0,1,2,3,4,--0,0,1,2,3,5,--
- R19) 0,0,1,1,2,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,--
- R20)
- 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,--
- 
- R21) 0,0,1,2,3,5,-->0,1,0,1,--0,1,0,1,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,--
- R22)
- 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,--
- 
- R23)
- 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,--
- R24)
- 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,--
- R25)

0,0,1,1,2,3,5,-->0,1,0,1,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,2,3,4,5,--0,0,1,2,3,4,6,  
--

R26) 0,0,1,1,2,3,6,-->0,1,0,1,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,--  
R27)

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,--

R28)

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,--0,0,--0,1,2,3,4,5,6,  
--

R29)

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,  
1,2,3,4,5,6,7,--

R30)

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,--

R31)

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,--

R32)

0,0,1,1,2,2,3,5,-->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,--

R33)

0,0,1,1,2,2,3,6,-->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,  
--

R34) 0,0,1,1,2,2,3,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,--  
R35)

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,--

R36)

0,0,1,1,2,3,4,6,-->0,1,0,1,--0,1,0,1,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,2,3,4,5,6,--  
0,0,1,2,3,4,5,7,--

R37)

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,--0,0,--0,1,2,3,4,5,6,  
--

R38)

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,--

R39)

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,--0,0,--0,  
1,2,3,4,5,6,7,--

R40)

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,--

R41)

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,--

R42)

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,--

R43)

0,0,1,1,2,2,3,4,6,-->0,1,0,1,--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,--

R44)

0,0,1,1,2,2,3,4,7,-->0,1,0,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,2,3,4,5,6,--  
0,0,1,2,3,4,5,7,--

R45)

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,--0,0,--0,1,2,3,4,5,6,  
--

R46)

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,--

R47)

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,--0,0,1,1,--0,0,1,  
2,3,4,5,6,7,--0,0,1,2,3,4,5,6,8,--

R48)

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,--0,0,--0,  
1,2,3,4,5,6,7,--

R49)

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,--

R50)

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,--0,0,--0,1,2,3,4,5,6,7,8,--

R51)

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,--

R52)

0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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,--

R53)

0,0,1,1,2,2,3,3,4,5,-->0,1,0,--0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,6,--0,0,1,  
1,2,2,3,3,4,5,7,--0,0,1,1,2,2,3,3,4,5,8,--0,0,1,1,2,2,3,3,4,5,9,--0,0,1,1,2,2,3,3,4,  
,5,10,--

R54)

0,0,1,1,2,2,3,3,4,6,-->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,--

R55)

0,0,1,1,2,2,3,3,4,7,-->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,--

R56)

0,0,1,1,2,2,3,3,4,8,-->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,--

R57)

0,0,1,1,2,2,3,3,4,9,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,2,3,4,5,6,  
--

R58)

0,0,1,1,2,2,3,4,5,6,-->0,1,0,1,--0,1,0,1,--0,1,0,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,  
4,5,6,7,--0,0,1,1,2,2,3,4,5,6,8,--0,0,1,1,2,2,3,4,5,6,9,--0,0,1,1,2,2,3,4,5,6,10,--

R59)

0,0,1,1,2,2,3,4,5,7,-->0,1,0,1,--0,1,0,1,--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,--  
 R60)  
 0,0,1,1,2,2,3,4,5,8,-->0,1,0,1,--0,1,0,1,--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,--  
 R61)  
 0,0,1,1,2,2,3,4,5,9,-->0,1,0,1,--0,1,0,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,  
 1,2,3,4,5,6,7,--  
 R62)  
 0,0,1,1,2,3,4,5,6,7,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--0,0,1,1,2,2,  
 --0,0,1,1,2,3,4,5,6,7,8,--0,0,1,1,2,3,4,5,6,7,9,--0,0,1,1,2,3,4,5,6,7,10,--  
 R63)  
 0,0,1,1,2,3,4,5,6,8,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,--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,--  
 R64)  
 0,0,1,1,2,3,4,5,6,9,-->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,--0,0,--0,1,2,3,4,5,6,7,8,--  
 R65)  
 0,0,1,2,3,4,5,6,7,8,-->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,--0,0,1,1,--0,0,1,2,3,4,5,6,7,8,9,--0,0,1,2,3,4,5,6,7,8,10,--  
 R66)  
 0,0,1,2,3,4,5,6,7,9,-->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,--0,0,--0,1,2,3,4,5,6,7,8,9,--  
 R67)  
 0,1,2,3,4,5,6,7,8,9,-->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,--0,1,0,--0,0,--0,1,2,3,4,5,6,7,8,9,10,--  
 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, : 0,1,2,3,4, :  
 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, : 0,1,2,3,4,5, :  
 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, :  
 0,0,1,2,3,4,5, : 0,0,1,2,3,4,6, : 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, :  
 0,0,1,2,3,4,5,6, : 0,0,1,2,3,4,5,7, : 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, : 0,0,1,1,2,3,4,5,6, : 0,0,1,1,2,3,4,5,7, :  
 0,0,1,1,2,3,4,5,8, : 0,0,1,2,3,4,5,6,7, : 0,0,1,2,3,4,5,6,8, : 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, : 0,0,1,1,2,3,4,5,6,7, : 0,0,1,1,2,3,4,5,6,8, :  
 0,0,1,1,2,3,4,5,6,9, : 0,0,1,2,3,4,5,6,7,8, : 0,0,1,2,3,4,5,6,7,9, :  
 0,1,2,3,4,5,6,7,8,9, :  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5, : 0,0,1,1,2,2,3,3,4,5,6, : 0,0,1,1,2,2,3,3,4,5,7, :  
 0,0,1,1,2,2,3,3,4,5,8, : 0,0,1,1,2,2,3,3,4,5,9, : 0,0,1,1,2,2,3,3,4,5,10, :  
 0,0,1,1,2,2,3,4,5,6,7, : 0,0,1,1,2,2,3,4,5,6,8, : 0,0,1,1,2,2,3,4,5,6,9, :

0,0,1,1,2,2,3,4,5,6,10, : 0,0,1,1,2,3,4,5,6,7,8, : 0,0,1,1,2,3,4,5,6,7,9, :  
 0,0,1,1,2,3,4,5,6,7,10, : 0,0,1,2,3,4,5,6,7,8,9, : 0,0,1,2,3,4,5,6,7,8,10, :  
 0,1,2,3,4,5,6,7,8,9,10, :  
 Number new nodes in level n is given by : 1,2,3,5,4,7,7,11,11,16,16,

-----Class

785-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][100][102][120][201][210]]$

-----

--

Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,1, --0,1, --
- R3) 0,1, -->0,1,0, --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, --0,1,0, --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) 0,0,1,3,3, -->0,1,0,1, --0,1,0,1, --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, -->0,1,0, --0,1,0, --0,0,1,1,2,4,4, --0,0,1,2, --0,0,1,3, --
- R17) 0,0,1,1,2,5, -->0,1,0, --0,1,0, --0,1,0, --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, -->0,1,0,1, --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, --
- R20) 0,0,1,1,2,4,4, -->0,1,0,1, --0,1,0,1, --0,0,1,1,2, --0,0,1,2, --0,0,1,3, --
- R21) 0,0,1,1,2,5,5, -->0,1,0,1, --0,1,0,1, --0,1,0,1, --0,0,1, --0,1, --
- R22) 0,0,1,1,2,2,3,3, -->0,0,1,1,2,2,3,3,4, --0,0,1,1,2,2,3,4, --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) 0,0,1,1,2,2,3,4, -->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, --
- R24) 0,0,1,1,2,2,3,5, -->0,1,0, --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, --
- R25) 0,0,1,1,2,2,3,6, -->0,1,0, --0,1,0, --0,1,0, --0,0,1,1,2,2,3,6,6, --0,0,1,2, --0,0,1,3, --
- R26) 0,0,1,1,2,2,3,7, -->0,1,0, --0,1,0, --0,1,0, --0,1,0, --0,0,1,1,2,2,3,7,7, --0,1, --
- R27)

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,--

R28)

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,--

R29)

0,0,1,1,2,2,3,5,5,-->0,1,0,1,--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,--

R30)

0,0,1,1,2,2,3,6,6,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,0,1,1,2,--0,0,1,2,--0,0,1,3,--

R31)

0,0,1,1,2,2,3,7,7,-->0,1,0,1,--0,1,0,1,--0,1,0,1,--0,1,0,1,--0,0,1,--0,1,--

R32)

0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--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)

0,0,1,1,2,2,3,3,4,5,-->0,1,0,--0,0,1,1,2,2,3,3,4,5,5,--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)

0,0,1,1,2,2,3,3,4,6,-->0,1,0,--0,1,0,--0,0,1,1,2,2,3,3,4,6,6,--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)

0,0,1,1,2,2,3,3,4,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,2,3,3,4,7,7,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--

R36)

0,0,1,1,2,2,3,3,4,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,2,3,3,4,8,8,--0,0,1,2,--0,0,1,3,--

R37)

0,0,1,1,2,2,3,3,4,9,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,2,3,3,4,9,9,--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,: 0,0,1,3,3,:

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,:

LEN=11) 0,0,1,1,2,2,3,3,4,4,5,: 0,0,1,1,2,2,3,3,4,5,5,: 0,0,1,1,2,2,3,3,4,6,6,:

0,0,1,1,2,2,3,3,4,7,7,: 0,0,1,1,2,2,3,3,4,8,8,: 0,0,1,1,2,2,3,3,4,9,9,:

Number new nodes in level n is given by : 1,2,3,4,3,4,4,5,5,6,6,

-----Class

786-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][100][110][120][201][210]]$

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

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

R2)  $0, 0, -- \rightarrow 0, 0, 1, --0, 1, --$

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

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

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

R6)  $0, 0, 1, 2, -- \rightarrow 0, 0, 1, 1, 2, --0, 0, 1, 1, --0, 0, 1, 2, --0, 0, 1, 3, --$

R7)  $0, 0, 1, 3, -- \rightarrow 0, 0, 1, --0, 0, 1, --0, 0, --0, 1, --$

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

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

R10)

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

R11)  $0, 0, 1, 1, 2, 4, -- \rightarrow 0, 0, 1, 1, 2, --0, 0, 1, 1, 2, --0, 0, 1, 1, --0, 0, 1, 2, --0, 0, 1, 3, --$

R12)  $0, 0, 1, 1, 2, 5, -- \rightarrow 0, 0, 1, --0, 0, 1, --0, 0, 1, --0, 0, --0, 1, --$

R13)

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

R14)

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

R15)

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

R16)

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

R17)

$0, 0, 1, 1, 2, 2, 3, 6, -- \rightarrow 0, 0, 1, 1, 2, --0, 0, 1, 1, 2, --0, 0, 1, 1, 2, --0, 0, 1, 1, --0, 0, 1, 2, --0, 0, 1, 3, --$

R18)  $0, 0, 1, 1, 2, 2, 3, 7, -- \rightarrow 0, 0, 1, --0, 0, 1, --0, 0, 1, --0, 0, 1, --0, 0, --0, 1, --$

R19)

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

R20)

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

R21)

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

R22)

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

R23)

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

R24)

0,0,1,1,2,2,3,3,4,8,-->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,--0,0,1,3,--

R25) 0,0,1,1,2,2,3,3,4,9,-->0,0,1,--0,0,1,--0,0,1,--0,0,1,--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) 0,0,1,:

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,:

LEN=11) 0,0,1,1,2,2,3,3,4,4,5,:

Number new nodes in level n is given by : 1,2,1,3,1,4,1,5,1,6,1,

-----Class

787-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][101][102][110][120][201]]$

-----

--

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,-->

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,--

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

R14) 0,0,1,3,2,-->0,1,0,--0,1,0,--

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)

0,0,1,1,2,3,-->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,--

R17) 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,--

R18) 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,--

R19) 0,0,1,1,4,3,-->0,0,2,1,--0,1,0,--

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,-->0,0,2,1,--0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--  
R22) 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,--  
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) 0,0,1,1,2,5,4,-->0,1,0,--0,0,1,3,2,--0,1,0,--  
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)  
0,0,1,1,2,2,3,4,-->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,--  
R27)  
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,--  
R28)  
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,  
--  
R29)  
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,--  
R30) 0,0,1,1,2,2,6,5,-->0,0,2,1,--0,0,1,1,4,3,--0,1,0,--  
R31)  
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,--  
R32)  
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,--  
R33)  
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,--  
R34)  
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,--  
R35)  
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,--  
R36) 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,--  
R37)  
0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--0,0,1,1,2,2,3,3,4,4,6,--0,0,1,1,2,2,  
3,3,4,4,7,--0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,  
--  
R38)  
0,0,1,1,2,2,3,3,4,5,-->0,1,0,--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,--  
R39)  
0,0,1,1,2,2,3,3,4,6,-->0,1,0,--0,0,1,3,2,--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,--  
R40)  
0,0,1,1,2,2,3,3,4,7,-->0,1,0,--0,0,1,3,2,--0,0,1,1,2,5,4,--0,0,1,1,2,2,--0,0,1,1,2,  
3,--0,0,1,1,2,4,--0,0,1,1,2,5,--  
R41)

$0,0,1,1,2,2,3,3,4,8, \rightarrow 0,1,0, \rightarrow 0,0,1,3,2, \rightarrow 0,0,1,1,2,5,4, \rightarrow 0,0,1,1,2,2,3,7,6, \rightarrow 0,0,1,1, \rightarrow 0,0,1,2, \rightarrow 0,0,1,3, \rightarrow$   
R42)  
 $0,0,1,1,2,2,3,3,4,9, \rightarrow 0,1,0, \rightarrow 0,0,1,3,2, \rightarrow 0,0,1,1,2,5,4, \rightarrow 0,0,1,1,2,2,3,7,6, \rightarrow 0,0,1,1,2,2,3,3,4,9,8, \rightarrow 0,0, \rightarrow 0,1, \rightarrow$   
R43)  $0,0,1,1,2,2,3,3,8,7, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,4,3, \rightarrow 0,0,1,1,2,2,6,5, \rightarrow 0,1,0, \rightarrow$   
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) 0,0,1,1, : 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, : 0,0,1,1,4,3, :  
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, :  
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, :  
LEN=11) 0,0,1,1,2,2,3,3,4,4,5, : 0,0,1,1,2,2,3,3,4,4,6, : 0,0,1,1,2,2,3,3,4,4,7, :  
0,0,1,1,2,2,3,3,4,4,8, : 0,0,1,1,2,2,3,3,4,4,9, : 0,0,1,1,2,2,3,3,4,4,10, :  
0,0,1,1,2,2,3,3,4,9,8, :  
Number new nodes in level n is given by : 1,2,3,4,4,5,5,6,6,7,7,

-----Class

788-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][101][102][110][120][210]]$

-----

--

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)  $0,1,0, \rightarrow$
- 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)  $0,0,2,1, \rightarrow 0,1,0, \rightarrow$
- R11)  $0,0,1,1,2, \rightarrow 0,0,1,1,2,2, \rightarrow 0,0,1,1,2,3, \rightarrow 0,0,1,1,2,4, \rightarrow 0,0,1,1,2,5, \rightarrow$
- R12)  $0,0,1,1,3, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1, \rightarrow 0,0,1,2, \rightarrow 0,0,1,3, \rightarrow$
- R13)  $0,0,1,1,4, \rightarrow 0,0,1,1,4,2, \rightarrow 0,0,2,1, \rightarrow 0,0, \rightarrow 0,1, \rightarrow$
- R14)  $0,0,1,3,1, \rightarrow 0,0,2,1, \rightarrow$
- R15)
- $0,0,1,1,2,2, \rightarrow 0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2,2,4, \rightarrow 0,0,1,1,2,2,5, \rightarrow 0,0,1,1,2,2,6, \rightarrow$
- R16)

$0,0,1,1,2,3, \rightarrow 0,1,0, \rightarrow 0,0,1,1,2,2, \rightarrow 0,0,1,1,2,3, \rightarrow 0,0,1,1,2,4, \rightarrow 0,0,1,1,2,5, \rightarrow$   
R17)  $0,0,1,1,2,4, \rightarrow 0,0,1,3,1, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1, \rightarrow 0,0,1,2, \rightarrow 0,0,1,3, \rightarrow$   
R18)  $0,0,1,1,2,5, \rightarrow 0,0,1,1,2,5,2, \rightarrow 0,0,1,1,4,2, \rightarrow 0,0,2,1, \rightarrow 0,0, \rightarrow 0,1, \rightarrow$   
R19)  $0,0,1,1,4,2, \rightarrow 0,0,1,3,1, \rightarrow 0,0,2,1, \rightarrow$   
R20)  
 $0,0,1,1,2,2,3, \rightarrow 0,0,1,1,2,2,3,3, \rightarrow 0,0,1,1,2,2,3,4, \rightarrow 0,0,1,1,2,2,3,5, \rightarrow 0,0,1,1,2,2,$   
 $3,6, \rightarrow 0,0,1,1,2,2,3,7, \rightarrow$   
R21)  
 $0,0,1,1,2,2,4, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,2,2, \rightarrow 0,0,1,1,2,3, \rightarrow 0,0,1,1,2,4, \rightarrow 0,0,1,1,2,5, \rightarrow$   
R22)  $0,0,1,1,2,2,5, \rightarrow 0,0,1,1,4,2, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1, \rightarrow 0,0,1,2, \rightarrow 0,0,1,3, \rightarrow$   
R23)  $0,0,1,1,2,2,6, \rightarrow 0,0,1,1,2,2,6,3, \rightarrow 0,0,1,1,4,2, \rightarrow 0,0,2,1, \rightarrow 0,0, \rightarrow 0,1, \rightarrow$   
R24)  $0,0,1,1,2,5,2, \rightarrow 0,0,1,1,4,2, \rightarrow 0,0,2,1, \rightarrow$   
R25)  
 $0,0,1,1,2,2,3,3, \rightarrow 0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3,3,5, \rightarrow 0,0,1,1,2,2,3,3,6, \rightarrow 0,0,$   
 $1,1,2,2,3,3,7, \rightarrow 0,0,1,1,2,2,3,3,8, \rightarrow$   
R26)  
 $0,0,1,1,2,2,3,4, \rightarrow 0,1,0, \rightarrow 0,0,1,1,2,2,3,3, \rightarrow 0,0,1,1,2,2,3,4, \rightarrow 0,0,1,1,2,2,3,5, \rightarrow 0,$   
 $0,1,1,2,2,3,6, \rightarrow 0,0,1,1,2,2,3,7, \rightarrow$   
R27)  
 $0,0,1,1,2,2,3,5, \rightarrow 0,0,1,3,1, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,2,2, \rightarrow 0,0,1,1,2,3, \rightarrow 0,0,1,1,2,4, \rightarrow$   
 $0,0,1,1,2,5, \rightarrow$   
R28)  
 $0,0,1,1,2,2,3,6, \rightarrow 0,0,1,1,2,5,2, \rightarrow 0,0,1,1,4,2, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1, \rightarrow 0,0,1,2, \rightarrow 0,0,$   
 $1,3, \rightarrow$   
R29)  
 $0,0,1,1,2,2,3,7, \rightarrow 0,0,1,1,2,2,3,7,3, \rightarrow 0,0,1,1,2,2,6,3, \rightarrow 0,0,1,1,4,2, \rightarrow 0,0,2,1, \rightarrow 0,$   
 $0, \rightarrow 0,1, \rightarrow$   
R30)  $0,0,1,1,2,2,6,3, \rightarrow 0,0,1,1,2,5,2, \rightarrow 0,0,1,1,4,2, \rightarrow 0,0,2,1, \rightarrow$   
R31)  
 $0,0,1,1,2,2,3,3,4, \rightarrow 0,0,1,1,2,2,3,3,4,4, \rightarrow 0,0,1,1,2,2,3,3,4,5, \rightarrow 0,0,1,1,2,2,3,3,4,$   
 $6, \rightarrow 0,0,1,1,2,2,3,3,4,7, \rightarrow 0,0,1,1,2,2,3,3,4,8, \rightarrow 0,0,1,1,2,2,3,3,4,9, \rightarrow$   
R32)  
 $0,0,1,1,2,2,3,3,5, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,2,2,3,3, \rightarrow 0,0,1,1,2,2,3,4, \rightarrow 0,0,1,1,2,2,3,5,$   
 $\rightarrow 0,0,1,1,2,2,3,6, \rightarrow 0,0,1,1,2,2,3,7, \rightarrow$   
R33)  
 $0,0,1,1,2,2,3,3,6, \rightarrow 0,0,1,1,4,2, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1,2,2, \rightarrow 0,0,1,1,2,3, \rightarrow 0,0,1,1,2,$   
 $4, \rightarrow 0,0,1,1,2,5, \rightarrow$   
R34)  
 $0,0,1,1,2,2,3,3,7, \rightarrow 0,0,1,1,2,2,6,3, \rightarrow 0,0,1,1,4,2, \rightarrow 0,0,2,1, \rightarrow 0,0,1,1, \rightarrow 0,0,1,2, \rightarrow$   
 $0,0,1,3, \rightarrow$   
R35)  
 $0,0,1,1,2,2,3,3,8, \rightarrow 0,0,1,1,2,2,3,3,8,4, \rightarrow 0,0,1,1,2,2,6,3, \rightarrow 0,0,1,1,4,2, \rightarrow 0,0,2,1,$   
 $\rightarrow 0,0, \rightarrow 0,1, \rightarrow$   
R36)  $0,0,1,1,2,2,3,7,3, \rightarrow 0,0,1,1,2,2,6,3, \rightarrow 0,0,1,1,4,2, \rightarrow 0,0,2,1, \rightarrow$   
R37)  
 $0,0,1,1,2,2,3,3,4,4, \rightarrow 0,0,1,1,2,2,3,3,4,4,5, \rightarrow 0,0,1,1,2,2,3,3,4,4,6, \rightarrow 0,0,1,1,2,2,$   
 $3,3,4,4,7, \rightarrow 0,0,1,1,2,2,3,3,4,4,8, \rightarrow 0,0,1,1,2,2,3,3,4,4,9, \rightarrow 0,0,1,1,2,2,3,3,4,4,10,$   
 $\rightarrow$   
R38)  
 $0,0,1,1,2,2,3,3,4,5, \rightarrow 0,1,0, \rightarrow 0,0,1,1,2,2,3,3,4,4, \rightarrow 0,0,1,1,2,2,3,3,4,5, \rightarrow 0,0,1,1,$



2,2,3,3,4,6,--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,--  
R39)  
0,0,1,1,2,2,3,3,4,6,-->0,0,1,3,1,--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,--  
R40)  
0,0,1,1,2,2,3,3,4,7,-->0,0,1,1,2,5,2,--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,--  
R41)  
0,0,1,1,2,2,3,3,4,8,-->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,  
--0,0,1,1,--0,0,1,2,--0,0,1,3,--  
R42)  
0,0,1,1,2,2,3,3,4,9,-->0,0,1,1,2,2,3,3,4,9,4,--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,--  
R43)  
0,0,1,1,2,2,3,3,8,4,-->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,  
--

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, :  
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, :  
LEN=11) 0,0,1,1,2,2,3,3,4,4,5, : 0,0,1,1,2,2,3,3,4,4,6, : 0,0,1,1,2,2,3,3,4,4,7, :  
0,0,1,1,2,2,3,3,4,4,8, : 0,0,1,1,2,2,3,3,4,4,9, : 0,0,1,1,2,2,3,3,4,4,10, :  
0,0,1,1,2,2,3,3,4,9,4, :

Number new nodes in level n is given by : 1,2,3,4,4,5,5,6,6,7,7,

-----Class

789-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][101][102][110][201][210]]$

-----

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,-->
- 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,--0,0,2,1,--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,-->0,0,2,1,--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,--0,1,0,--0,0,2,1,--0,0,--0,0,1,2,4,5,--  
R19) 0,0,1,3,4,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,--0,0,1,3,4,5,--  
R20) 0,0,2,3,4,-->0,0,2,1,--0,1,0,--0,1,0,--0,0,--0,0,2,3,4,5,--  
R21) 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,--  
R22)  
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,--  
R23)  
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,--  
--  
R24) 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,--  
R25) 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,--  
R26) 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,--  
R27) 0,0,1,1,3,5,-->0,0,2,1,--0,1,0,--0,0,2,1,--0,0,--0,0,1,1,3,5,6,--  
R28) 0,0,1,1,4,5,-->0,0,2,1,--0,0,2,1,--0,1,0,--0,0,--0,0,1,1,4,5,6,--  
R29)  
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,--  
R30) 0,0,1,2,3,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,0,--0,0,1,2,3,5,6,--  
R31) 0,0,1,2,4,5,-->0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,0,--0,0,1,2,4,5,6,--  
R32) 0,0,1,3,4,5,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,--0,0,1,3,4,5,6,--  
R33) 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,--  
R34) 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,--  
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)  
0,0,1,1,2,2,4,-->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,--  
R37)  
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,--  
R38) 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,--  
R39)  
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,--  
R40)  
0,0,1,1,2,3,5,-->0,1,0,--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,--  
R41) 0,0,1,1,2,3,6,-->0,1,0,--0,1,0,--0,0,2,1,--0,0,2,1,--0,0,--0,0,1,1,2,3,6,7,--  
R42)  
0,0,1,1,2,4,5,-->0,1,0,--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,--

R43) 0,0,1,1,2,4,6,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,2,1,--0,0,--0,0,1,1,2,4,6,7,--  
R44) 0,0,1,1,2,5,6,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,1,0,--0,0,--0,0,1,1,2,5,6,7,--  
R45)  
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,--  
R46) 0,0,1,1,3,4,6,-->0,0,2,1,--0,1,0,--0,1,0,--0,0,2,1,--0,0,--0,0,1,1,3,4,6,7,--  
R47) 0,0,1,1,3,5,6,-->0,0,2,1,--0,1,0,--0,0,2,1,--0,1,0,--0,0,--0,0,1,1,3,5,6,7,--  
R48) 0,0,1,1,4,5,6,-->0,0,2,1,--0,0,2,1,--0,1,0,--0,1,0,--0,0,--0,0,1,1,4,5,6,7,--  
R49)  
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,--  
R50)  
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,--0,0,1,2,3,4,6,7,--  
R51)  
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,--0,0,1,2,3,5,6,7,--  
R52)  
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,--0,0,1,2,4,5,6,7,--  
R53)  
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,--0,0,1,3,4,5,6,7,--  
R54)  
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,--  
R55)  
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,--  
R56)  
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,--  
R57)  
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,--  
R58)  
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,--  
R59)  
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,--  
R60)  
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,--0,0,1,1,2,2,3,7,8,--  
R61)  
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,--  
R62)  
0,0,1,1,2,2,4,6,-->0,0,2,1,--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,--  
R63)  
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,--0,0,1,1,2,2,4,7,8,--  
R64)  
0,0,1,1,2,2,5,6,-->0,0,2,1,--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,--  
R65)

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,--0,0,1,1,2,2,5,7,8,--  
R66)

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,--0,0,1,1,2,2,6,7,8,--  
R67)

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,--  
R68)

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,--0,0,1,1,2,3,4,6,7,--  
0,0,1,1,2,3,4,6,8,--  
R69)

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,--0,0,1,1,2,3,4,  
7,8,--  
R70)

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,--0,0,1,1,2,3,5,6,7,--  
0,0,1,1,2,3,5,6,8,--  
R71)

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,--0,0,1,1,2,3,5,  
7,8,--  
R72)

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,--0,0,1,1,2,3,6,  
7,8,--  
R73)

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,--0,0,1,1,2,4,5,6,7,--  
0,0,1,1,2,4,5,6,8,--  
R74)

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,--0,0,1,1,2,4,5,  
7,8,--  
R75)

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,--0,0,1,1,2,4,6,  
7,8,--  
R76)

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,--0,0,1,1,2,5,6,  
7,8,--  
R77)

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,--  
R78)

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,--0,0,1,1,3,4,5,  
7,8,--  
R79)

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,--0,0,1,1,3,4,6,  
7,8,--  
R80)

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,--0,0,1,1,3,5,6,  
7,8,--  
R81)

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,--0,0,1,1,4,5,6,  
7,8,--  
R82)

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,--

R83)

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,--0,0,1,2,3,4,5,7,8,--

R84)

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,--0,0,1,2,3,4,6,7,8,--

R85)

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,--0,0,1,2,3,5,6,7,8,--

R86)

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,--0,0,1,2,4,5,6,7,8,--

R87)

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,--0,0,1,3,4,5,6,7,8,--

R88)

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,--

R89)

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,--

R90)

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,--

R91)

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,--

R92)

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,--

R93)

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,--

R94)

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,--

R95)

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,--

R96)

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,--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,--

R97)

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,--0,0,1,1,2,2,3,4,7,8,--0,0,1,1,2,2,3,4,7,9,--

R98)

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,--0,0,1,1,2,2,3,4,8,9,--

R99)

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,--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,--

R100)

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,--0,0,1,1,2,2,3,5,  
7,8,--0,0,1,1,2,2,3,5,7,9,--

R101)

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,--0,0,1,1,2,  
2,3,5,8,9,--

R102)

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,--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,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,1,0,--0,0,2,1,--0,0,--0,0,1,1,2,  
2,3,6,8,9,--

R104)

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,--0,0,1,1,2,  
2,3,7,8,9,--

R105)

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,--

R106)

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,--0,0,1,1,2,2,4,5,  
7,8,--0,0,1,1,2,2,4,5,7,9,--

R107)

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,--0,0,1,1,2,  
2,4,5,8,9,--

R108)

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,--0,0,1,1,2,2,4,6,  
7,8,--0,0,1,1,2,2,4,6,7,9,--

R109)

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,--0,0,1,1,2,  
2,4,6,8,9,--

R110)

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,--0,0,1,1,2,  
2,4,7,8,9,--

R111)

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,--0,0,1,1,2,2,5,6,  
7,8,--0,0,1,1,2,2,5,6,7,9,--

R112)

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,--0,0,1,1,2,  
2,5,6,8,9,--

R113)

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,--0,0,1,1,2,  
2,5,7,8,9,--

R114)

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,--0,0,1,1,2,  
2,6,7,8,9,--

R115)

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,--

R116)

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,--0,0,1,1,2,  
3,4,5,7,8,--0,0,1,1,2,3,4,5,7,9,--

R117)

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,--0,0,  
1,1,2,3,4,5,8,9,--

R118)

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,--0,0,1,1,2,  
3,4,6,7,8,--0,0,1,1,2,3,4,6,7,9,--

R119)

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,--0,0,  
1,1,2,3,4,6,8,9,--

R120)

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,--0,0,  
1,1,2,3,4,7,8,9,--

R121)

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,--0,0,1,1,2,  
3,5,6,7,8,--0,0,1,1,2,3,5,6,7,9,--

R122)

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,--0,0,  
1,1,2,3,5,6,8,9,--

R123)

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,--0,0,  
1,1,2,3,5,7,8,9,--

R124)

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,--0,0,  
1,1,2,3,6,7,8,9,--

R125)

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,--0,0,1,1,2,  
4,5,6,7,8,--0,0,1,1,2,4,5,6,7,9,--

R126)

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,--0,0,  
1,1,2,4,5,6,8,9,--

R127)

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,--0,0,  
1,1,2,4,5,7,8,9,--

R128)

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,--0,0,  
1,1,2,4,6,7,8,9,--

R129)

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,--0,0,  
1,1,2,5,6,7,8,9,--

R130)

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,--

R131)

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,--0,0,  
1,1,3,4,5,6,8,9,--

R132)

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,--0,0,

1,1,3,4,5,7,8,9, --  
R133)  
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, --0,0,  
1,1,3,4,6,7,8,9, --  
R134)  
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, --0,0,  
1,1,3,5,6,7,8,9, --  
R135)  
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, --0,0,  
1,1,4,5,6,7,8,9, --  
R136)  
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, --  
R137)  
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,  
--0,0,1,2,3,4,5,6,8,9, --  
R138)  
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,  
--0,0,1,2,3,4,5,7,8,9, --  
R139)  
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,  
--0,0,1,2,3,4,6,7,8,9, --  
R140)  
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,  
--0,0,1,2,3,5,6,7,8,9, --  
R141)  
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,  
--0,0,1,2,4,5,6,7,8,9, --  
R142)  
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,  
--0,0,1,3,4,5,6,7,8,9, --  
R143)  
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, --  
R144)  
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, --  
R145)  
0,0,1,1,2,2,3,3,4,4, -->0,0,1,1,2,2,3,3,4,4,5, --0,0,1,1,2,2,3,3,4,4,6, --0,0,1,1,2,2,  
3,3,4,4,7, --0,0,1,1,2,2,3,3,4,4,8, --0,0,1,1,2,2,3,3,4,4,9, --0,0,1,1,2,2,3,3,4,4,10,  
--  
R146)  
0,0,1,1,2,2,3,3,4,5, -->0,1,0, --0,0,1,1,2,2,3,3,4,4, --0,0,1,1,2,2,3,3,4,5,6, --0,0,1,  
1,2,2,3,3,4,5,7, --0,0,1,1,2,2,3,3,4,5,8, --0,0,1,1,2,2,3,3,4,5,9, --0,0,1,1,2,2,3,3,4,  
5,10, --  
R147)  
0,0,1,1,2,2,3,3,4,6, -->0,1,0, --0,0,2,1, --0,0,1,1,2,2,3,3, --0,0,1,1,2,2,3,3,4,6,7, --  
0,0,1,1,2,2,3,3,4,6,8, --0,0,1,1,2,2,3,3,4,6,9, --0,0,1,1,2,2,3,3,4,6,10, --  
R148)  
0,0,1,1,2,2,3,3,4,7, -->0,1,0, --0,0,2,1, --0,0,2,1, --0,0,1,1,2,2, --0,0,1,1,2,2,3,3,4,



7,8,--0,0,1,1,2,2,3,3,4,7,9,--0,0,1,1,2,2,3,3,4,7,10,--  
R149)  
0,0,1,1,2,2,3,3,4,8,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,1,--0,0,1,1,2,2,  
3,3,4,8,9,--0,0,1,1,2,2,3,3,4,8,10,--  
R150)  
0,0,1,1,2,2,3,3,4,9,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,--0,0,1,  
1,2,2,3,3,4,9,10,--  
R151)  
0,0,1,1,2,2,3,3,5,6,-->0,0,2,1,--0,1,0,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,3,5,6,7,--  
0,0,1,1,2,2,3,3,5,6,8,--0,0,1,1,2,2,3,3,5,6,9,--0,0,1,1,2,2,3,3,5,6,10,--  
R152)  
0,0,1,1,2,2,3,3,5,7,-->0,0,2,1,--0,1,0,--0,0,2,1,--0,0,1,1,2,2,--0,0,1,1,2,2,3,3,5,  
7,8,--0,0,1,1,2,2,3,3,5,7,9,--0,0,1,1,2,2,3,3,5,7,10,--  
R153)  
0,0,1,1,2,2,3,3,5,8,-->0,0,2,1,--0,1,0,--0,0,2,1,--0,0,2,1,--0,0,1,1,--0,0,1,1,2,2,  
3,3,5,8,9,--0,0,1,1,2,2,3,3,5,8,10,--  
R154)  
0,0,1,1,2,2,3,3,5,9,-->0,0,2,1,--0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,--0,0,1,  
1,2,2,3,3,5,9,10,--  
R155)  
0,0,1,1,2,2,3,3,6,7,-->0,0,2,1,--0,0,2,1,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,2,3,3,6,  
7,8,--0,0,1,1,2,2,3,3,6,7,9,--0,0,1,1,2,2,3,3,6,7,10,--  
R156)  
0,0,1,1,2,2,3,3,6,8,-->0,0,2,1,--0,0,2,1,--0,1,0,--0,0,2,1,--0,0,1,1,--0,0,1,1,2,2,  
3,3,6,8,9,--0,0,1,1,2,2,3,3,6,8,10,--  
R157)  
0,0,1,1,2,2,3,3,6,9,-->0,0,2,1,--0,0,2,1,--0,1,0,--0,0,2,1,--0,0,2,1,--0,0,--0,0,1,  
1,2,2,3,3,6,9,10,--  
R158)  
0,0,1,1,2,2,3,3,7,8,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,0,--0,0,1,1,--0,0,1,1,2,2,  
3,3,7,8,9,--0,0,1,1,2,2,3,3,7,8,10,--  
R159)  
0,0,1,1,2,2,3,3,7,9,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,0,--0,0,2,1,--0,0,--0,0,1,  
1,2,2,3,3,7,9,10,--  
R160)  
0,0,1,1,2,2,3,3,8,9,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,0,--0,0,--0,0,1,  
1,2,2,3,3,8,9,10,--  
R161)  
0,0,1,1,2,2,3,4,5,6,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,2,3,3,--0,0,1,1,2,2,3,4,5,  
6,7,--0,0,1,1,2,2,3,4,5,6,8,--0,0,1,1,2,2,3,4,5,6,9,--0,0,1,1,2,2,3,4,5,6,10,--  
R162)  
0,0,1,1,2,2,3,4,5,7,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,0,1,1,2,2,--0,0,1,1,2,2,  
3,4,5,7,8,--0,0,1,1,2,2,3,4,5,7,9,--0,0,1,1,2,2,3,4,5,7,10,--  
R163)  
0,0,1,1,2,2,3,4,5,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,0,2,1,--0,0,1,1,--0,0,1,  
1,2,2,3,4,5,8,9,--0,0,1,1,2,2,3,4,5,8,10,--  
R164)  
0,0,1,1,2,2,3,4,5,9,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,--  
0,0,1,1,2,2,3,4,5,9,10,--  
R165)

0,0,1,1,2,2,3,4,6,7,-->0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,2,  
3,4,6,7,8,--0,0,1,1,2,2,3,4,6,7,9,--0,0,1,1,2,2,3,4,6,7,10,--

R166)

0,0,1,1,2,2,3,4,6,8,-->0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,0,2,1,--0,0,1,1,--0,0,1,  
1,2,2,3,4,6,8,9,--0,0,1,1,2,2,3,4,6,8,10,--

R167)

0,0,1,1,2,2,3,4,6,9,-->0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,0,2,1,--0,0,2,1,--0,0,--  
0,0,1,1,2,2,3,4,6,9,10,--

R168)

0,0,1,1,2,2,3,4,7,8,-->0,1,0,--0,1,0,--0,0,2,1,--0,0,2,1,--0,1,0,--0,0,1,1,--0,0,1,  
1,2,2,3,4,7,8,9,--0,0,1,1,2,2,3,4,7,8,10,--

R169)

0,0,1,1,2,2,3,4,7,9,-->0,1,0,--0,1,0,--0,0,2,1,--0,0,2,1,--0,1,0,--0,0,2,1,--0,0,--  
0,0,1,1,2,2,3,4,7,9,10,--

R170)

0,0,1,1,2,2,3,4,8,9,-->0,1,0,--0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,0,--0,0,--  
0,0,1,1,2,2,3,4,8,9,10,--

R171)

0,0,1,1,2,2,3,5,6,7,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,2,  
3,5,6,7,8,--0,0,1,1,2,2,3,5,6,7,9,--0,0,1,1,2,2,3,5,6,7,10,--

R172)

0,0,1,1,2,2,3,5,6,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,2,1,--0,0,1,1,--0,0,1,  
1,2,2,3,5,6,8,9,--0,0,1,1,2,2,3,5,6,8,10,--

R173)

0,0,1,1,2,2,3,5,6,9,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,2,1,--0,0,2,1,--0,0,--  
0,0,1,1,2,2,3,5,6,9,10,--

R174)

0,0,1,1,2,2,3,5,7,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,2,1,--0,1,0,--0,0,1,1,--0,0,1,  
1,2,2,3,5,7,8,9,--0,0,1,1,2,2,3,5,7,8,10,--

R175)

0,0,1,1,2,2,3,5,7,9,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,2,1,--0,1,0,--0,0,2,1,--0,0,--  
0,0,1,1,2,2,3,5,7,9,10,--

R176)

0,0,1,1,2,2,3,5,8,9,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,2,1,--0,0,2,1,--0,1,0,--0,0,--  
0,0,1,1,2,2,3,5,8,9,10,--

R177)

0,0,1,1,2,2,3,6,7,8,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,  
1,2,2,3,6,7,8,9,--0,0,1,1,2,2,3,6,7,8,10,--

R178)

0,0,1,1,2,2,3,6,7,9,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,1,0,--0,1,0,--0,0,2,1,--0,0,--  
0,0,1,1,2,2,3,6,7,9,10,--

R179)

0,0,1,1,2,2,3,6,8,9,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,1,0,--0,0,2,1,--0,1,0,--0,0,--  
0,0,1,1,2,2,3,6,8,9,10,--

R180)

0,0,1,1,2,2,3,7,8,9,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,0,--0,1,0,--0,0,--  
0,0,1,1,2,2,3,7,8,9,10,--

R181)

0,0,1,1,2,2,4,5,6,7,-->0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,2,--0,0,1,1,2,2,  
4,5,6,7,8,--0,0,1,1,2,2,4,5,6,7,9,--0,0,1,1,2,2,4,5,6,7,10,--

R182)

0,0,1,1,2,2,4,5,6,8,-->0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,0,1,1,--0,0,1,  
1,2,2,4,5,6,8,9,--0,0,1,1,2,2,4,5,6,8,10,--

R183)

0,0,1,1,2,2,4,5,6,9,-->0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,0,2,1,--0,0,--  
0,0,1,1,2,2,4,5,6,9,10,--

R184)

0,0,1,1,2,2,4,5,7,8,-->0,0,2,1,--0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,0,1,1,--0,0,1,  
1,2,2,4,5,7,8,9,--0,0,1,1,2,2,4,5,7,8,10,--

R185)

0,0,1,1,2,2,4,5,7,9,-->0,0,2,1,--0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,0,2,1,--0,0,--  
0,0,1,1,2,2,4,5,7,9,10,--

R186)

0,0,1,1,2,2,4,5,8,9,-->0,0,2,1,--0,1,0,--0,1,0,--0,0,2,1,--0,0,2,1,--0,1,0,--0,0,--  
0,0,1,1,2,2,4,5,8,9,10,--

R187)

0,0,1,1,2,2,4,6,7,8,-->0,0,2,1,--0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,  
1,2,2,4,6,7,8,9,--0,0,1,1,2,2,4,6,7,8,10,--

R188)

0,0,1,1,2,2,4,6,7,9,-->0,0,2,1,--0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,2,1,--0,0,--  
0,0,1,1,2,2,4,6,7,9,10,--

R189)

0,0,1,1,2,2,4,6,8,9,-->0,0,2,1,--0,1,0,--0,0,2,1,--0,1,0,--0,0,2,1,--0,1,0,--0,0,--  
0,0,1,1,2,2,4,6,8,9,10,--

R190)

0,0,1,1,2,2,4,7,8,9,-->0,0,2,1,--0,1,0,--0,0,2,1,--0,0,2,1,--0,1,0,--0,1,0,--0,0,--  
0,0,1,1,2,2,4,7,8,9,10,--

R191)

0,0,1,1,2,2,5,6,7,8,-->0,0,2,1,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,--0,0,1,  
1,2,2,5,6,7,8,9,--0,0,1,1,2,2,5,6,7,8,10,--

R192)

0,0,1,1,2,2,5,6,7,9,-->0,0,2,1,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,0,--  
0,0,1,1,2,2,5,6,7,9,10,--

R193)

0,0,1,1,2,2,5,6,8,9,-->0,0,2,1,--0,0,2,1,--0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,0,--  
0,0,1,1,2,2,5,6,8,9,10,--

R194)

0,0,1,1,2,2,5,7,8,9,-->0,0,2,1,--0,0,2,1,--0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,--  
0,0,1,1,2,2,5,7,8,9,10,--

R195)

0,0,1,1,2,2,6,7,8,9,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,--  
0,0,1,1,2,2,6,7,8,9,10,--

R196)

0,0,1,1,2,3,4,5,6,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,2,2,--0,0,1,  
1,2,3,4,5,6,7,8,--0,0,1,1,2,3,4,5,6,7,9,--0,0,1,1,2,3,4,5,6,7,10,--

R197)

0,0,1,1,2,3,4,5,6,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,0,1,1,--  
0,0,1,1,2,3,4,5,6,8,9,--0,0,1,1,2,3,4,5,6,8,10,--

R198)

0,0,1,1,2,3,4,5,6,9,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,0,2,1,--

0,0,--0,0,1,1,2,3,4,5,6,9,10,--  
R199)  
0,0,1,1,2,3,4,5,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,0,1,1,--  
0,0,1,1,2,3,4,5,7,8,9,--0,0,1,1,2,3,4,5,7,8,10,--  
R200)  
0,0,1,1,2,3,4,5,7,9,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,0,2,1,--  
0,0,--0,0,1,1,2,3,4,5,7,9,10,--  
R201)  
0,0,1,1,2,3,4,5,8,9,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,0,2,1,--0,1,0,--  
0,0,--0,0,1,1,2,3,4,5,8,9,10,--  
R202)  
0,0,1,1,2,3,4,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,1,1,--  
0,0,1,1,2,3,4,6,7,8,9,--0,0,1,1,2,3,4,6,7,8,10,--  
R203)  
0,0,1,1,2,3,4,6,7,9,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,2,1,--  
0,0,--0,0,1,1,2,3,4,6,7,9,10,--  
R204)  
0,0,1,1,2,3,4,6,8,9,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,0,2,1,--0,1,0,--  
0,0,--0,0,1,1,2,3,4,6,8,9,10,--  
R205)  
0,0,1,1,2,3,4,7,8,9,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,0,2,1,--0,1,0,--0,1,0,--  
0,0,--0,0,1,1,2,3,4,7,8,9,10,--  
R206)  
0,0,1,1,2,3,5,6,7,8,-->0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,--  
0,0,1,1,2,3,5,6,7,8,9,--0,0,1,1,2,3,5,6,7,8,10,--  
R207)  
0,0,1,1,2,3,5,6,7,9,-->0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--  
0,0,--0,0,1,1,2,3,5,6,7,9,10,--  
R208)  
0,0,1,1,2,3,5,6,8,9,-->0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--  
0,0,--0,0,1,1,2,3,5,6,8,9,10,--  
R209)  
0,0,1,1,2,3,5,7,8,9,-->0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--  
0,0,--0,0,1,1,2,3,5,7,8,9,10,--  
R210)  
0,0,1,1,2,3,6,7,8,9,-->0,1,0,--0,1,0,--0,0,2,1,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--  
0,0,--0,0,1,1,2,3,6,7,8,9,10,--  
R211)  
0,0,1,1,2,4,5,6,7,8,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,--  
0,0,1,1,2,4,5,6,7,8,9,--0,0,1,1,2,4,5,6,7,8,10,--  
R212)  
0,0,1,1,2,4,5,6,7,9,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--  
0,0,--0,0,1,1,2,4,5,6,7,9,10,--  
R213)  
0,0,1,1,2,4,5,6,8,9,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--  
0,0,--0,0,1,1,2,4,5,6,8,9,10,--  
R214)  
0,0,1,1,2,4,5,7,8,9,-->0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--  
0,0,--0,0,1,1,2,4,5,7,8,9,10,--  
R215)

0,0,1,1,2,4,6,7,8,9,-->0,1,0,--0,0,2,1,--0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--  
0,0,--0,0,1,1,2,4,6,7,8,9,10,--

R216)

0,0,1,1,2,5,6,7,8,9,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
0,0,--0,0,1,1,2,5,6,7,8,9,10,--

R217)

0,0,1,1,3,4,5,6,7,8,-->0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,1,--  
0,0,1,1,3,4,5,6,7,8,9,--0,0,1,1,3,4,5,6,7,8,10,--

R218)

0,0,1,1,3,4,5,6,7,9,-->0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--  
0,0,--0,0,1,1,3,4,5,6,7,9,10,--

R219)

0,0,1,1,3,4,5,6,8,9,-->0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--  
0,0,--0,0,1,1,3,4,5,6,8,9,10,--

R220)

0,0,1,1,3,4,5,7,8,9,-->0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--  
0,0,--0,0,1,1,3,4,5,7,8,9,10,--

R221)

0,0,1,1,3,4,6,7,8,9,-->0,0,2,1,--0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--  
0,0,--0,0,1,1,3,4,6,7,8,9,10,--

R222)

0,0,1,1,3,5,6,7,8,9,-->0,0,2,1,--0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
0,0,--0,0,1,1,3,5,6,7,8,9,10,--

R223)

0,0,1,1,4,5,6,7,8,9,-->0,0,2,1,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--  
0,0,--0,0,1,1,4,5,6,7,8,9,10,--

R224)

0,0,1,2,3,4,5,6,7,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,  
1,1,--0,0,1,2,3,4,5,6,7,8,9,--0,0,1,2,3,4,5,6,7,8,10,--

R225)

0,0,1,2,3,4,5,6,7,9,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,  
2,1,--0,0,--0,0,1,2,3,4,5,6,7,9,10,--

R226)

0,0,1,2,3,4,5,6,8,9,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,  
1,0,--0,0,--0,0,1,2,3,4,5,6,8,9,10,--

R227)

0,0,1,2,3,4,5,7,8,9,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,  
1,0,--0,0,--0,0,1,2,3,4,5,7,8,9,10,--

R228)

0,0,1,2,3,4,6,7,8,9,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,  
1,0,--0,0,--0,0,1,2,3,4,6,7,8,9,10,--

R229)

0,0,1,2,3,5,6,7,8,9,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,  
1,0,--0,0,--0,0,1,2,3,5,6,7,8,9,10,--

R230)

0,0,1,2,4,5,6,7,8,9,-->0,1,0,--0,1,0,--0,0,2,1,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,  
1,0,--0,0,--0,0,1,2,4,5,6,7,8,9,10,--

R231)

0,0,1,3,4,5,6,7,8,9,-->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,--0,0,1,3,4,5,6,7,8,9,10,--

R232)

0,0,2,3,4,5,6,7,8,9,-->0,0,2,1,--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,--0,0,2,3,4,5,6,7,8,9,10,--

R233)

0,1,2,3,4,5,6,7,8,9,-->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,--0,1,2,3,4,5,6,7,8,9,10,--

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, : 0,0,1,3,4, :  
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, :  
LEN=11) 0,0,1,1,2,2,3,3,4,4,5, : 0,0,1,1,2,2,3,3,4,4,6, : 0,0,1,1,2,2,3,3,4,4,7, :  
0,0,1,1,2,2,3,3,4,4,8, : 0,0,1,1,2,2,3,3,4,4,9, : 0,0,1,1,2,2,3,3,4,4,10, :  
0,0,1,1,2,2,3,3,4,5,6, : 0,0,1,1,2,2,3,3,4,5,7, : 0,0,1,1,2,2,3,3,4,5,8, :  
0,0,1,1,2,2,3,3,4,5,9, : 0,0,1,1,2,2,3,3,4,5,10, : 0,0,1,1,2,2,3,3,4,6,7, :  
0,0,1,1,2,2,3,3,4,6,8, : 0,0,1,1,2,2,3,3,4,6,9, : 0,0,1,1,2,2,3,3,4,6,10, :  
0,0,1,1,2,2,3,3,4,7,8, : 0,0,1,1,2,2,3,3,4,7,9, : 0,0,1,1,2,2,3,3,4,7,10, :  
0,0,1,1,2,2,3,3,4,8,9, : 0,0,1,1,2,2,3,3,4,8,10, : 0,0,1,1,2,2,3,3,4,9,10, :  
0,0,1,1,2,2,3,3,5,6,7, : 0,0,1,1,2,2,3,3,5,6,8, : 0,0,1,1,2,2,3,3,5,6,9, :  
0,0,1,1,2,2,3,3,5,6,10, : 0,0,1,1,2,2,3,3,5,7,8, : 0,0,1,1,2,2,3,3,5,7,9, :  
0,0,1,1,2,2,3,3,5,7,10, : 0,0,1,1,2,2,3,3,5,8,9, : 0,0,1,1,2,2,3,3,5,8,10, :  
0,0,1,1,2,2,3,3,5,9,10, : 0,0,1,1,2,2,3,3,6,7,8, : 0,0,1,1,2,2,3,3,6,7,9, :  
0,0,1,1,2,2,3,3,6,7,10, : 0,0,1,1,2,2,3,3,6,8,9, : 0,0,1,1,2,2,3,3,6,8,10, :  
0,0,1,1,2,2,3,3,6,9,10, : 0,0,1,1,2,2,3,3,7,8,9, : 0,0,1,1,2,2,3,3,7,8,10, :  
0,0,1,1,2,2,3,3,7,9,10, : 0,0,1,1,2,2,3,3,8,9,10, : 0,0,1,1,2,2,3,4,5,6,7, :  
0,0,1,1,2,2,3,4,5,6,8, : 0,0,1,1,2,2,3,4,5,6,9, : 0,0,1,1,2,2,3,4,5,6,10, :  
0,0,1,1,2,2,3,4,5,7,8, : 0,0,1,1,2,2,3,4,5,7,9, : 0,0,1,1,2,2,3,4,5,7,10, :  
0,0,1,1,2,2,3,4,5,8,9, : 0,0,1,1,2,2,3,4,5,8,10, : 0,0,1,1,2,2,3,4,5,9,10, :  
0,0,1,1,2,2,3,4,6,7,8, : 0,0,1,1,2,2,3,4,6,7,9, : 0,0,1,1,2,2,3,4,6,7,10, :  
0,0,1,1,2,2,3,4,6,8,9, : 0,0,1,1,2,2,3,4,6,8,10, : 0,0,1,1,2,2,3,4,6,9,10, :  
0,0,1,1,2,2,3,4,7,8,9, : 0,0,1,1,2,2,3,4,7,8,10, : 0,0,1,1,2,2,3,4,7,9,10, :  
0,0,1,1,2,2,3,4,8,9,10, : 0,0,1,1,2,2,3,5,6,7,8, : 0,0,1,1,2,2,3,5,6,7,9, :  
0,0,1,1,2,2,3,5,6,7,10, : 0,0,1,1,2,2,3,5,6,8,9, : 0,0,1,1,2,2,3,5,6,8,10, :  
0,0,1,1,2,2,3,5,6,9,10, : 0,0,1,1,2,2,3,5,7,8,9, : 0,0,1,1,2,2,3,5,7,8,10, :  
0,0,1,1,2,2,3,5,7,9,10, : 0,0,1,1,2,2,3,5,8,9,10, : 0,0,1,1,2,2,3,6,7,8,9, :  
0,0,1,1,2,2,3,6,7,8,10, : 0,0,1,1,2,2,3,6,7,9,10, : 0,0,1,1,2,2,3,6,8,9,10, :  
0,0,1,1,2,2,3,7,8,9,10, : 0,0,1,1,2,2,4,5,6,7,8, : 0,0,1,1,2,2,4,5,6,7,9, :

$0,0,1,1,2,2,4,5,6,7,10, : 0,0,1,1,2,2,4,5,6,8,9, : 0,0,1,1,2,2,4,5,6,8,10, :$   
 $0,0,1,1,2,2,4,5,6,9,10, : 0,0,1,1,2,2,4,5,7,8,9, : 0,0,1,1,2,2,4,5,7,8,10, :$   
 $0,0,1,1,2,2,4,5,7,9,10, : 0,0,1,1,2,2,4,5,8,9,10, : 0,0,1,1,2,2,4,6,7,8,9, :$   
 $0,0,1,1,2,2,4,6,7,8,10, : 0,0,1,1,2,2,4,6,7,9,10, : 0,0,1,1,2,2,4,6,8,9,10, :$   
 $0,0,1,1,2,2,4,7,8,9,10, : 0,0,1,1,2,2,5,6,7,8,9, : 0,0,1,1,2,2,5,6,7,8,10, :$   
 $0,0,1,1,2,2,5,6,7,9,10, : 0,0,1,1,2,2,5,6,8,9,10, : 0,0,1,1,2,2,5,7,8,9,10, :$   
 $0,0,1,1,2,2,6,7,8,9,10, : 0,0,1,1,2,3,4,5,6,7,8, : 0,0,1,1,2,3,4,5,6,7,9, :$   
 $0,0,1,1,2,3,4,5,6,7,10, : 0,0,1,1,2,3,4,5,6,8,9, : 0,0,1,1,2,3,4,5,6,8,10, :$   
 $0,0,1,1,2,3,4,5,6,9,10, : 0,0,1,1,2,3,4,5,7,8,9, : 0,0,1,1,2,3,4,5,7,8,10, :$   
 $0,0,1,1,2,3,4,5,7,9,10, : 0,0,1,1,2,3,4,5,8,9,10, : 0,0,1,1,2,3,4,6,7,8,9, :$   
 $0,0,1,1,2,3,4,6,7,8,10, : 0,0,1,1,2,3,4,6,7,9,10, : 0,0,1,1,2,3,4,6,8,9,10, :$   
 $0,0,1,1,2,3,4,7,8,9,10, : 0,0,1,1,2,3,5,6,7,8,9, : 0,0,1,1,2,3,5,6,7,8,10, :$   
 $0,0,1,1,2,3,5,6,7,9,10, : 0,0,1,1,2,3,5,6,8,9,10, : 0,0,1,1,2,3,5,7,8,9,10, :$   
 $0,0,1,1,2,3,6,7,8,9,10, : 0,0,1,1,2,4,5,6,7,8,9, : 0,0,1,1,2,4,5,6,7,8,10, :$   
 $0,0,1,1,2,4,5,6,7,9,10, : 0,0,1,1,2,4,5,6,8,9,10, : 0,0,1,1,2,4,5,7,8,9,10, :$   
 $0,0,1,1,2,4,6,7,8,9,10, : 0,0,1,1,2,5,6,7,8,9,10, : 0,0,1,1,3,4,5,6,7,8,9, :$   
 $0,0,1,1,3,4,5,6,7,8,10, : 0,0,1,1,3,4,5,6,7,9,10, : 0,0,1,1,3,4,5,6,8,9,10, :$   
 $0,0,1,1,3,4,5,7,8,9,10, : 0,0,1,1,3,4,6,7,8,9,10, : 0,0,1,1,3,5,6,7,8,9,10, :$   
 $0,0,1,1,4,5,6,7,8,9,10, : 0,0,1,2,3,4,5,6,7,8,9, : 0,0,1,2,3,4,5,6,7,8,10, :$   
 $0,0,1,2,3,4,5,6,7,9,10, : 0,0,1,2,3,4,5,6,8,9,10, : 0,0,1,2,3,4,5,7,8,9,10, :$   
 $0,0,1,2,3,4,6,7,8,9,10, : 0,0,1,2,3,5,6,7,8,9,10, : 0,0,1,2,4,5,6,7,8,9,10, :$   
 $0,0,1,3,4,5,6,7,8,9,10, : 0,0,2,3,4,5,6,7,8,9,10, : 0,1,2,3,4,5,6,7,8,9,10, :$   
 Number new nodes in level n is given by : 1,2,4,6,8,13,21,34,55,89,144,

-----Class

790-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][101][102][120][201][210]]$

-----

--

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)  $0,1,0, -->$
- 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)  $0,0,1,3, -->0,1,0, --0,0,2,1, --0,0,1,3,3, --0,1, --$
- 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)  $0,0,1,1,4, -->0,0,2,1, --0,0,2,1, --0,0,1,1,4,4, --0,1, --$
- 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)  $0,0,1,3,3, -->0,1,0, --0,0,2,1, --0,0,1, --0,0,2, --$
- R18)
- R19)  $0,0,1,1,2,2, -->0,0,1,1,2,2,3, --0,0,1,1,2,2,4, --0,0,1,1,2,2,5, --0,0,1,1,2,2,6, --$



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,--  
R20) 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,--  
R21) 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,--  
R22) 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,--  
R23) 0,0,1,1,4,4,-->0,0,2,1,--0,0,2,1,--0,0,1,--0,0,2,--  
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)  
0,0,1,1,2,2,4,-->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,--  
R26) 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,--  
R27) 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,--  
R28)  
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,--  
R29) 0,0,1,1,2,4,4,-->0,1,0,--0,0,2,1,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,1,4,--  
R30) 0,0,1,1,2,5,5,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,1,--0,0,2,--  
R31)  
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,--  
R32)  
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,--  
R33)  
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,--  
R34)  
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,--  
R35)  
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,--  
R36)  
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,--  
R37) 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,--  
R38) 0,0,1,1,2,2,6,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,--0,0,2,--  
R39)  
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,--  
R40)  
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,--  
R41)  
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,--  
R42)  
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,--  
R43)

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,--

R44)

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,--

R45)

0,0,1,1,2,2,3,5,5,-->0,1,0,--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,--

R46)

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,--0,0,1,1,3,--0,0,1,1,4,  
--

R47) 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,--0,0,2,--

R48)

0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--0,0,1,1,2,2,3,3,4,4,6,--0,0,1,1,2,2,  
3,3,4,4,7,--0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,  
--

R49)

0,0,1,1,2,2,3,3,4,5,-->0,1,0,--0,0,1,1,2,2,3,3,4,5,5,--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,--

R50)

0,0,1,1,2,2,3,3,4,6,-->0,1,0,--0,0,2,1,--0,0,1,1,2,2,3,3,4,6,6,--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,--

R51)

0,0,1,1,2,2,3,3,4,7,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,3,3,4,7,7,--0,0,1,1,  
2,3,--0,0,1,1,2,4,--0,0,1,1,2,5,--

R52)

0,0,1,1,2,2,3,3,4,8,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,3,3,4,8,8,  
--0,0,1,2,--0,0,1,3,--

R53)

0,0,1,1,2,2,3,3,4,9,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,  
3,3,4,9,9,--0,1,--

R54)

0,0,1,1,2,2,3,3,5,5,-->0,0,2,1,--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,--

R55)

0,0,1,1,2,2,3,3,6,6,-->0,0,2,1,--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,--

R56)

0,0,1,1,2,2,3,3,7,7,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,1,2,--0,0,1,1,3,--0,0,1,  
1,4,--

R57)

0,0,1,1,2,2,3,3,8,8,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--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,: 0,0,1,3,3,:

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,:  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5,: 0,0,1,1,2,2,3,3,4,4,6,: 0,0,1,1,2,2,3,3,4,4,7,:  
 0,0,1,1,2,2,3,3,4,4,8,: 0,0,1,1,2,2,3,3,4,4,9,: 0,0,1,1,2,2,3,3,4,4,10,:  
 0,0,1,1,2,2,3,3,4,5,5,: 0,0,1,1,2,2,3,3,4,6,6,: 0,0,1,1,2,2,3,3,4,7,7,:  
 0,0,1,1,2,2,3,3,4,8,8,: 0,0,1,1,2,2,3,3,4,9,9,:  
 Number new nodes in level n is given by : 1,2,4,5,5,6,7,8,9,10,11,

-----Class

791-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][101][110][120][201][210]]$

-----

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,1,--0,0,2,--
- R3) 0,1,-->0,0,--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,--0,0,2,1,--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,--0,0,2,1,--0,0,--0,1,--
- 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)
- 0,0,1,1,2,3,-->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,
- 
- R15) 0,0,1,1,2,4,-->0,0,1,1,--0,0,1,1,3,2,--0,0,1,1,--0,0,1,2,--0,0,1,3,--
- R16) 0,0,1,1,2,5,-->0,0,--0,0,2,1,--0,0,2,1,--0,0,--0,1,--
- R17) 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,--
- 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)
- 0,0,1,1,2,2,4,-->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,--
- R20) 0,0,1,1,2,2,5,-->0,0,1,1,3,2,--0,0,1,1,3,2,--0,0,1,1,--0,0,1,2,--0,0,1,3,--

R21) 0,0,1,1,2,2,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,--0,1,--  
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)  
0,0,1,1,2,2,3,4,-->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,--  
R24)  
0,0,1,1,2,2,3,5,-->0,0,1,1,2,2,--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,--  
R25)  
0,0,1,1,2,2,3,6,-->0,0,1,1,--0,0,1,1,3,2,--0,0,1,1,3,2,--0,0,1,1,--0,0,1,2,--0,0,1,  
3,--  
R26) 0,0,1,1,2,2,3,7,-->0,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,--0,1,--  
R27)  
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,--  
R28)  
0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,--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,--  
R29)  
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,--  
R30)  
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,--0,0,1,1,2,3,  
--0,0,1,1,2,4,--0,0,1,1,2,5,--  
R31)  
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,--0,0,1,2,--  
0,0,1,3,--  
R32) 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,--0,1,--  
R33)  
0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--0,0,1,1,2,2,3,3,4,4,6,--0,0,1,1,2,2,  
3,3,4,4,7,--0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,  
--  
R34)  
0,0,1,1,2,2,3,3,4,5,-->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,--0,0,1,1,2,2,3,3,4,6,--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)  
0,0,1,1,2,2,3,3,4,6,-->0,0,1,1,2,2,3,3,--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)  
0,0,1,1,2,2,3,3,4,7,-->0,0,1,1,2,2,--0,0,1,1,2,2,4,3,--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)  
0,0,1,1,2,2,3,3,4,8,-->0,0,1,1,--0,0,1,1,3,2,--0,0,1,1,3,2,--0,0,1,1,3,2,--0,0,1,1,  
--0,0,1,2,--0,0,1,3,--  
R38)  
0,0,1,1,2,2,3,3,4,9,-->0,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,--0,1,--  
R39)

0,0,1,1,2,2,3,3,5,4,-->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,--

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, :
  - 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, :
  - 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, : 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, : 0,0,1,1,2,2,3,3,4,5, : 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, :
  - LEN=11) 0,0,1,1,2,2,3,3,4,4,5, : 0,0,1,1,2,2,3,3,4,4,6, : 0,0,1,1,2,2,3,3,4,4,7, :  
 0,0,1,1,2,2,3,3,4,4,8, : 0,0,1,1,2,2,3,3,4,4,9, : 0,0,1,1,2,2,3,3,4,4,10, :
- Number new nodes in level n is given by : 1,2,2,4,3,5,4,6,5,7,6,

-----Class

792-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[000][102][110][120][201][210]]$

-----

--

Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,1, --0,0,2, --
- R3) 0,1, -->0,1,0, --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, --0,0,2,1, --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, --0,0,2,1, --0,0, --0,1, --
- 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)
- 0,0,1,1,2,3, -->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, --
- R17) 0,0,1,1,2,4, -->0,1,0, --0,0,2,1, --0,0,1,1, --0,0,1,2, --0,0,1,3, --
- R18) 0,0,1,1,2,5, -->0,1,0, --0,0,2,1, --0,0,2,1, --0,0, --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)  
0,0,1,1,2,2,4,-->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,--  
R21) 0,0,1,1,2,2,5,-->0,0,2,1,--0,0,2,1,--0,0,1,1,--0,0,1,2,--0,0,1,3,--  
R22) 0,0,1,1,2,2,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,--0,1,--  
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)  
0,0,1,1,2,2,3,4,-->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,--  
R25)  
0,0,1,1,2,2,3,5,-->0,1,0,--0,0,2,1,--0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,--0,0,  
1,1,2,5,--  
R26) 0,0,1,1,2,2,3,6,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,1,1,--0,0,1,2,--0,0,1,3,--  
R27) 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,--0,1,--  
R28)  
0,0,1,1,2,2,3,3,4,-->0,0,1,1,2,2,3,3,4,4,--0,0,1,1,2,2,3,3,4,5,--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,--  
R29)  
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,--  
R30)  
0,0,1,1,2,2,3,3,6,-->0,0,2,1,--0,0,2,1,--0,0,1,1,2,2,--0,0,1,1,2,3,--0,0,1,1,2,4,--  
0,0,1,1,2,5,--  
R31)  
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,--0,0,1,2,--0,0,1,3,--  
R32) 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,--0,1,--  
R33)  
0,0,1,1,2,2,3,3,4,4,-->0,0,1,1,2,2,3,3,4,4,5,--0,0,1,1,2,2,3,3,4,4,6,--0,0,1,1,2,2,  
3,3,4,4,7,--0,0,1,1,2,2,3,3,4,4,8,--0,0,1,1,2,2,3,3,4,4,9,--0,0,1,1,2,2,3,3,4,4,10,  
--  
R34)  
0,0,1,1,2,2,3,3,4,5,-->0,1,0,--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)  
0,0,1,1,2,2,3,3,4,6,-->0,1,0,--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,--  
R36)  
0,0,1,1,2,2,3,3,4,7,-->0,1,0,--0,0,2,1,--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,--  
R37)  
0,0,1,1,2,2,3,3,4,8,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,1,--0,0,1,2,--0,  
0,1,3,--  
R38)  
0,0,1,1,2,2,3,3,4,9,-->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,--  
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,:  
 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,:  
 LEN=11) 0,0,1,1,2,2,3,3,4,4,5,: 0,0,1,1,2,2,3,3,4,4,6,: 0,0,1,1,2,2,3,3,4,4,7,:  
 0,0,1,1,2,2,3,3,4,4,8,: 0,0,1,1,2,2,3,3,4,4,9,: 0,0,1,1,2,2,3,3,4,4,10,:  
 Number new nodes in level n is given by : 1,2,3,5,3,4,4,5,5,6,6,

-----Class

793-----  
 Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][010][011][012][021][100]]

-----  
 --  
 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

794-----  
 Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][010][011][012][021][101]]

-----  
 --  
 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

795-----  
 Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][010][011][012][021][102]]

-----  
 --  
 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

796-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][012][021][110]]$

--  
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

797-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][012][021][120]]$

--  
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

798-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][012][021][201]]$

--  
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

799-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][012][021][210]]$



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

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

R2)  $0, 0, \rightarrow 0, 0, \rightarrow$

R3)  $0, 1, \rightarrow$

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

800-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][012][100][101]]$

-----  
--  
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

801-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][012][100][102]]$

-----  
--  
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

802-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][012][100][110]]$

-----  
--  
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

803-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][010][011][012][100][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

804-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][010][011][012][100][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

805-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][010][011][012][100][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

806-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][010][011][012][101][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

807-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][012][101][110]]$

--

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

808-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][012][101][120]]$

--

Rules of T[L]:

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

R2)  $0, 0, \rightarrow 0, 0, \rightarrow$

R3)  $0, 1, \rightarrow$

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

809-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][012][101][201]]$

--

Rules of T[L]:

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

R2)  $0, 0, \rightarrow 0, 0, \rightarrow$

R3)  $0, 1, \rightarrow$

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
810-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][011][012][101][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
811-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][011][012][102][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
812-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][011][012][102][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
813-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][011][012][102][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

814-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][012][102][210]]$

--  
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

815-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][012][110][120]]$

--  
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

816-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][012][110][201]]$

--  
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

817-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][012][110][210]]$

-----  
--  
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

818-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][012][120][201]]$

-----  
--  
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

819-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][012][120][210]]$

-----  
--  
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

820-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][012][201][210]]$

-----  
--  
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

821-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][011][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

822-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][011][021][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

823-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][011][021][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

824-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][011][021][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

825-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][021][100][201]]$

--  
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

826-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][021][100][210]]$

--  
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

827-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][021][101][102]]$

--  
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

828-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][021][101][110]]$



```
--
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
829-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][011][021][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
830-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][011][021][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
831-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][011][021][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
832-----
```

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][021][102][110]]$

-----  
--  
Rules of T[L]:  
R1)  $0, -- \rightarrow 0, 0, -- 0, 0, --$   
R2)  $0, 0, -- \rightarrow 0, 0, --$   
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

833-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][021][102][120]]$

-----  
--  
Rules of T[L]:  
R1)  $0, -- \rightarrow 0, 0, -- 0, 0, --$   
R2)  $0, 0, -- \rightarrow 0, 0, --$   
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

834-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][021][102][201]]$

-----  
--  
Rules of T[L]:  
R1)  $0, -- \rightarrow 0, 0, -- 0, 0, --$   
R2)  $0, 0, -- \rightarrow 0, 0, --$   
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

835-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][021][102][210]]$

-----  
--  
Rules of T[L]:  
R1)  $0, -- \rightarrow 0, 0, -- 0, 0, --$   
R2)  $0, 0, -- \rightarrow 0, 0, --$   
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
836-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][011][021][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
837-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][011][021][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
838-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][011][021][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
839-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][011][021][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

840-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][021][120][210]]$

-----

--

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

841-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][021][201][210]]$

-----

--

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

842-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][100][101][102]]$

-----

--

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

843-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][100][101][110]]$

-----

--

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

844-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][100][101][120]]$

--

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

845-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][100][101][201]]$

--

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

846-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][100][101][210]]$

--

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

847-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][100][102][110]]$

--

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

848-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][100][102][120]]$

--  
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

849-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][100][102][201]]$

--  
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

850-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][100][102][210]]$

--  
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

851-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][100][110][120]]$

--

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

852-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][100][110][201]]$

--

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

853-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][100][110][210]]$

--

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

854-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][100][120][201]]$

--

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

855-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][100][120][210]]$

```

-----
--
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
856-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][011][100][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
857-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][011][101][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
858-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][011][101][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

```



859-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][101][102][201]]$

-----  
--  
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  
860-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][101][102][210]]$

-----  
--  
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  
861-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][101][110][120]]$

-----  
--  
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  
862-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][101][110][201]]$

-----  
--  
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  
863-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][101][110][210]]$   
-----

--  
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  
864-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][101][120][201]]$   
-----

--  
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  
865-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][101][120][210]]$   
-----

--  
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  
866-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][101][201][210]]$   
-----

--  
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

867-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][010][011][102][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

868-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][010][011][102][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

869-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][010][011][102][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

870-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][010][011][102][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

871-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][011][102][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

872-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][011][102][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

873-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][011][110][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

874-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][011][110][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

875-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][110][201][210]]$

--  
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

876-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][011][120][201][210]]$

--  
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

877-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][021][100][101]]$

--  
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

878-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][021][100][102]]$

```
--
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
879-----
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][021][100][110]]$ 
-----
```

```
--
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
880-----
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][021][100][120]]$ 
-----
```

```
--
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
881-----
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][021][100][201]]$ 
-----
```

```
--
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
882-----
```

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][021][100][210]]$

-----  
--  
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  
883-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][021][101][102]]$

-----  
--  
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  
884-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][021][101][110]]$

-----  
--  
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  
885-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][021][101][120]]$

-----  
--  
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  
886-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][021][101][201]]$   
-----  
--  
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  
887-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][021][101][210]]$   
-----  
--  
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  
888-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][021][102][110]]$   
-----  
--  
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  
889-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][021][102][120]]$   
-----  
--  
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

890-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][021][102][201]]$

-----

--

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

891-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][021][102][210]]$

-----

--

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

892-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][021][110][120]]$

-----

--

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

893-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][021][110][201]]$

-----

--

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

894-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][012][021][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

895-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][012][021][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

896-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][012][021][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

897-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][012][021][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

898-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][100][101][102]]$

--  
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

899-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][100][101][110]]$

--  
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

900-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][100][101][120]]$

--  
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

901-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][100][101][201]]$

--

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

902-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][100][101][210]]$

--

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

903-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][100][102][110]]$

--

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

904-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][100][102][120]]$

--

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

905-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][100][102][201]]$

-----

--  
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  
906-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][100][102][210]]$   
-----

--  
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  
907-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][100][110][120]]$   
-----

--  
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  
908-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][100][110][201]]$   
-----

--  
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

909-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][100][110][210]]$   
-----

--  
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  
910-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][100][120][201]]$   
-----

--  
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  
911-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][100][120][210]]$   
-----

--  
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  
912-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][100][201][210]]$   
-----

--  
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  
913-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][101][102][110]]$

-----  
--  
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  
914-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][101][102][120]]$

-----  
--  
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  
915-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][101][102][201]]$

-----  
--  
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  
916-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][101][102][210]]$

-----  
--  
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

917-----

Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][012][101][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

918-----

Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][012][101][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

919-----

Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][012][101][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

920-----

Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][012][101][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

921-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][012][101][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

922-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][012][101][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

923-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][012][102][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

924-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][012][102][110][201]]

--  
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  
925-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][102][110][210]]$

--  
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  
926-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][102][120][201]]$

--  
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  
927-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][102][120][210]]$

--  
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  
928-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][102][201][210]]$

```
--
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
929-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][012][110][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
930-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][012][110][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
931-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][012][110][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
932-----
```

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][012][120][201][210]]$

-----  
--  
Rules of T[L]:  
R1)  $0, -- \rightarrow 0, 0, -- 0, 0, --$   
R2)  $0, 0, -- \rightarrow 0, 0, --$   
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  
933-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][100][101][102]]$

-----  
--  
Rules of T[L]:  
R1)  $0, -- \rightarrow 0, 0, -- 0, 0, --$   
R2)  $0, 0, -- \rightarrow 0, 0, --$   
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  
934-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][100][101][110]]$

-----  
--  
Rules of T[L]:  
R1)  $0, -- \rightarrow 0, 0, -- 0, 0, --$   
R2)  $0, 0, -- \rightarrow 0, 0, --$   
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  
935-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][100][101][120]]$

-----  
--  
Rules of T[L]:  
R1)  $0, -- \rightarrow 0, 0, -- 0, 0, --$   
R2)  $0, 0, -- \rightarrow 0, 0, --$   
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  
936-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][100][101][201]]$   
-----  
--  
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  
937-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][100][101][210]]$   
-----  
--  
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  
938-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][100][102][110]]$   
-----  
--  
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  
939-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][100][102][120]]$   
-----  
--  
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

940-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][100][102][201]]$

-----

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

941-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][100][102][210]]$

-----

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

942-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][100][110][120]]$

-----

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

943-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][100][110][201]]$

-----

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

944-----

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

945-----

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

946-----

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

947-----

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

948-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][021][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

949-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][021][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

950-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][021][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

951-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][021][101][102][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

952-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][101][110][120]]$

--

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

953-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][101][110][201]]$

--

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

954-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][101][110][210]]$

--

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

955-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][101][120][201]]$

-----

--  
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  
956-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][101][120][210]]$

-----

--  
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  
957-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][101][201][210]]$

-----

--  
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  
958-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][102][110][120]]$

-----

--  
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

959-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][102][110][201]]$

-----  
--  
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  
960-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][102][110][210]]$

-----  
--  
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  
961-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][102][120][201]]$

-----  
--  
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  
962-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][102][120][210]]$

-----  
--  
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  
963-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][102][201][210]]$

-----  
--  
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  
964-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][110][120][201]]$

-----  
--  
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  
965-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][110][120][210]]$

-----  
--  
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  
966-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][021][110][201][210]]$

-----  
--  
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

967-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][010][021][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

968-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][010][100][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

969-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][010][100][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

970-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][010][100][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

971-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][100][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

972-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][100][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

973-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][100][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

974-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][100][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  
975-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][100][101][120][201]]$

--  
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  
976-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][100][101][120][210]]$

--  
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  
977-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][100][101][201][210]]$

--  
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  
978-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][100][102][110][120]]$

```
--
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
979-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][100][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
980-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][100][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
981-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][010][100][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
982-----
```



Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][100][102][120][210]]$

-----  
--  
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  
983-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][100][102][201][210]]$

-----  
--  
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  
984-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][100][110][120][201]]$

-----  
--  
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  
985-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][100][110][120][210]]$

-----  
--  
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  
986-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][100][110][201][210]]$

-----  
--  
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  
987-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][100][120][201][210]]$

-----  
--  
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  
988-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][101][102][110][120]]$

-----  
--  
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  
989-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][101][102][110][201]]$

-----  
--  
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

990-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][101][102][110][210]]$

-----

--  
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

991-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][101][102][120][201]]$

-----

--  
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

992-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][101][102][120][210]]$

-----

--  
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

993-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][101][102][201][210]]$

-----

--  
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

994-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][101][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

995-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][101][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

996-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][101][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

997-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][010][101][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

998-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][102][110][120][201]]$

--  
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

999-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][102][110][120][210]]$

--  
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

1000-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][102][110][201][210]]$

--  
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

1001-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][102][120][201][210]]$

--

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

1002-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][010][110][120][201][210]]$

--

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

1003-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][021][100][101]]$

--

Rules of T[L]:

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

R2)  $0, 0, \rightarrow 0, 0, \rightarrow$

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

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

1004-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][021][100][102]]$

--

Rules of T[L]:

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

R2)  $0, 0, \rightarrow 0, 0, \rightarrow$

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

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

1005-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][021][100][110]]$

--

Rules of T[L]:

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

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

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

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

1006-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][021][100][120]]$

--

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

1007-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][021][100][201]]$

--

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
1008-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][011][012][021][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
1009-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][011][012][021][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
1010-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][011][012][021][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
1011-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][011][012][021][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

1012-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][021][101][201]]$

--  
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

1013-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][021][101][210]]$

--  
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

1014-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][021][102][110]]$

--  
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

1015-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][021][102][120]]$

--

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

1016-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][021][102][201]]$

--

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

1017-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][021][102][210]]$

--

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

1018-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][021][110][120]]$

--

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

1019-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][021][110][201]]$

```

-----
--
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
1020-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][011][012][021][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
1021-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][011][012][021][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
1022-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][011][012][021][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

```

1023-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][021][201][210]]$

-----  
--  
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

1024-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][100][101][102]]$

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

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

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

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

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

1025-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][100][101][110]]$

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

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

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

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

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

1026-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][100][101][120]]$

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

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

1027-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][100][101][201]]$

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

1028-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][100][101][210]]$

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

1029-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][100][102][110]]$

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

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

1030-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][100][102][120]]$

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

1031-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][100][102][201]]$

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

1032-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][100][102][210]]$

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

1033-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][100][110][120]]$

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

1034-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][100][110][201]]$

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

1035-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][100][110][210]]$

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

1036-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][100][120][201]]$

--

Rules of T[L]:

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

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

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

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

1037-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][100][120][210]]$

--

Rules of T[L]:

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

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

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

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

1038-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][100][201][210]]$

--

Rules of T[L]:

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

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

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

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

1039-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][101][102][110]]$

-----

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

1040-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][101][102][120]]$

-----

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

1041-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][101][102][201]]$

-----

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

1042-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][101][102][210]]$

-----

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

1043-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][011][012][101][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

1044-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][011][012][101][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

1045-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][011][012][101][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

1046-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][011][012][101][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

1047-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][101][120][210]]$

--  
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

1048-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][101][201][210]]$

--  
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

1049-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][102][110][120]]$

--  
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

1050-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][102][110][201]]$

--

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

1051-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][102][110][210]]$

--

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

1052-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][102][120][201]]$

--

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

1053-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][102][120][210]]$

--

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

1054-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][102][201][210]]$

```

-----
--
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
1055-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][011][012][110][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
1056-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][011][012][110][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
1057-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][011][012][110][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

```

1058-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][012][120][201][210]]$

-----  
--  
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

1059-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][100][101][102]]$

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

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

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

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

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

1060-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][100][101][110]]$

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

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

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

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

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

1061-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][100][101][120]]$

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

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

1062-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][100][101][201]]$

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

1063-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][100][101][210]]$

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

1064-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][100][102][110]]$

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

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

1065-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][100][102][120]]$

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

1066-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][100][102][201]]$

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

1067-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][100][102][210]]$

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

1068-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][100][110][120]]$

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

1069-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][100][110][201]]$

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

1070-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][100][110][210]]$

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

1071-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][100][120][201]]$

--

Rules of T[L]:

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

1072-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][100][120][210]]$

--

Rules of T[L]:

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

1073-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][100][201][210]]$

--

Rules of T[L]:

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

1074-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][101][102][110]]$

-----

--

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

1075-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][101][102][120]]$

-----

--

Rules of T[L]:

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

R2)  $0, 0, \rightarrow 0, 0, \rightarrow$

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

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

1076-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][101][102][201]]$

-----

--

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

1077-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][101][102][210]]$

-----

--

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

1078-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][011][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,--  
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

1079-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][011][021][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

1080-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][011][021][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

1081-----  
Inversion Sequences (I\_n=(n+1)!) avoiding L=[[001][011][021][101][120][201]]

--

Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,0,--0,0,--  
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  
1082-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][101][120][210]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,0,--0,0,--  
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  
1083-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][101][201][210]]$

--  
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  
1084-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][102][110][120]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,0,--0,0,--  
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  
1085-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][102][110][201]]$   
-----  
--  
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  
1086-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][102][110][210]]$   
-----  
--  
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  
1087-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][102][120][201]]$   
-----  
--  
Rules of  $T[L]$ :  
R1)  $0,-->0,0,--0,1,--$   
R2)  $0,0,-->0,0,--$   
R3)  $0,1,-->0,0,--0,0,--$   
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  
1088-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][102][120][210]]$   
-----  
--  
Rules of  $T[L]$ :  
R1)  $0,-->0,0,--0,1,--$   
R2)  $0,0,-->0,0,--$   
R3)  $0,1,-->0,0,--0,0,--$   
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

1089-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][011][021][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

1090-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][011][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,--

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

1091-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][011][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,--

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

1092-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][011][021][110][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

1093-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][021][120][201][210]]$

--

Rules of T[L]:

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

R2)  $0, 0, \rightarrow 0, 0, \rightarrow$

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

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

1094-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][100][101][102][110]]$

--

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

1095-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][100][101][102][120]]$

--

Rules of T[L]:

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

R2)  $0, 0, \rightarrow 0, 0, \rightarrow$

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

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

1096-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][100][101][102][201]]$

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

1097-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][100][101][102][210]]$

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

1098-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][100][101][110][120]]$

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

List of different nodes in T[L]

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

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

-----Class

1099-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][100][101][110][201]]$

-----

--

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

1100-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][100][101][110][210]]$

-----

--

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

1101-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][100][101][120][201]]$

-----

--

Rules of T[L]:

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

R2)  $0,0, \rightarrow 0,0, \rightarrow$

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

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  
1102-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][100][101][120][210]]$   
-----

--  
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  
1103-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][100][101][201][210]]$   
-----

--  
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  
1104-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][100][102][110][120]]$   
-----

--  
Rules of  $T[L]$ :  
R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$   
R2)  $0, 0, \rightarrow 0, 0, \rightarrow$   
R3)  $0, 1, \rightarrow 0, 1, 0, \rightarrow 0, 0, \rightarrow$   
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  
1105-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][100][102][110][201]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,1,0,--0,1,--  
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  
1106-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][100][102][110][210]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,1,0,--0,1,--  
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  
1107-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][100][102][120][201]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,1,0,--0,0,--  
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  
1108-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][100][102][120][210]]$

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

```
1109-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][011][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,--
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

```
1110-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][011][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,--
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

```
1111-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][011][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,--  
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

1112-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][100][110][201][210]]$

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

1113-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][100][120][201][210]]$

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

1114-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][101][102][110][120]]$

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

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

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

1115-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][101][102][110][201]]$

--

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

1116-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][101][102][110][210]]$

--

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

1117-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][101][102][120][201]]$

--

Rules of T[L]:

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

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

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

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

1118-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][101][102][120][210]]$

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

```
1119-----
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][101][102][201][210]]$ 
-----
```

```
--
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

```
1120-----
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][101][110][120][201]]$ 
-----
```

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

```
1121-----
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][101][110][120][210]]$ 
-----
```

```
--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,--
R3) 0,1,-->0,0,--0,0,--
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
1122-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][011][101][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
1123-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][011][101][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
1124-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][011][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,--
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
1125-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][011][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,--  
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

1126-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][102][110][201][210]]$

--  
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

1127-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][102][120][201][210]]$

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

1128-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][011][110][120][201][210]]$

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

1129-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][100][101][102]]$

```

-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,--
R3) 0,1,-->0,1,0,--0,1,--
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
1130-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][012][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,--
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
1131-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][012][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,--
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
1132-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][012][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,--

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

1133-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][100][101][210]]$

--

Rules of T[L]:

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

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

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

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

1134-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][100][102][110]]$

--

Rules of T[L]:

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

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

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

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

1135-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][100][102][120]]$

--

Rules of T[L]:

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

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

1136-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][100][102][201]]$

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

1137-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][100][102][210]]$

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

1138-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][100][110][120]]$

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

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

1139-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][100][110][201]]$

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

1140-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][100][110][210]]$

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

1141-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][100][120][201]]$

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

1142-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][100][120][210]]$

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

1143-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][100][201][210]]$

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

1144-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][101][102][110]]$

--  
Rules of T[L]:  
R1) 0, -->0,0, --0,1, --  
R2) 0,0, -->0,0, --  
R3) 0,1, -->0,0, --0,0, --  
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  
1145-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][101][102][120]]$

-----  
--  
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  
1146-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][101][102][201]]$

-----  
--  
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  
1147-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][101][102][210]]$

-----  
--  
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  
1148-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][101][110][120]]$

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

1149-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][101][110][201]]$

--

Rules of T[L]:

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

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

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

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

1150-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][101][110][210]]$

--

Rules of T[L]:

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

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

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

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

1151-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][101][120][201]]$

--

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

1152-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][101][120][210]]$

--

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

1153-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][101][201][210]]$

--

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

1154-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][102][110][120]]$

--

Rules of T[L]:

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

R2)  $0, 0, \rightarrow 0, 0, \rightarrow$

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

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

1155-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][102][110][201]]$

--

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

1156-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][102][110][210]]$

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

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

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

1157-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][102][120][201]]$

-----  
--  
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

1158-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][102][120][210]]$

-----  
--  
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

1159-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][021][102][201][210]]$

-----  
--  
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

1160-----

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

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

1161-----

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

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

1162-----

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

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

1163-----

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

1164-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][100][101][102][110]]$

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

1165-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][100][101][102][120]]$

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

1166-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][100][101][102][201]]$

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

1167-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][100][101][102][210]]$

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

1168-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][100][101][110][120]]$

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

1169-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][100][101][110][201]]$

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

1170-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][100][101][110][210]]$

--

Rules of  $T[L]$ :

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

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

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

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

1171-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][100][101][120][201]]$

--

Rules of  $T[L]$ :

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

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

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

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

1172-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][100][101][120][210]]$

--

Rules of  $T[L]$ :

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

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

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

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

1173-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][100][101][201][210]]$

-----  
--

Rules of  $T[L]$ :

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

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

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

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

1174-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][100][102][110][120]]$

-----  
--

Rules of  $T[L]$ :

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

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

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

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

1175-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][100][102][110][201]]$

-----  
--

Rules of  $T[L]$ :

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

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

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

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



1176-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][100][102][110][210]]$

--  
Rules of  $T[L]$ :

- R1)  $0, -- \rightarrow 0, 0, -- 0, 1, --$
- R2)  $0, 0, -- \rightarrow 0, 0, --$
- R3)  $0, 1, -- \rightarrow 0, 1, 0, -- 0, 0, --$
- 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

1177-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][100][102][120][201]]$

--  
Rules of  $T[L]$ :

- R1)  $0, -- \rightarrow 0, 0, -- 0, 1, --$
- R2)  $0, 0, -- \rightarrow 0, 0, --$
- R3)  $0, 1, -- \rightarrow 0, 1, 0, -- 0, 1, --$
- 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

1178-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][100][102][120][210]]$

--  
Rules of  $T[L]$ :

- R1)  $0, -- \rightarrow 0, 0, -- 0, 1, --$
- R2)  $0, 0, -- \rightarrow 0, 0, --$
- R3)  $0, 1, -- \rightarrow 0, 1, 0, -- 0, 1, --$
- 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

1179-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][100][102][201][210]]$

```

-----
--
Rules of T[L]:
R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,--
R3) 0,1,-->0,1,0,--0,1,--
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
1180-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][012][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,--
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
1181-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][012][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,--
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
1182-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[001][012][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,--

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

1183-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][100][120][201][210]]$

--

Rules of T[L]:

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

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

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

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

1184-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][101][102][110][120]]$

--

Rules of T[L]:

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

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

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

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

1185-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][101][102][110][201]]$

--

Rules of T[L]:

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

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

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

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

1186-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][101][102][110][210]]$

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

1187-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][101][102][120][201]]$

--  
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

1188-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][101][102][120][210]]$

--  
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

1189-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][101][102][201][210]]$

--

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

1190-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][101][110][120][201]]$

--

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

1191-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][101][110][120][210]]$

--

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

1192-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][101][110][201][210]]$

--

Rules of T[L]:

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

R2)  $0, 0, \rightarrow 0, 0, \rightarrow$

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

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  
1193-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][101][120][201][210]]$

-----  
--  
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  
1194-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][102][110][120][201]]$

-----  
--  
Rules of T[L]:  
R1)  $0,-->0,0,--0,1,--$   
R2)  $0,0,-->0,0,--$   
R3)  $0,1,-->0,0,--0,0,--$   
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  
1195-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][102][110][120][210]]$

-----  
--  
Rules of T[L]:  
R1)  $0,-->0,0,--0,1,--$   
R2)  $0,0,-->0,0,--$   
R3)  $0,1,-->0,0,--0,0,--$   
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  
1196-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][102][110][201][210]]$

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

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

1197-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][102][120][201][210]]$

--  
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

1198-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][012][110][120][201][210]]$

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

1199-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][100][101][102][110]]$

--  
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,--  
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

1200-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][100][101][102][120]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,1,0,--0,1,1,--0,1,2,--  
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  
1201-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][100][101][102][201]]$

-----  
--  
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,--  
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  
1202-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][100][101][102][210]]$

-----  
--  
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,--  
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  
1203-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][100][101][110][120]]$

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

-----Class  
1204-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][100][101][110][201]]$

--  
Rules of T[L]:  
R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$   
R2)  $0, 0, \rightarrow 0, 0, \rightarrow$   
R3)  $0, 1, \rightarrow 0, 1, 0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$   
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  
1205-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][100][101][110][210]]$

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

1206-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][100][101][120][201]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,1,0,--0,1,1,--0,1,2,--  
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  
1207-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][100][101][120][210]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,1,0,--0,1,1,--0,1,2,--  
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  
1208-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][100][101][201][210]]$

-----  
--  
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,--  
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

1209-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][100][102][110][120]]$

-----

--

Rules of T[L]:

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

R2)  $0,0, \rightarrow 0,0, \rightarrow$

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

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

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

List of different nodes in T[L]

LEN=1)  $0, :$

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

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

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

-----Class

1210-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][100][102][110][201]]$

-----

--

Rules of T[L]:

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

R2)  $0,0, \rightarrow 0,0, \rightarrow$

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

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

1211-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][100][102][110][210]]$

-----

--

Rules of T[L]:

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

R2)  $0,0, \rightarrow 0,0, \rightarrow$

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

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

1212-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][100][102][120][201]]$

-----

--

Rules of  $T[L]$ :

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

R2)  $0, 0, -- \rightarrow 0, 0, --$

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

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

R5)  $0, 1, 1, -- \rightarrow 0, 1, 0, -- 0, 1, 1, --$

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

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

1213-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][100][102][120][210]]$

-----

--

Rules of  $T[L]$ :

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

R2)  $0, 0, -- \rightarrow 0, 0, --$

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

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

R5)  $0, 1, 1, -- \rightarrow 0, 1, 0, -- 0, 1, 1, --$

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

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

1214-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][100][102][201][210]]$

-----

--

Rules of  $T[L]$ :

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

R2)  $0, 0, -- \rightarrow 0, 0, --$

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

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

R5)  $0, 1, 1, -- \rightarrow 0, 1, 0, -- 0, 1, 1, --$

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

1215-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][100][110][120][201]]$

--

Rules of T[L]:

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

1216-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][100][110][120][210]]$

--

Rules of T[L]:

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

1217-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][100][110][201][210]]$

--

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,--
- 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

1218-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][100][120][201][210]]$

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

1219-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][101][102][110][120]]$

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

1220-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][101][102][110][201]]$

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

1221-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][101][102][110][210]]$

-----

--

Rules of  $T[L]$ :

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

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

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

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

1222-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][101][102][120][201]]$

-----

--

Rules of  $T[L]$ :

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

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

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

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

1223-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][101][102][120][210]]$

-----

--

Rules of  $T[L]$ :

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

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

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

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

1224-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][101][102][201][210]]$

-----  
--  
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,--  
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

1225-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][101][110][120][201]]$

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

1226-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][101][110][120][210]]$

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

1227-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][101][110][201][210]]$



```
--
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

```
1228-----
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][101][120][201][210]]$ 
```

```
--
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

```
1229-----
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][102][110][120][201]]$ 
```

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

```
1230-----
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][102][110][120][210]]$ 
```

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

R3) 0,1,-->0,0,--0,0,--0,1,2,--  
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  
1231-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][102][110][201][210]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,0,--0,0,--0,1,--  
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  
1232-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][102][120][201][210]]$

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,--  
R3) 0,1,-->0,0,--0,1,1,--0,1,1,--  
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  
1233-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][021][110][120][201][210]]$

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

1234-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][100][101][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

1235-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[001][100][101][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,--0,1,0,--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,--0,1,0,--0,0,--0,1,2,3,4,5,6,7,8,9,--
- R12) 0,1,2,3,4,5,6,7,8,9,-->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,--0,1,2,3,4,5,6,7,8,9,10,--

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, :  
 LEN=11) 0,1,2,3,4,5,6,7,8,9,10, :  
 Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,

-----Class

1236-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][100][101][102][110][210]]$

--

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,--
- R12) 0,1,2,3,4,5,6,7,8,9,-->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,--0,1,2,3,4,5,6,7,8,9,10,--

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, :  
 LEN=11) 0,1,2,3,4,5,6,7,8,9,10, :  
 Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,

-----Class  
1237-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][100][101][102][120][201]]$

-----  
--  
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  
1238-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][100][101][102][120][210]]$

-----  
--  
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  
1239-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][100][101][102][201][210]]$

-----  
--  
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,--0,1,2,3,4,5,5,--  
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,--  
R19)  
0,1,2,3,4,5,6,7,8,8,-->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,--  
R20)  
0,1,2,3,4,5,6,7,8,9,-->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,--0,1,2,3,4,5,6,7,8,9,9,--0,1,2,3,4,5,6,7,8,9,10,--

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, :  
LEN=11) 0,1,2,3,4,5,6,7,8,9,9, : 0,1,2,3,4,5,6,7,8,9,10, :  
Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,2,2,

-----Class

1240-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][100][101][110][120][201]]$

-----

--

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

1241-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][100][101][110][120][210]]$

-----

--

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

1242-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][100][101][110][201][210]]$

-----

--

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,--0,1,0,

--0,0,--0,1,2,3,4,5,6,7,8,9,--

R12)

0,1,2,3,4,5,6,7,8,9,-->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,--0,1,2,3,4,5,6,7,8,9,10,--

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,:  
 LEN=11) 0,1,2,3,4,5,6,7,8,9,10,:  
 Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,

-----Class

1243-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][100][101][120][201][210]]$

--  
 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

1244-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][100][102][110][120][201]]$

--  
 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

1245-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][100][102][110][120][210]]$

--



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

1246-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][100][102][110][201][210]]$

--  
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,--
- R12) 0,1,2,3,4,5,6,7,8,9,-->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,--0,1,2,3,4,5,6,7,8,9,10,--

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,:
- LEN=11) 0,1,2,3,4,5,6,7,8,9,10,:

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

-----Class  
1247-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][100][102][120][201][210]]$

--  
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  
1248-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][100][110][120][201][210]]$

--  
Rules of  $T[L]$ :  
R1)  $0,-->0,0,--0,1,--$   
R2)  $0,0,-->0,0,--$   
R3)  $0,1,-->0,1,0,--0,0,--0,1,--$   
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  
1249-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][101][102][110][120][201]]$

--  
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  
1250-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][101][102][110][120][210]]$

--

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

1251-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][101][102][110][201][210]]$

--

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,--0,1,2,3,4,5,6,7,

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,--

R11)

0,1,2,3,4,5,6,7,8,9,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--

0,1,2,3,4,5,6,7,8,9,10,--

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,:

LEN=11) 0,1,2,3,4,5,6,7,8,9,10,:

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

-----Class

1252-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][101][102][120][201][210]]$

--

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

1253-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][101][110][120][201][210]]$

--

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

1254-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[001][102][110][120][201][210]]$

--

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

1255-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][021][100][101]]$

--

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,--0,1,--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,--
- 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,--

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=11) 0,0,0,0,0,0,0,0,0,0,0, :

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

-----Class

1256-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][021][100][102]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,1,--
- R3) 0,1,-->
- 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,--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=11) 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

1261-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][011][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,-->
- 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,--
- 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,--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=11) 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

1262-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][021][101][110]]$

-----

--

Rules of T[L]:

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

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

R3) 0,1,-->

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,--

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,--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=11) 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

1263-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][021][101][120]]$

-----

--

Rules of T[L]:

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

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

R3) 0,1,-->

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,--



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=11) 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

1265-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][021][101][210]]$

-----

--  
Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,0, --0,1, --0,1, --
- R3) 0,1, -->
- 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, --
- 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, --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=11) 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

1266-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][021][102][110]]$

-----  
--

Rules of  $T[L]$ :

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

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

R3)  $0,1, -->$

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)

$0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,0,0, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --$   
 $--0,1, --0,1, --$

R11)

$0,0,0,0,0,0,0,0,0,0, -->0, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --$   
 $0,1, --0,1, --0,1, --0,1, --$

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)  $0,0,0,0,0,0,0,0,0,0, :$

LEN=11)  $0,0,0,0,0,0,0,0,0,0,0, :$

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

-----Class

1267-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][021][102][120]]$

-----  
--

Rules of  $T[L]$ :

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

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

R3)  $0,1, -->$

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,--  
R11) 0,0,0,0,0,0,0,0,0,0,0,0,-->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, :  
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=11) 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  
1268-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][021][102][201]]$   
-----

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,1,--0,1,--  
R3) 0,1,-->  
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,--  
R11) 0,0,0,0,0,0,0,0,0,0,0,-->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,:  
 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=11) 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

1269-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][021][102][210]]$

--

Rules of  $T[L]$ :

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

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=11) 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

1270-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][021][110][120]]$

--

Rules of  $T[L]$ :

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

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=11) 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

1271-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][021][110][201]]$

--

Rules of  $T[L]$ :

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





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=11) 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

1273-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][021][120][201]]$

-----

--  
 Rules of  $T[L]$ :

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

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=11) 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

1274-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][021][120][210]]$

-----

--

Rules of T[L]:

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

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

R3) 0,1,-->

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,--

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,:

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=11) 0,0,0,0,0,0,0,0,0,0,0,:

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

-----Class

1275-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][021][201][210]]$

-----

--

Rules of T[L]:

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

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

R3) 0,1,-->

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,--







$0,0,0,0,0,0, \rightarrow 0,0,0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,0,5, \rightarrow 0,0,0,0,0,6, \rightarrow$   
R11)  $0,0,0,0,0,5, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow$   
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)  $0,0,0,0,0,0,6, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,0,5, \rightarrow$   
R14)  
 $0,0,0,0,0,0,0,0, \rightarrow 0,0,0,0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,0,5, \rightarrow 0,0,0,0,0,6, \rightarrow 0,0,0,0,0,0,7, \rightarrow 0,0,0,0,0,0,0,8, \rightarrow$   
R15)  
 $0,0,0,0,0,0,0,7, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,0,5, \rightarrow 0,0,0,0,0,6, \rightarrow$   
--  
R16)  
 $0,0,0,0,0,0,0,0,0, \rightarrow 0,0,0,0,0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,5, \rightarrow 0,0,0,0,0,6, \rightarrow 0,0,0,0,0,0,7, \rightarrow 0,0,0,0,0,0,0,8, \rightarrow 0,0,0,0,0,0,0,9, \rightarrow$   
--  
R17)  
 $0,0,0,0,0,0,0,0,8, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,0,5, \rightarrow 0,0,0,0,0,6, \rightarrow 0,0,0,0,0,0,7, \rightarrow$   
R18)  
 $0,0,0,0,0,0,0,0,0,0, \rightarrow 0,0,0,0,0,0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,0,5, \rightarrow 0,0,0,0,0,0,6, \rightarrow 0,0,0,0,0,0,0,7, \rightarrow 0,0,0,0,0,0,0,0,8, \rightarrow 0,0,0,0,0,0,0,0,9, \rightarrow 0,0,0,0,0,0,0,0,0,10, \rightarrow$   
R19)  
 $0,0,0,0,0,0,0,0,0,9, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,0,5, \rightarrow 0,0,0,0,0,6, \rightarrow 0,0,0,0,0,0,7, \rightarrow 0,0,0,0,0,0,0,8, \rightarrow$   
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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :  
Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

1279-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][100][101][201]]$   
-----

--  
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,-->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,--0,1,--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,--0,0,0,0,0,0,6,--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,  
 --  
 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,--0,0,0,0,0,0,0,9  
 ,--  
 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,--  
 R18)  
 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,10,--  
 R19)  
 0,0,0,0,0,0,0,0,0,9,-->0,1,--0,0,2,--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,--

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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,2,



Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][100][101][210]]$

--

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)  $0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 6, \rightarrow$
- R11)  $0, 0, 0, 0, 0, 5, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow$
- R12)  $0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 6, \rightarrow 0, 0, 0, 0, 0, 0, 7, \rightarrow$
- 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)  $0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 6, \rightarrow 0, 0, 0, 0, 0, 0, 7, \rightarrow 0, 0, 0, 0, 0, 0, 0, 8, \rightarrow$
- 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)  $0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 6, \rightarrow 0, 0, 0, 0, 0, 0, 7, \rightarrow 0, 0, 0, 0, 0, 0, 0, 8, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 9, \rightarrow$
- R17)  $0, 0, 0, 0, 0, 0, 0, 0, 8, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow$
- R18)  $0, 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 6, \rightarrow 0, 0, 0, 0, 0, 0, 7, \rightarrow 0, 0, 0, 0, 0, 0, 0, 8, \rightarrow 0, 0, 0, 0, 0, 0, 0, 9, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 10, \rightarrow$
- R19)  $0, 0, 0, 0, 0, 0, 0, 0, 0, 9, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow$

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)  $0, 0, 0, 0, 0, 0, 0, 0, 0, 0, : 0, 0, 0, 0, 0, 0, 0, 0, 0, 9, :$
  - LEN=11)  $0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, : 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 10, :$
- Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,2

-----Class

1281-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][100][102][110]]$   
-----

--  
Rules of  $T[L]$ :

- R1)  $0, -->0,0, --0,1, --$
- R2)  $0,0, -->0,0,0, --0,1, --0,0,2, --$
- R3)  $0,1, -->$
- 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)  $0,0,0,0,0,4, -->0,1, --0,0,2, --0,0,0,3, --$
- 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)  
 $0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,$   
 $0,5, --0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,8, --$
- R15)  
 $0,0,0,0,0,0,0,7, -->0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6,$   
 $--$
- 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)  
 $0,0,0,0,0,0,0,0,8, -->0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,0,$   
 $6, --0,0,0,0,0,0,7, --$
- R18)  
 $0,0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --$   
 $0,0,0,0,0,5, --0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,8, --0,0,0,0,0,0,0,$   
 $0,9, --0,0,0,0,0,0,0,0,0,10, --$
- R19)  
 $0,0,0,0,0,0,0,0,0,9, -->0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,$   
 $0,6, --0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,8, --$

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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

1282-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][100][102][120]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
  - R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
  - R3) 0,1,-->
  - 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,--
  - 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,--0,1,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,10,--
  - R19) 0,0,0,0,0,0,0,0,0,9,-->0,1,--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,--
- 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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,2,

-----Class

1283-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][100][102][201]]$

-----

--

Rules of T[L]:

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

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

R3) 0,1, -->

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, --0,0,0,0,0,6, --

--

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, --0,0,0,0,5, --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, --0,0,0,0,0,7, --

R18)



, --  
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,--  
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,--0,0,2,--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,--0,0,0,0,0,0,0,0,  
,0,9,--0,0,0,0,0,0,0,10, --  
R19) 0,0,0,0,0,0,0,0,0,9, -->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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :  
Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class  
1285-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][100][110][120]]$   
-----

--  
Rules of  $T[L]$ :  
R1) 0, -->0,0,--0,1, --  
R2) 0,0, -->0,0,0,--0,1,--0,0,2, --  
R3) 0,1, -->  
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,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8, --  
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,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--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,--

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,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,10,--

R19)  
 0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,8,--

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, :
  - LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :
- Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,2,

-----Class

1286-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][100][110][201]]$

-----

--  
 Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
- R3) 0,1,-->
- 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,--0,0,0,0,0,0,0,7,--

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,--0,0,0,0,0,0,0,7,--  
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,--0,1,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,0,10,--  
R19)  
0,0,0,0,0,0,0,0,0,9,-->0,1,--0,0,2,--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,--

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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :  
Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

1287-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][100][110][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,1,--0,0,2,--  
R3) 0,1,-->  
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,--0,0,0,0,0,6,--

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,--0,0,0,0,0,0,0,8,--

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,-->0,0,0,0,0,0,0,0,0,0,0,0,--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,--

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,--0,1,--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,--0,0,0,0,0,0,0,0,10,--

R19) 0,0,0,0,0,0,0,0,0,9,-->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, :

LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :

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

-----Class

1288-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][100][120][201]]$

-----

--

Rules of T[L]:

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

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

R3) 0,1,-->

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,--0,0,0,0,0,0,0,7,--  
R13) 0,0,0,0,0,0,0,6,-->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)  
0,0,0,0,0,0,0,0,7,-->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)  
0,0,0,0,0,0,0,0,0,8,-->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,--  
R18)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,0,10,--  
R19)  
0,0,0,0,0,0,0,0,0,0,9,-->0,1,--0,0,2,--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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :  
Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

1289-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][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,-->
- 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,--0,0,0,0,0,0,7,--
- 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) 0,0,0,0,0,0,0,7,-->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,--0,0,0,0,0,0,6,--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,--
- 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,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,10,--
- R19) 0,0,0,0,0,0,0,0,0,9,-->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, :
  - LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :
- Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,2,

-----Class

1290-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][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, -->
- 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, --0,0,0,0,0,0,7, --
- 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) 0,0,0,0,0,0,0,7, -->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, --0,0,0,0,0,0,0,6, --0,0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,0,8, --0,0,0,0,0,0,0,0,0,9, --
- 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, --
- 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, --0,0,2, --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, --0,0,0,0,0,0,0,0,0,0,10, --
- R19) 0,0,0,0,0,0,0,0,0,9, -->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, :
- LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :

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

-----Class

1291-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][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,-->
- 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,--0,0,0,0,0,0,0,9  
,--
- 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,--
- R18)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,10,--
- R19)  
0,0,0,0,0,0,0,0,0,9,-->0,1,--0,0,2,--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,--

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,:
- LEN=11) 0,0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,10,:

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

-----Class

1292-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][101][102][120]]$

-----

--

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)  $0,1, \rightarrow$

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

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

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

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

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)

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

--

R16)

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

--

R17)

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

R18)

$0,0,0,0,0,0,0,0,0,0, \rightarrow 0,0,0,0,0,0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,0,5, \rightarrow 0,0,0,0,0,0,6, \rightarrow 0,0,0,0,0,0,0,7, \rightarrow 0,0,0,0,0,0,0,0,8, \rightarrow 0,0,0,0,0,0,0,0,0,9, \rightarrow 0,0,0,0,0,0,0,0,0,0,10, \rightarrow$

R19)

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

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,:  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,10,:  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

1293-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][101][102][201]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
- R3) 0,1,-->
- 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,--
- 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,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,10,--
- R19)

0,0,0,0,0,0,0,0,0,9,-->0,1,--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,--

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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,10,:

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

-----Class

1294-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][101][102][210]]$

-----

--  
Rules of T[L]:

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

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

R3) 0,1,-->

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,--0,0,0,0,0,0,0,0,0,9,--

--

R17) 0,0,0,0,0,0,0,0,8,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

R18)

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--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,--0,0,0,0,0,10,--

R19) 0,0,0,0,0,0,0,0,9,-->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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,10,:

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

-----Class

1295-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][101][110][120]]$

-----

--

Rules of T[L]:

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

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

R3) 0,1,-->

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,--0,0,0,0,0,0,8,--

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,--0,0,0,0,0,0,8,--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,--0,0,0,0,0,0,0,7,--

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,--0,1,--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,--0,0,0,0,0,0,0,  
0,9,--0,0,0,0,0,0,0,0,0,10,--

R19)  
0,0,0,0,0,0,0,0,9,-->0,1,--0,0,2,--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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,10,:

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

-----Class

1296-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding L=[[010][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,-->

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,--0,0,0,0,0,0,6,  
--

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,--0,0,0,0,0,0,0,7,--

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,--0,0,2,--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,  
,0,9,--0,0,0,0,0,0,0,0,0,0,10,--

R19)  
0,0,0,0,0,0,0,0,0,9,-->0,1,--0,0,2,--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,--

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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,10,:

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

-----Class

1297-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][101][110][210]]$

-----

--

Rules of T[L]:

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

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

R3) 0,1,-->

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,  
0,0,0,0,0,6,--

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,--0,0,0,0,0,0,7,--  
 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,--0,0,0,0,0,0,6,--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,--  
 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,--0,0,0,0,0,0,0,9  
 ,--  
 R17) 0,0,0,0,0,0,0,0,8,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 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,--0,0,2,--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  
 ,0,9,--0,0,0,0,0,0,0,0,0,10,--  
 R19) 0,0,0,0,0,0,0,0,0,9,-->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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :

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

-----Class

1298-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][101][120][201]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,1,--0,0,2,--  
 R3) 0,1,-->  
 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,  
--0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,0,9  
,--  
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,--  
R18)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--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,  
0,9,--0,0,0,0,0,0,0,0,0,0,10,--  
R19)  
0,0,0,0,0,0,0,0,0,9,-->0,1,--0,0,2,--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,--

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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :  
Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

1299-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][101][120][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,1,--0,0,2,--  
R3) 0,1,-->  
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,--0,0,0,0,0,0,0,0,0,9,--  
 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,--  
 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,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,0,10,--  
 R19) 0,0,0,0,0,0,0,0,0,9,-->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, : 0,0,2, :  
 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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,2,

-----Class

1300-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][101][201][210]]$

Rules of T[L]:

R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,1,--0,0,2,--  
 R3) 0,1,-->  
 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,--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,--0,0,0,0,0,6,--  
 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,--0,1,--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,--0,1,--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,-->0,0,0,0,0,0,0,0,0,0,0,0,--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,--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,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 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,--0,1,--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,--0,0,0,0,0,10,--  
 R19) 0,0,0,0,0,0,0,0,0,9,-->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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

1301-----  
 Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][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,-->

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,--0,1,--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,--0,0,0,0,0,0,6,--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,  
--  
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,--0,0,0,0,0,0,0,9  
,--  
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,--  
R18)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,0,10,--  
R19)  
0,0,0,0,0,0,0,0,0,9,-->0,1,--0,0,2,--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,--

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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :  
Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,2,



Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][102][110][201]]$

--

Rules of  $T[L]$ :

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

R2)  $0,0, -->0,0,0, --0,1, --0,0,2, --$

R3)  $0,1, -->$

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)

$0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,0,8, --$

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)

$0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,0,8, --0,0,0,0,0,0,0,0,9, --$

R17)

$0,0,0,0,0,0,0,0,8, -->0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --$

R18)

$0,0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,0,8, --0,0,0,0,0,0,0,0,9, --0,0,0,0,0,0,0,0,0,10, --$

R19)

$0,0,0,0,0,0,0,0,0,9, -->0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --0,0,0,0,0,0,7, --0,0,0,0,0,0,0,8, --$

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) 0,0,0,0,0,0,0,0,0,0,0,0,0,0,8, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,9, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,10, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,2,

-----Class

1303-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][102][110][210]]$

- Rules of T[L]:  
 R1) 0, -->0,0, --0,1, --  
 R2) 0,0, -->0,0,0, --0,1, --0,0,2, --  
 R3) 0,1, -->  
 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, --0,0,0,0,0,0,0,8, --  
 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, --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, --  
 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, --0,0,2, --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,  
 0,9, --0,0,0,0,0,0,0,0,0,10, --  
 R19) 0,0,0,0,0,0,0,0,0,9, -->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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

1304-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][102][120][201]]$

-----

--  
 Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,1,--0,0,2,--
- R3) 0,1,-->
- 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,--
- 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,--0,1,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,10,--
- R19) 0,0,0,0,0,0,0,0,0,9,-->0,1,--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,--

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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

1305-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][102][120][210]]$

-----

--

Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,0, --0,1, --0,0,2, --
- R3) 0,1, -->
- 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, --0,0,0,0,0,0,7, --
- 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, --0,0,0,0,0,0,7, --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, --
- 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, --0,0,0,0,0,0,0,0,9, --
- R17) 0,0,0,0,0,0,0,0,8, -->0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --
- 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, --0,0,2, --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, --0,0,0,0,0,0,0,0,10, --
- R19) 0,0,0,0,0,0,0,0,0,9, -->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, :
  - LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :
- Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

1306-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][102][201][210]]$

-----

--

Rules of T[L]:

- R1) 0, -->0,0, --0,1, --
- R2) 0,0, -->0,0,0, --0,1, --0,0,2, --
- R3) 0,1, -->
- 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, --0,0,0,0,0,0,7, --
- 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) 0,0,0,0,0,0,0,7, -->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, --0,0,0,0,0,0,6, --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, --
- 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, --0,0,2, --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, --0,0,0,0,0,0,0,0,0,10, --

R19) 0,0,0,0,0,0,0,0,0,0,9,-->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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,10,:

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

-----Class

1307-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][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,-->

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,

--0,0,0,0,0,0,6,--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,--0,1,--0,0,2,--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,

--

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,--0,0,0,0,0,0,0,8,--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, --  
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, --0,1, --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, --0,0,0,0,0,0,0,  
,0,9, --0,0,0,0,0,0,0,0,0,10, --  
R19)  
0,0,0,0,0,0,0,0,9, -->0,1, --0,0,2, --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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :  
Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

1308-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][110][120][210]]$

-----  
--

Rules of T[L]:

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

R17) 0,0,0,0,0,0,0,0,8,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

R18)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--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,--0,0,0,0,0,0,0,0,0,10,--

R19) 0,0,0,0,0,0,0,0,0,9,-->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, :

LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :

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

-----Class

1309-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][110][201][210]]$

-----

--

Rules of T[L]:

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

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

R3) 0,1,-->

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,--0,0,0,0,0,0,7,--

R13) 0,0,0,0,0,0,6,-->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,--0,0,0,0,0,0,7,--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,--0,1,--0,0,2,--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) 0,0,0,0,0,0,0,8,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

R18)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,10,--

R19) 0,0,0,0,0,0,0,0,9,-->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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,10,:

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

-----Class

1310-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][012][120][201][210]]$

-----

--

Rules of T[L]:

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

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

R3) 0,1,-->

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,  
0,0,0,0,0,6,--

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,--0,0,0,0,0,0,7,--

R13) 0,0,0,0,0,0,6,-->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) 0,0,0,0,0,0,0,7,-->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,--0,0,0,0,0,6,--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,--

R18)

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,--0,0,0,0,0,0,9,--0,0,0,0,0,0,10,--

R19) 0,0,0,0,0,0,0,0,9,-->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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,10,:

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

-----Class

1311-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][100][101][102]]$

-----

--

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,--

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,--

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,--

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,--0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,1,--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,--

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,--0,0,0,1,--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,--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,--0,0,1,--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,--0,0,0,0,1,--0,0,0,1,--0,1,--0,1,--

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,--0,0,0,0,0,0,0,0,0,0,0,1,--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,--0,1,--0,1,--

R19)

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,--0,1,--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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,1,:

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

-----Class

1312-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][100][101][110]]$

-----

--  
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,--

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,--0,1,--  
 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,  
 0,0,0,1,--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,--  
 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,--0,0,0,0,0,0,0,0,0,0,1,--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,--0,1,--  
 R19)  
 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,--  
 0,0,0,0,0,0,1,--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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 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

1313-----  
 Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][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,--

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,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,0,1,--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,--  
,--  
R17)  
0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,  
0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R18)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--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,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,  
,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R19)  
0,0,0,0,0,0,0,0,0,0,1,-->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,--0,0,0,0,0,1,--0,0,0,1,--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, :
- 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, :
- LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 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

1314-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][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,--
- 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,--0,1,--
- R11) 0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--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,--0,1,--
- R13) 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,--0,1,--
- 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,--0,1,--
- R15) 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,--0,1,--
- 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,--0,0,0,0,0,0,1,--0,1,--
- R17) 0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,1,--0,1,--
- 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,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,1,--
- R19) 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,--0,0,0,0,0,1,--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,:  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 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

1315-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][100][101][210]]$

-----

--

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,--

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,--0,1,--

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,--0,0,0,0,0,0,0,0,1,--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,--0,1,--

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,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--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,--0,1,--

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,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--

R19)

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,--0,1,--

0,0,0,0,0,0,1,--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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 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

1316-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][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,--

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,--

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,--

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,--0,0,0,0,0,0,0,0,1,--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,--0,1,--

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,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--

R17)







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,--0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,0,1,--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,--  
,--

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,--0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R18)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--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,--0,1,--

R19)  
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,--  
0,0,0,0,0,0,1,--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, :
  - LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 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

1319-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][100][102][210]]$

-----

--

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,--
- 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,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--  
 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,--  
 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,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,1,--  
 R15) 0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--  
 R16) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--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,--  
 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,--0,0,0,0,1,--0,0,0,1,--0,1,--  
 R18) 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,1,--  
 R19) 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,--0,0,0,1,--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, :
- LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,1, :

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

-----Class

1320-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][100][110][120]]$

-----  
--  
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,--

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,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--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,--0,1,--

R13)

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,--

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,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--

R15)

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,--0,1,--

R16)

0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--

R17)

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

0,0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,0,--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,--0,1,--

R19)

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,--0,0,0,1,--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, :

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, : 0,0,0,0,0,0,0,0,0,1, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,1, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,0,1, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,2,

-----Class

1321-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][100][110][201]]$

--

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, --
- 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, --
- 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, --
- 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, --0,0,0,0,0,0,0,0,1, --0,0,0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,1, --0,0,0,1, --
- R15) 0,0,0,0,0,0,0,1, -->0,0,0,0,0,0,0,1, --0,0,0,0,0,0,1, --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, --0,0,0,0,0,0,0,0,0,1, --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, --
- 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, --
- R18) 0,0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0,0,1, --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, --
- R19) 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, --0,0,0,0,0,0,1, --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, :  
 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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,1, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,2,

-----Class

1322-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][100][110][210]]$

-----

--  
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, --
- 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, --
- 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, --0,1, --
- 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, --0,0,0,0,0,0,0,0,1, --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, --0,1, --
- 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, --0,0,0,0,1, --0,0,0,1, --0,1, --
- R16) 0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0,0,1, --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, --0,1, --
- R17) 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, --0,1, --





```

0,1,--0,0,1,--0,1,--
R16)
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--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,--0,0,0,1,--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,--
R18)
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,1,--0,0,0,0,
,0,1,--0,0,0,1,--0,0,1,--0,1,--
R19)
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,--
0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--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, :
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, :
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 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

1324-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[010][011][021][100][120][210]$

```

-----
--
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,--
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,--0,0,1,--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,  
 0,1,--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,--0,0,0,0,0,0,0,0,0,1,--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,  
 ,--  
 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,--  
 R18)  
 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--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,--0,1,--  
 R19)  
 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,--  
 0,0,0,0,0,0,1,--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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,1, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,2,

-----Class  
 1325-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][100][201][210]]$   
 -----

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,--  
 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,--0,0,0,0,0,0,1,--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,--0,0,1,--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,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,0,1,--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,--  
 R18)  
 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--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,--0,1,--  
 R19)  
 0,0,0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,--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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,1, :

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

-----Class

1326-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][101][102][110]]$

-----  
 --

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,--
- 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,--
- 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,--0,1,--
- 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,--0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--
- R15) 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,--0,1,--
- R16) 0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--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,--0,1,--
- R17) 0,0,0,0,0,0,0,0,1, -->0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--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) 0,0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,0,0,--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,--0,1,--
- R19) 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,--0,0,0,1,--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, :



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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,1, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,2,

-----Class

1328-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][101][102][201]]$

--

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, --
- 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, --0,0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,1, --0,0,0,1, --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, --
- 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, --0,0,0,0,0,0,0,0,1, --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, --
- 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, --0,0,0,0,0,0,0,0,0,1, --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, --
- 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, --
- R18)
  - 0,0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0,0,0,1, --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, --

0,0,0,1,--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,--0,0,0,1,--0,0,1,--0,0,1,--0,1,--

R19)

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,--0,0,0,1,--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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,1,:

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

-----Class

1329-----

Inversion Sequences (I\_n=(n+1)!) avoiding L=[[010][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,--

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,--0,0,0,0,1,--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,--

0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--

0,0,0,1,--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,--

0,0,1,--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,--0,0,0,1,--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,--
R18)
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--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
,0,1,--0,0,0,1,--0,0,1,--0,1,--
R19)
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,--
0,0,0,0,0,0,1,--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,:
LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 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

1330-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][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,-->0,1,--
- 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,--0,0,0,0,1,--
  - 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,--
- 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,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--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,  
0,1,--0,0,1,--0,1,--  
R16)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--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,--  
,--  
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,  
0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R18)

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,1,--0,0,0,  
,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R19)

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,--  
0,0,0,0,0,0,1,--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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 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

1331-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][101][110][201]]$

-----

--

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,--

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,--0,1,--  
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,--0,1,--  
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,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,1,--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,--0,1,--  
R16)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--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,--0,1,--  
R18)  
0,0,0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,--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,--0,1,--  
,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R19)  
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,--0,0,0,0,0,0,1,--0,0,0,0,1,--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, :
  - LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 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

1332-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][011][021][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,--
- 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,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--
- 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,--
- 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,--0,0,0,0,0,0,0,0,1,--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,--0,0,1,--
- R15) 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,--
- R16) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--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,--
- 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,--
- R18) 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--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,--
- R19) 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,--0,0,0,0,0,0,1,--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, :
  - 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, :
  - LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,1, :
- Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,2,

-----Class

1333-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][101][120][201]]$

-----

--

Rules of  $T[L]$ :

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

R2)  $0, 0, \rightarrow 0, 0, 0, \rightarrow 0, 0, 1, \rightarrow 0, 1, \rightarrow$

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

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

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

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

R7)  $0, 0, 0, 1, \rightarrow 0, 0, 0, 1, \rightarrow 0, 0, 1, \rightarrow 0, 1, \rightarrow$

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

R9)  $0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 1, \rightarrow 0, 0, 1, \rightarrow 0, 1, \rightarrow$

R10)

$0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 1, \rightarrow 0, 0, 1, \rightarrow$

R11)  $0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 1, \rightarrow 0, 0, 1, \rightarrow 0, 1, \rightarrow$

R12)

$0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 1, \rightarrow 0, 0, 1, \rightarrow$

R13)

$0, 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 1, \rightarrow 0, 0, 1, \rightarrow 0, 1, \rightarrow$

R14)

$0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 1, \rightarrow 0, 0, 1, \rightarrow$

R15)

$0, 0, 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 1, \rightarrow 0, 0, 1, \rightarrow 0, 1, \rightarrow$

R16)

$0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 1, \rightarrow 0, 0, 1, \rightarrow 0, 1, \rightarrow$

R17)

$0, 0, 0, 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 1, \rightarrow 0, 0, 1, \rightarrow 0, 1, \rightarrow$

R18)

$0, 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 1, \rightarrow 0, 0, 1, \rightarrow 0, 1, \rightarrow$

R19)

$0, 0, 0, 0, 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 1, \rightarrow 0, 0, 1, \rightarrow 0, 1, \rightarrow$

List of different nodes in  $T[L]$

LEN=1)  $0, :$

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

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

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,:  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,1,:  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,2,

-----Class

1334-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][101][120][210]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- R3) 0,1,-->0,1,--
- 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,--
- 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,--0,1,--
- 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,--0,0,0,0,0,0,0,0,1,--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,--0,0,0,1,--0,1,--
- R15) 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,--0,1,--
- 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,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,1,--
- R17) 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,--0,1,--
- R18) 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--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,--0,1,--

R19)  
 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,--  
 0,0,0,0,0,0,1,--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,:
- 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,:
- LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,1,:

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

-----Class

1335-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][101][201][210]]$

-----

--

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,--
- 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,--0,0,0,0,0,0,1,--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,--0,0,1,--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,--0,0,0,0,0,0,0,0,0,1,--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,--
R18)
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--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,--0,1,--
R19)
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,--
0,0,0,0,0,0,1,--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,:
LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,1,:
Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,2,

```

-----Class

1336-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][102][110][120]]$

```

--
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,--
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,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--
R14)

```





0,0,1,--0,1,--  
 R11) 0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--  
 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,  
 0,0,0,1,--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,--  
 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,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,  
 0,0,0,1,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,  
 ,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R19)  
 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,--0,0,0,0,0,0,0,1,--  
 0,0,0,0,0,0,1,--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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 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

1338-----  
 Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][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,--

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,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,0,1,--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,--  
,--  
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,--  
R18)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--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,--0,1,--  
R19)  
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,--  
0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--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, :
- 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, :
- LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,1, :

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

-----Class

1339-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][102][120][201]]$

-----

--

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,--
- 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,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--
- R11) 0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--
- 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,--0,1,--
- R13) 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,--0,1,--
- 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,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--
- R15) 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,--0,1,--
- R16) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--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,--0,1,--
- R17) 0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--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) 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--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,--0,1,--
- R19) 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,--0,0,0,1,--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,:  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 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

1340-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][102][120][210]]$

-----

--

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,--

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,--0,1,--

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,--0,0,0,0,0,0,0,0,1,--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,--0,0,0,1,--0,1,--

R15)

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)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--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,--0,1,--

--

R17)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--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,--

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,--0,0,0,0,0,0,0,0,0,0,1,--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,--

R19)

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,--0,1,--

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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 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

1341-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][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,--

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,--

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,--

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,--0,0,0,0,0,0,0,0,1,--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,--

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,--0,0,0,0,1,--0,0,1,--0,1,--

R17)

0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,  
0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R18)

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--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,  
,0,1,--0,0,0,1,--0,0,1,--0,1,--

R19)

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,--  
0,0,0,0,0,0,1,--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, :

LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,1, :

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

-----Class

1342-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][110][120][201]]$

-----

--

Rules of T[L]:

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

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

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

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,--0,0,1,--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,--0,0,1,--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,--0,0,0,0,1,--0,0,1,--0,1,--0,1,--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,--0,1,--0,1,--

R18)  
 0,0,0,0,0,0,0,0,0,0,-->0,1,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,--0,1,--

R19)  
 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,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--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, :
  - 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, :
  - LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,1, :
- Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,2,

-----Class

1343-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][110][120][210]]$

-----

--

Rules of T[L]:

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

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,--0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R18)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--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,  
,0,1,--0,0,0,1,--0,0,1,--0,1,--

R19)  
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,--0,0,0,0,1,--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, :
  - LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 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

1344-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][110][201][210]]$

-----

--

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,--
- 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,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--  
 R11) 0,0,0,0,0,1,-->0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--  
 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,-->0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,1,--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,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--  
 R16) 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--  
 R18) 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,1,--  
 R19) 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,--0,0,0,1,--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, :
- LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,1, :

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

-----Class

1345-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][021][120][201][210]]$

-----  
--  
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,--

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,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--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,--0,1,--

R13)

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,--

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,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--

R15)

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,--0,1,--

R16)

0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--

R17)

0,0,0,0,0,0,0,0,1, -->0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,1,--

R18)

0,0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,1,--0,1,--

0,0,0,1, -->0,0,0,0,0,0,0,0,0,1,--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,--0,1,--

R19)

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,--0,0,0,0,0,1,--0,0,0,1,--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, : 0,0,0,0,0,0,0,0,0,1, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,1, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,0,1, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,2,

-----Class

1346-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][100][101][102][110]]$

-----

--  
 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, --
- 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,  
0,0,0,0,0,5,--0,0,0,0,0,0,5,7,--  
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,--0,0,0,0,0,0,0,0,1,--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,--

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,--0,0,0,0,0,2,4,7,--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,--0,0,0,0,0,2,5,7,--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,--0,0,0,0,0,3,5,7,--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,--0,0,0,0,0,3,6,--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,--0,0,0,0,0,4,6,--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,--0,0,0,0,0,6,4,--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,  
0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,  
,0,6,9,--

R81)

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,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,7,9,--

R82)

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,--0,0,0,0,0,0,0,0,8,--

R83)

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

R84)

0,0,0,0,0,0,0,0,2,5,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,0,0,2,5,--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,--

R85)

0,0,0,0,0,0,0,0,2,6,-->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,--0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,2,6,8,--0,0,0,0,0,0,0,2,6,9,--

R86)

0,0,0,0,0,0,0,0,2,7,-->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,--0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,2,7,9,--

R87)

0,0,0,0,0,0,0,0,2,8,-->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,--0,0,0,0,0,0,0,2,8,6,--0,0,0,0,0,0,0,7,2,--0,0,0,0,0,0,0,2,8,--

R88)

0,0,0,0,0,0,0,0,3,5,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,0,0,0,3,5,--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,--

R89)

0,0,0,0,0,0,0,0,3,6,-->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,--0,0,0,0,0,0,0,3,6,8,--0,0,0,0,0,0,0,3,6,9,--

R90)

0,0,0,0,0,0,0,0,3,7,-->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,--0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,3,7,9,--

R91)

0,0,0,0,0,0,0,0,3,8,-->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)

0,0,0,0,0,0,0,0,4,6,-->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,--0,0,0,0,0,0,0,4,6,8,--0,0,0,0,0,0,0,4,6,9,--

R93)

0,0,0,0,0,0,0,0,4,7,-->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,--0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,4,7,9,--

R94)

0,0,0,0,0,0,0,0,4,8,-->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,--0,0,0,0,0,0,0,7,4,--0,0,0,0,0,0,0,4,8,--

R95)

0,0,0,0,0,0,0,0,5,7,-->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,--0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,5,7,9,--

R96)

0,0,0,0,0,0,0,0,5,8,-->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,--0,0,0,0,0,0,0,7,5,--0,0,0,0,0,0,0,5,8,--

R97)

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,--0,0,0,0,0,0,6,8,--

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,--0,0,0,0,0,0,6,1,--

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,--0,0,0,0,0,4,6,8,--

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,--

R117)

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--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,--0,0,0,0,0,0,0,0,0,0,10,--

R118)

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,--0,0,0,0,0,0,0,0,0,9,--

R119)

0,0,0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,2,4,--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,--0,0,0,0,0,0,0,0,0,2,10,--

R120)

0,0,0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,0,0,0,3,--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,--0,0,0,0,0,0,0,0,0,3,10,--

R121)

0,0,0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,0,0,0,0,4,--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,--0,0,0,0,0,0,0,0,0,4,10,--

R122)

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,--0,0,0,0,0,5,1,--0,0,0,0,0,0,0,0,0,5,--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,--0,0,0,0,0,0,0,0,0,5,10,--

R123)

0,0,0,0,0,0,0,0,0,6,-->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,--0,0,0,0,0,0,6,10,--

R124)

0,0,0,0,0,0,0,0,0,7,-->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,--0,0,0,0,0,0,0,7,7,--0,0,0,0,0,0,0,7,9,--0,0,0,0,0,0,0,7,10,--

R125)

0,0,0,0,0,0,0,0,0,8,-->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,--0,0,0,0,0,0,0,8,4,--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,--0,0,0,0,0,0,0,8,8,--0,0,0,0,0,0,0,8,10,--

R126)

0,0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,9,1,--0,0,0,0,0,0,0,0,9,2,--0,0,0,0,0,0,0,0,9,3,--0,0,0,0,0,0,0,0,9,4,--0,0,0,0,0,0,0,0,9,5,--0,0,0,0,0,0,0,0,9,6,--0,0,0,0,0,0,0,0,9,7,--0,0,0,0,0,0,0,0,9,1,--0,0,0,0,0,0,0,0,9,--

R127)

0,0,0,0,0,0,0,0,2,4,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,0,0,0,2,4,--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,--0,0,0,0,0,0,0,2,4,10,--

R128)

0,0,0,0,0,0,0,0,2,5,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,0,0,0,2,5,--  
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,  
,0,0,2,5,10,--

R129)

0,0,0,0,0,0,0,0,2,6,-->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,--  
0,0,0,0,0,0,0,0,2,6,--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,  
,0,2,6,10,--

R130)

0,0,0,0,0,0,0,0,2,7,-->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,--0,0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,0,2,7,9,--0,0,0,0,0,0,  
,0,0,2,7,10,--

R131)

0,0,0,0,0,0,0,0,2,8,-->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,--0,0,0,0,0,0,2,8,6,--0,0,0,0,0,0,7,2,--0,0,0,0,0,0,0,2,8,--0,0,0,  
,0,0,0,0,2,8,10,--

R132)

0,0,0,0,0,0,0,0,2,9,-->0,0,2,1,--0,0,0,0,0,0,8,2,--0,0,0,0,0,0,0,2,9,4,--0,0,  
0,0,0,0,0,0,2,9,5,--0,0,0,0,0,0,0,2,9,6,--0,0,0,0,0,0,0,2,9,7,--0,0,0,0,0,0,0,0,  
,8,2,--0,0,0,0,0,0,0,2,9,--

R133)

0,0,0,0,0,0,0,0,3,5,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,0,0,0,3,5,--  
0,0,0,0,0,0,0,0,3,5,7,--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,  
,0,0,3,5,10,--

R134)

0,0,0,0,0,0,0,0,3,6,-->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,  
0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,3,6,8,--0,0,0,0,0,0,0,3,6,9,--0,0,0,0,0,0,0,0,3,  
,6,10,--

R135)

0,0,0,0,0,0,0,0,3,7,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,6,3,--0,0,0,0,0,0,3,7,5,  
--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,3,7,9,--0,0,0,0,0,0,0,0,3,  
,7,10,--

R136)

0,0,0,0,0,0,0,0,3,8,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,7,3,--0,0,0,0,0,0,0,3,  
8,5,--0,0,0,0,0,0,0,3,8,6,--0,0,0,0,0,0,0,7,3,--0,0,0,0,0,0,0,0,3,8,--0,0,0,0,0,0,  
,0,3,8,10,--

R137)

0,0,0,0,0,0,0,0,3,9,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,8,3,--0,0,0,0,0,0,0,  
0,3,9,5,--0,0,0,0,0,0,0,3,9,6,--0,0,0,0,0,0,0,3,9,7,--0,0,0,0,0,0,0,8,3,--0,0,  
,0,0,0,0,0,0,3,9,--

R138)

0,0,0,0,0,0,0,0,4,6,-->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,  
0,0,0,0,0,0,0,4,6,--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,  
,4,6,10,--

R139)

0,0,0,0,0,0,0,0,4,7,-->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,--0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,4,7,9,--0,0,0,0,0,0,0,4,7,  
,10,--

R140)

0,0,0,0,0,0,0,0,4,8,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,7,4,  
--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,--0,0,0,0,0,0,0,4,  
--0,0,0,0,0,0,0,4

,8,10,--

R141)

0,0,0,0,0,0,0,0,4,9,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,0,0,0,8,  
4,--0,0,0,0,0,0,0,0,4,9,6,--0,0,0,0,0,0,0,0,4,9,7,--0,0,0,0,0,0,0,0,8,4,--0,0,0,0,  
,0,0,0,4,9,--

R142)

0,0,0,0,0,0,0,0,5,7,-->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,--0,0,0,0,0,0,0,6,1,--0,0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,0,5,7,9,--0,0,0,0,0,0,0,0,  
,5,7,10,--

R143)

0,0,0,0,0,0,0,0,5,8,-->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,--0,0,0,0,0,0,0,7,5,--0,0,0,0,0,0,7,5,--0,0,0,0,0,0,0,5,8,--0,0,0,0,0,0,0,0,5,  
,8,10,--

R144)

0,0,0,0,0,0,0,0,5,9,-->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,--0,0,0,0,0,0,0,8,5,--0,0,0,0,0,0,0,5,9,7,--0,0,0,0,0,0,0,8,5,--0,0,0,0,0,0,  
,0,0,5,9,--

R145)

0,0,0,0,0,0,0,0,6,8,-->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,--0,0,0,0,0,  
,0,0,6,8,10,--

R146)

0,0,0,0,0,0,0,0,6,9,-->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,--0,0,0,0,0,0,8,6,--0,0,0,0,0,0,8,6,--0,0,0,0,0,  
,0,0,0,6,9,--

R147)

0,0,0,0,0,0,0,0,7,9,-->0,0,0,0,0,7,1,--0,0,0,0,0,7,2,--0,0,0,0,0,7,3,--  
0,0,0,0,0,0,7,4,--0,0,0,0,0,7,5,--0,0,0,0,0,7,1,--0,0,0,0,0,0,8,1,--0,  
,0,0,0,0,0,7,9,--

R148)

0,0,0,0,0,0,0,0,8,1,-->0,0,0,0,0,7,1,--0,0,0,0,0,7,2,--0,0,0,0,0,7,3,--  
0,0,0,0,0,0,7,4,--0,0,0,0,0,7,5,--0,0,0,0,0,7,1,--

R149)

0,0,0,0,0,0,0,0,8,2,-->0,0,2,1,--0,0,0,0,0,7,2,--0,0,0,0,0,2,8,4,--0,0,0,0,  
0,0,0,2,8,5,--0,0,0,0,0,2,8,6,--0,0,0,0,0,7,2,--

R150)

0,0,0,0,0,0,0,0,8,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,7,3,--0,0,0,0,0,0,3,  
8,5,--0,0,0,0,0,3,8,6,--0,0,0,0,0,7,3,--

R151)

0,0,0,0,0,0,0,0,8,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,0,0,7,4,  
--0,0,0,0,0,0,4,8,6,--0,0,0,0,0,7,4,--

R152)

0,0,0,0,0,0,0,0,8,5,-->0,0,0,0,5,1,--0,0,0,0,5,2,--0,0,0,0,5,3,--0,0,0,0,5,  
1,--0,0,0,0,0,7,5,--0,0,0,0,0,7,5,--

R153)

0,0,0,0,0,0,0,0,8,6,-->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,--

R154)

0,0,0,0,0,0,0,2,4,6,-->0,0,2,1,--0,0,0,3,1,--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,--0,0,0,0,0,2,4,6,10,--

R155)

0,0,0,0,0,0,0,2,4,7,-->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,  
0,0,0,0,0,0,2,4,7,--0,0,0,0,0,0,2,4,7,9,--0,0,0,0,0,0,2,4,7,10,--

R156)

0,0,0,0,0,0,0,2,4,8,-->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,--0,0,0,0,0,0,2,4,8,10,--

R157)

0,0,0,0,0,0,0,2,4,9,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,0,0,0,2,8,4,--0,0,0,0,0,0,0,2,  
4,9,6,--0,0,0,0,0,0,2,4,9,7,--0,0,0,0,0,0,0,2,8,4,--0,0,0,0,0,0,0,2,4,9,--

R158)

0,0,0,0,0,0,0,2,5,7,-->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,  
0,0,0,0,2,5,7,--0,0,0,0,0,0,2,5,7,9,--0,0,0,0,0,0,2,5,7,10,--

R159)

0,0,0,0,0,0,0,2,5,8,-->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,--0,0,0,0,0,0,2,5,8,10,--

R160)

0,0,0,0,0,0,0,2,5,9,-->0,0,2,1,--0,0,0,0,4,2,--0,0,0,0,4,2,--0,0,0,0,0,0,0,2,8,5,--  
0,0,0,0,0,0,0,2,5,9,7,--0,0,0,0,0,0,2,8,5,--0,0,0,0,0,0,2,5,9,--

R161)

0,0,0,0,0,0,0,2,6,8,-->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,--0,0,0,0,0,0,2,6,8,10,--

R162)

0,0,0,0,0,0,0,2,6,9,-->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,--  
0,0,0,0,0,0,0,2,8,6,--0,0,0,0,0,0,2,8,6,--0,0,0,0,0,0,2,6,9,--

R163)

0,0,0,0,0,0,0,2,7,9,-->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,--0,0,0,0,0,6,2,--0,0,0,0,0,0,7,2,--0,0,0,0,0,0,2,7,9,--

R164)

0,0,0,0,0,0,0,2,8,4,-->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,--

R165)

0,0,0,0,0,0,0,2,8,5,-->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,--

R166)

0,0,0,0,0,0,0,2,8,6,-->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,--  
0,0,0,0,0,6,2,--

R167)

0,0,0,0,0,0,0,3,5,7,-->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,  
0,0,0,0,3,5,7,--0,0,0,0,0,0,3,5,7,9,--0,0,0,0,0,0,3,5,7,10,--

R168)

0,0,0,0,0,0,0,3,5,8,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,0,3,7,5,--0,  
0,0,0,0,0,3,7,5,--0,0,0,0,0,0,3,5,8,--0,0,0,0,0,0,3,5,8,10,--

R169)

0,0,0,0,0,0,0,3,5,9,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,4,1,--0,0,0,0,0,0,3,8,5,--  
0,0,0,0,0,0,0,3,5,9,7,--0,0,0,0,0,0,3,8,5,--0,0,0,0,0,0,3,5,9,--

R170)

0,0,0,0,0,0,0,3,6,8,-->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,--0,0,0,0,0,0,3,6,8,10,--

R171)

0,0,0,0,0,0,0,3,6,9,-->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,

0,0,0,0,0,3,8,6,--0,0,0,0,0,0,3,8,6,--0,0,0,0,0,0,3,6,9,--  
R172)

0,0,0,0,0,0,3,7,9,-->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,--0,0,0,0,0,0,7,3,--0,0,0,0,0,0,3,7,9,--

R173)  
0,0,0,0,0,0,3,8,5,-->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,--

R174)  
0,0,0,0,0,0,3,8,6,-->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,  
0,0,0,0,6,3,--

R175)  
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,--0,0,0,0,0,0,4,6,8,10,--

R176)  
0,0,0,0,0,0,4,6,9,-->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,  
0,0,0,0,0,4,8,6,--0,0,0,0,0,0,4,8,6,--0,0,0,0,0,0,4,6,9,--

R177)  
0,0,0,0,0,0,4,7,9,-->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,--0,0,0,0,0,0,7,4,--0,0,0,0,0,0,4,7,9,--

R178)  
0,0,0,0,0,0,4,8,6,-->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,  
0,0,0,0,0,6,4,--

R179)  
0,0,0,0,0,0,5,7,9,-->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,--0,0,0,0,0,0,7,5,--0,0,0,0,0,0,5,7,9,--

R180)  
0,0,0,0,0,0,2,4,6,8,-->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,  
0,0,0,2,4,6,8,--0,0,0,0,0,0,2,4,6,8,10,--

R181)  
0,0,0,0,0,0,2,4,6,9,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,4,2,--0,0,0,0,0,0,2,4,8,6,--0,  
0,0,0,0,0,2,4,8,6,--0,0,0,0,0,0,2,4,6,9,--

R182)  
0,0,0,0,0,0,2,4,7,9,-->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,  
0,0,0,0,0,2,7,4,--0,0,0,0,0,0,2,4,7,9,--

R183) 0,0,0,0,0,0,2,4,8,6,-->0,0,2,1,--0,0,0,3,1,--0,0,0,0,4,2,--0,0,0,0,0,2,6,4,--  
R184)

0,0,0,0,0,0,2,5,7,9,-->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,  
0,0,0,2,7,5,--0,0,0,0,0,0,2,5,7,9,--  
R185)

0,0,0,0,0,0,3,5,7,9,-->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,  
0,0,0,3,7,5,--0,0,0,0,0,0,3,5,7,9,--

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, : 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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 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, : 0,0,0,0,0,0,0,0,0,0,10, : 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, : 0,0,0,0,0,0,0,0,0,2,10, :  
 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, : 0,0,0,0,0,0,0,0,0,3,10, :  
 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, : 0,0,0,0,0,0,0,0,0,4,10, : 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, : 0,0,0,0,0,0,0,0,0,5,10, :  
 0,0,0,0,0,0,0,0,0,6,8, : 0,0,0,0,0,0,0,0,0,6,9, : 0,0,0,0,0,0,0,0,0,6,10, :  
 0,0,0,0,0,0,0,0,0,7,9, : 0,0,0,0,0,0,0,0,0,7,10, : 0,0,0,0,0,0,0,0,0,8,10, :  
 0,0,0,0,0,0,0,0,0,9,1, : 0,0,0,0,0,0,0,0,0,9,2, : 0,0,0,0,0,0,0,0,0,9,3, :  
 0,0,0,0,0,0,0,0,0,9,4, : 0,0,0,0,0,0,0,0,0,9,5, : 0,0,0,0,0,0,0,0,0,9,6, :  
 0,0,0,0,0,0,0,0,0,9,7, : 0,0,0,0,0,0,0,0,2,4,6, : 0,0,0,0,0,0,0,0,2,4,7, :  
 0,0,0,0,0,0,0,0,0,2,4,8, : 0,0,0,0,0,0,0,0,0,2,4,9, : 0,0,0,0,0,0,0,0,0,2,4,10, :  
 0,0,0,0,0,0,0,0,0,2,5,7, : 0,0,0,0,0,0,0,0,0,2,5,8, : 0,0,0,0,0,0,0,0,0,2,5,9, :  
 0,0,0,0,0,0,0,0,0,2,5,10, : 0,0,0,0,0,0,0,0,0,2,6,8, : 0,0,0,0,0,0,0,0,0,2,6,9, :  
 0,0,0,0,0,0,0,0,0,2,6,10, : 0,0,0,0,0,0,0,0,0,2,7,9, : 0,0,0,0,0,0,0,0,0,2,7,10, :  
 0,0,0,0,0,0,0,0,0,2,8,10, : 0,0,0,0,0,0,0,0,0,2,9,4, : 0,0,0,0,0,0,0,0,0,2,9,5, :  
 0,0,0,0,0,0,0,0,0,2,9,6, : 0,0,0,0,0,0,0,0,0,2,9,7, : 0,0,0,0,0,0,0,0,0,3,5,7, :  
 0,0,0,0,0,0,0,0,0,3,5,8, : 0,0,0,0,0,0,0,0,0,3,5,9, : 0,0,0,0,0,0,0,0,0,3,5,10, :  
 0,0,0,0,0,0,0,0,0,3,6,8, : 0,0,0,0,0,0,0,0,0,3,6,9, : 0,0,0,0,0,0,0,0,0,3,6,10, :  
 0,0,0,0,0,0,0,0,0,3,7,9, : 0,0,0,0,0,0,0,0,0,3,7,10, : 0,0,0,0,0,0,0,0,0,3,8,10, :  
 0,0,0,0,0,0,0,0,0,3,9,5, : 0,0,0,0,0,0,0,0,0,3,9,6, : 0,0,0,0,0,0,0,0,0,3,9,7, :  
 0,0,0,0,0,0,0,0,0,4,6,8, : 0,0,0,0,0,0,0,0,0,4,6,9, : 0,0,0,0,0,0,0,0,0,4,6,10, :  
 0,0,0,0,0,0,0,0,0,4,7,9, : 0,0,0,0,0,0,0,0,0,4,7,10, : 0,0,0,0,0,0,0,0,0,4,8,10, :  
 0,0,0,0,0,0,0,0,0,4,9,6, : 0,0,0,0,0,0,0,0,0,4,9,7, : 0,0,0,0,0,0,0,0,0,5,7,9, :  
 0,0,0,0,0,0,0,0,0,5,7,10, : 0,0,0,0,0,0,0,0,0,5,8,10, : 0,0,0,0,0,0,0,0,0,5,9,7, :  
 0,0,0,0,0,0,0,0,0,6,8,10, : 0,0,0,0,0,0,0,0,2,4,6,8, : 0,0,0,0,0,0,0,0,2,4,6,9, :  
 0,0,0,0,0,0,0,0,2,4,6,10, : 0,0,0,0,0,0,0,0,2,4,7,9, : 0,0,0,0,0,0,0,0,2,4,7,10, :  
 0,0,0,0,0,0,0,0,2,4,8,10, : 0,0,0,0,0,0,0,0,2,4,9,6, : 0,0,0,0,0,0,0,0,2,4,9,7, :  
 0,0,0,0,0,0,0,0,2,5,7,9, : 0,0,0,0,0,0,0,0,2,5,7,10, : 0,0,0,0,0,0,0,0,2,5,8,10, :  
 0,0,0,0,0,0,0,0,2,5,9,7, : 0,0,0,0,0,0,0,0,2,6,8,10, : 0,0,0,0,0,0,0,0,3,5,7,9, :  
 0,0,0,0,0,0,0,0,3,5,7,10, : 0,0,0,0,0,0,0,0,3,5,8,10, : 0,0,0,0,0,0,0,0,3,5,9,7, :  
 0,0,0,0,0,0,0,0,3,6,8,10, : 0,0,0,0,0,0,0,0,4,6,8,10, : 0,0,0,0,0,0,0,2,4,6,8,10, :  
 Number new nodes in level n is given by : 1,2,3,5,7,11,17,27,43,69,111,

-----Class

1347-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][100][101][102][120]]$

-----

--

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, --
- 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,  
0,3,--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,--0,0,0,0,0,0,0,4,--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)

0,0,0,0,0,0,1,-->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,--0,0,0,0,0,0,7,--

R38)

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)

0,0,0,0,0,0,3,-->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)

0,0,0,0,0,0,4,-->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)

0,0,0,0,0,0,5,-->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)

0,0,0,0,0,0,6,-->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)

0,0,0,0,0,0,7,-->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)

0,0,0,0,0,0,6,1,-->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,--0,0,0,0,0,0,0,0,0,1,--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)

0,0,0,0,0,0,0,1,-->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,--

R50)

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)

0,0,0,0,0,0,0,3,-->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)

0,0,0,0,0,0,0,4,-->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)

0,0,0,0,0,0,0,5,-->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)

0,0,0,0,0,0,0,6,-->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,

0,0,6,4,--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,-->0,0,0,0,0,0,0,8,1,--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,  
0,8,1,--0,1,--  
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,--0,0,0,0,0,0,6,1,--  
R58)  
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,--  
R59)  
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)  
0,0,0,0,0,0,0,7,4,-->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)  
0,0,0,0,0,0,0,7,5,-->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,--  
R62)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--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,--  
-0,0,0,0,0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,0,0,0,0,10,--  
R63)  
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,--0,0,0,0,0,0,0,0,0,9,--  
R64)  
0,0,0,0,0,0,0,0,0,2,-->0,0,2,1,--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,--  
R65)  
0,0,0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,0,1,--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,--  
R66)  
0,0,0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--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,--  
R67)  
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,  
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,--  
R68)  
0,0,0,0,0,0,0,0,0,6,-->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,--0,0,0,0,0,6,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R69)

0,0,0,0,0,0,0,0,0,7,-->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,--0,0,0,1,--0,0,0,2,--0,0,  
,0,3,--

R70)

0,0,0,0,0,0,0,0,0,8,-->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,--0,0,1,--0,0,2,--

R71)

0,0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,9,1,--0,0,0,0,0,0,0,0,9,2,--0,0,0,0,0,0,  
0,0,0,9,3,--0,0,0,0,0,0,0,0,9,4,--0,0,0,0,0,0,0,0,9,5,--0,0,0,0,0,0,0,0,9,6,-  
-0,0,0,0,0,0,0,0,9,7,--0,0,0,0,0,0,0,0,9,1,--0,1,--

R72)

0,0,0,0,0,0,0,0,8,1,-->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,--

R73)

0,0,0,0,0,0,0,0,8,2,-->0,0,2,1,--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,--

R74)

0,0,0,0,0,0,0,0,8,3,-->0,0,0,3,1,--0,0,0,3,1,--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,--

R75)

0,0,0,0,0,0,0,0,8,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,4,1,--0,0,  
0,0,4,2,--0,0,0,0,4,1,--

R76)

0,0,0,0,0,0,0,0,8,5,-->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,--0,0,0,3,1,--0,0,0,3,1,--

R77)

0,0,0,0,0,0,0,0,8,6,-->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,--0,0,2,1,--

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,:  
 LEN=11) 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,: 0,0,0,0,0,0,0,0,0,0,10,: 0,0,0,0,0,0,0,0,0,0,9,1,:  
 0,0,0,0,0,0,0,0,0,0,9,2,: 0,0,0,0,0,0,0,0,0,0,9,3,: 0,0,0,0,0,0,0,0,0,0,9,4,:  
 0,0,0,0,0,0,0,0,0,0,9,5,: 0,0,0,0,0,0,0,0,0,0,9,6,: 0,0,0,0,0,0,0,0,0,0,9,7,:  
 Number new nodes in level n is given by : 1,2,3,5,6,8,10,12,14,16,18,

-----Class

1348-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][100][101][102][201]]$

-----

--

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,--

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,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--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,--0,0,0,3,2,--  
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,--0,0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,4,--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,--0,0,0,0,0,0,0,6,5,--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,--0,0,0,0,0,0,0,6,5,--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)



0,0,0,0,0,0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,0,0,0,4,--0,  
0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8  
,--0,0,0,0,0,0,0,0,0,9,--

R57)

0,0,0,0,0,0,0,0,0,5,-->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,--0,0,0,0,0,0,0,0,0,6,--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,--

R58)

0,0,0,0,0,0,0,0,0,6,-->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,--0,0,0,0,0,0,0,0,0,6,--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)

0,0,0,0,0,0,0,0,0,7,-->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,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,  
,0,0,0,0,9,--

R60)

0,0,0,0,0,0,0,0,0,8,-->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,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,  
,0,0,0,0,9,--

R61)

0,0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,0,9,8,--0,0,0,0,  
,0,0,0,0,9,--

R62)

0,0,0,0,0,0,0,0,8,7,-->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,--

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,: 0,0,0,0,0,0,7,6,:

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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 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,: 0,0,0,0,0,0,0,0,0,0,10,: 0,0,0,0,0,0,0,0,0,9,8,:

Number new nodes in level n is given by : 1,2,3,5,6,7,8,9,10,11,12,

-----Class

1349-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][100][101][102][210]]$

-----

--

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)  $0, 1, \rightarrow 0, 1, \rightarrow$
- 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)  $0, 0, 1, \rightarrow 0, 0, 1, \rightarrow 0, 0, 2, \rightarrow$
- R6)  $0, 0, 2, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, \rightarrow$
- R7)  $0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow$
- R8)  $0, 0, 0, 1, \rightarrow 0, 0, 0, 1, \rightarrow 0, 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow$
- R9)  $0, 0, 0, 2, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 0, 2, \rightarrow 0, 0, 0, 2, 4, \rightarrow$
- R10)  $0, 0, 0, 3, \rightarrow 0, 0, 0, 3, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 0, 3, \rightarrow$
- R11)  $0, 0, 2, 1, \rightarrow$
- R12)  
 $0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 0, 4, \rightarrow$   
 $0, 0, 0, 0, 0, 5, \rightarrow$
- R13)  $0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow$
- R14)  $0, 0, 0, 0, 2, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, 2, 4, \rightarrow 0, 0, 0, 0, 2, 5, \rightarrow$
- R15)  $0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 3, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 3, 5, \rightarrow$
- R16)  $0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 4, 1, \rightarrow 0, 0, 0, 0, 3, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 0, 0, 4, \rightarrow$
- R17)  $0, 0, 0, 2, 4, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 0, 2, 4, \rightarrow$
- R18)  $0, 0, 0, 3, 1, \rightarrow 0, 0, 2, 1, \rightarrow$
- R19)  
 $0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, 0, 0, 3, \rightarrow 0, 0,$   
 $0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 0, 6, \rightarrow$
- R20)  
 $0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 5,$   
 $\rightarrow$
- R21)  
 $0, 0, 0, 0, 0, 2, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, 0, 2, 4, \rightarrow 0, 0, 0, 0, 0, 2, 5, \rightarrow 0, 0, 0, 0, 0, 2,$   
 $6, \rightarrow$
- R22)  
 $0, 0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 3, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 0, 3, 5, \rightarrow 0, 0, 0, 0, 0, 3, 6, \rightarrow$
- R23)  
 $0, 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 4, 1, \rightarrow 0, 0, 0, 0, 3, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 4, 6, \rightarrow$
- R24)  
 $0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 5, 1, \rightarrow 0, 0, 0, 0, 4, 1, \rightarrow 0, 0, 0, 0, 3, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 0, 0, 0, 5, \rightarrow$
- R25)  $0, 0, 0, 0, 2, 4, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 0, 0, 2, 4, \rightarrow 0, 0, 0, 0, 2, 4, 6, \rightarrow$
- R26)  $0, 0, 0, 0, 2, 5, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 0, 0, 3, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 0, 0, 2, 5, \rightarrow$
- R27)  $0, 0, 0, 0, 3, 5, \rightarrow 0, 0, 0, 3, 1, \rightarrow 0, 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 0, 0, 3, 5, \rightarrow$
- R28)  $0, 0, 0, 0, 4, 1, \rightarrow 0, 0, 0, 3, 1, \rightarrow 0, 0, 2, 1, \rightarrow$
- R29)  
 $0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, 0, 0,$   
 $0, 3, \rightarrow 0, 0, 0, 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 0, 0, 6, \rightarrow 0, 0, 0, 0, 0, 0, 0, 7, \rightarrow$



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,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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,--

0,5,--0,0,0,0,0,0,5,7,--0,0,0,0,0,0,5,8,--  
R50)  
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,--0,0,0,0,0,0,6,8,--  
R51)  
0,0,0,0,0,0,7,-->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,--  
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,-->0,0,0,0,0,0,0,0,0,0,0,0,--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,--0,0,0,0,0,0,0,0,0,9,--  
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,  
0,0,0,0,0,4,6,--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,--0,0,0,0,0,0,0,7,1,--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,--  
R76)  
0,0,0,0,0,0,0,2,4,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,2,4,--0,0,0,0,0,0,0,2,4,6,--  
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,--  
R77)  
0,0,0,0,0,0,0,2,5,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,2,5,--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,--  
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,--0,0,0,0,0,0,0,2,  
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,--0,0,0,0,0,0,0,3,5,--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,--0,0,0,0,0,0,0,3,6,  
--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,--0,0,0,0,0,3,7,--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,--0,0,0,0,0,5,1,--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,--0,0,0,0,0,0,0,4,6,--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,--0,0,0,0,0,0,4,7,--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,--



0,0,0,0,0,0,0,0,2,4,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,2,4,--0,0,0,0,0,0,0,0,2,4,6,--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,--0,0,0,0,0,0,0,0,2,4,10,--

R114)

0,0,0,0,0,0,0,0,2,5,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,0,2,5,7,--0,0,0,0,0,0,0,0,2,5,8,--0,0,0,0,0,0,0,0,2,5,9,--0,0,0,0,0,0,0,0,2,5,10,--

R115)

0,0,0,0,0,0,0,0,2,6,-->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,--0,0,0,0,0,0,0,0,2,6,8,--0,0,0,0,0,0,0,0,2,6,9,--0,0,0,0,0,0,0,0,2,6,10,--

R116)

0,0,0,0,0,0,0,0,2,7,-->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,--0,0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,0,2,7,9,--0,0,0,0,0,0,0,0,2,7,10,--

R117)

0,0,0,0,0,0,0,0,2,8,-->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,--0,0,0,0,0,0,0,0,2,8,--0,0,0,0,0,0,0,0,2,8,10,--

R118)

0,0,0,0,0,0,0,0,2,9,-->0,0,2,1,--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,--0,0,0,0,0,0,0,0,2,9,--

R119)

0,0,0,0,0,0,0,0,3,5,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,3,5,--0,0,0,0,0,0,0,0,3,5,7,--0,0,0,0,0,0,0,0,3,5,8,--0,0,0,0,0,0,0,0,3,5,9,--0,0,0,0,0,0,0,0,3,5,10,--

R120)

0,0,0,0,0,0,0,0,3,6,-->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,--0,0,0,0,0,0,0,0,3,6,8,--0,0,0,0,0,0,0,0,3,6,9,--0,0,0,0,0,0,0,0,3,6,10,--

R121)

0,0,0,0,0,0,0,0,3,7,-->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,--0,0,0,0,0,0,0,0,3,7,9,--0,0,0,0,0,0,0,0,3,7,10,--

R122)

0,0,0,0,0,0,0,0,3,8,-->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,--0,0,0,0,0,0,0,0,3,8,--0,0,0,0,0,0,0,0,3,8,10,--

R123)

0,0,0,0,0,0,0,0,3,9,-->0,0,0,3,1,--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,--0,0,0,0,0,0,0,0,3,9,--

R124)

0,0,0,0,0,0,0,0,4,6,-->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,--0,0,0,0,0,0,0,0,4,6,8,--0,0,0,0,0,0,0,0,4,6,9,--0,0,0,0,0,0,0,0,4,6,10,--

R125)

0,0,0,0,0,0,0,0,4,7,-->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,--0,0,0,0,0,0,0,0,4,7,9,--0,0,0,0,0,0,0,0,4,7,10,--

R126)

0,0,0,0,0,0,0,0,4,8,-->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,--0,0,0,0,0,0,0,0,4,8,--0,0,0,0,0,0,0,0,4,8,10,--

R127)

0,0,0,0,0,0,0,0,4,9,-->0,0,0,0,4,1,--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,--0,0,0,0,0,0,0,0,4,9,--

R128)

0,0,0,0,0,0,0,0,5,7,-->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,--0,0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,0,5,7,9,--0,0,0,0,0,0,0,0,5,7,10,--

R129)

0,0,0,0,0,0,0,0,5,8,-->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,--0,0,0,0,0,0,0,0,5,8,10,--

R130)

0,0,0,0,0,0,0,0,5,9,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,5,9,--

R131)

0,0,0,0,0,0,0,0,6,8,-->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,--0,0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,0,6,8,10,--

R132)

0,0,0,0,0,0,0,0,6,9,-->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,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,6,9,--

R133)

0,0,0,0,0,0,0,0,7,9,-->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,--0,0,0,0,0,0,0,0,7,9,--

R134)

0,0,0,0,0,0,0,0,8,1,-->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,--

R135)

0,0,0,0,0,0,0,0,2,4,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,2,4,6,--0,0,0,0,0,0,0,2,4,6,8,--0,0,0,0,0,0,0,0,2,4,6,9,--0,0,0,0,0,0,0,0,2,4,6,10,--

R136)

0,0,0,0,0,0,0,0,2,4,7,-->0,0,2,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,2,4,7,--0,0,0,0,0,0,0,0,2,4,7,9,--0,0,0,0,0,0,0,0,2,4,7,10,--

R137)

0,0,0,0,0,0,0,0,2,4,8,-->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,--0,0,0,0,0,0,0,0,2,4,8,10,--

R138)

0,0,0,0,0,0,0,0,2,4,9,-->0,0,2,1,--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,--0,0,0,0,0,0,0,2,4,9,--

R139)

0,0,0,0,0,0,0,0,2,5,7,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,2,5,7,--0,0,0,0,0,0,0,0,2,5,7,9,--0,0,0,0,0,0,0,0,2,5,7,10,--

R140)

0,0,0,0,0,0,0,0,2,5,8,-->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,--0,0,0,0,0,0,0,0,2,5,8,10,--

R141)

0,0,0,0,0,0,0,0,2,5,9,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,2,5,9,--

R142)

0,0,0,0,0,0,0,0,2,6,8,-->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,--0,0,0,0,0,0,0,0,2,6,8,10,--

R143)

0,0,0,0,0,0,0,0,2,6,9,-->0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,2,6,9,--

R144)

0,0,0,0,0,0,0,0,2,7,9,-->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,--0,0,2,1,--0,0,0,0,0,0,0,2,7,9,--

R145)

0,0,0,0,0,0,0,0,3,5,7,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,3,5,

7, --0,0,0,0,0,0,0,3,5,7,9, --0,0,0,0,0,0,0,3,5,7,10, --  
 R146)  
 0,0,0,0,0,0,0,3,5,8, -->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, --0,0,0,0,0,0,0,3,5,8,10, --  
 R147)  
 0,0,0,0,0,0,0,3,5,9, -->0,0,0,3,1, --0,0,2,1, --0,0,2,1, --0,0,0,0,4,1, --0,0,0,3,1, --0,  
 0,2,1, --0,0,0,0,0,0,0,3,5,9, --  
 R148)  
 0,0,0,0,0,0,0,3,6,8, -->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, --0,0,0,0,0,0,0,3,6,8,10, --  
 R149)  
 0,0,0,0,0,0,0,3,6,9, -->0,0,0,3,1, --0,0,2,1, --0,0,0,3,1, --0,0,2,1, --0,0,0,3,1, --0,0,  
 2,1, --0,0,0,0,0,0,0,3,6,9, --  
 R150)  
 0,0,0,0,0,0,0,3,7,9, -->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,  
 0,2,1, --0,0,0,0,0,0,0,3,7,9, --  
 R151)  
 0,0,0,0,0,0,0,4,6,8, -->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, --0,0,0,0,0,0,0,4,6,8,10, --  
 R152)  
 0,0,0,0,0,0,0,4,6,9, -->0,0,0,0,4,1, --0,0,0,3,1, --0,0,2,1, --0,0,2,1, --0,0,0,3,1, --0,  
 0,2,1, --0,0,0,0,0,0,0,4,6,9, --  
 R153)  
 0,0,0,0,0,0,0,4,7,9, -->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,  
 0,2,1, --0,0,0,0,0,0,0,4,7,9, --  
 R154)  
 0,0,0,0,0,0,0,5,7,9, -->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,  
 --0,0,2,1, --0,0,0,0,0,0,0,5,7,9, --  
 R155)  
 0,0,0,0,0,0,2,4,6,8, -->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,  
 --0,0,0,0,0,0,2,4,6,8,10, --  
 R156)  
 0,0,0,0,0,0,2,4,6,9, -->0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,0,3,1, --0,0,2,1, --0,0,0,0,  
 0,0,2,4,6,9, --  
 R157)  
 0,0,0,0,0,0,2,4,7,9, -->0,0,2,1, --0,0,2,1, --0,0,0,3,1, --0,0,2,1, --0,0,2,1, --0,0,0,0,  
 0,0,2,4,7,9, --  
 R158)  
 0,0,0,0,0,0,2,5,7,9, -->0,0,2,1, --0,0,0,3,1, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,0,0,  
 0,0,2,5,7,9, --  
 R159)  
 0,0,0,0,0,0,3,5,7,9, -->0,0,0,3,1, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,0,0,  
 0,0,3,5,7,9, --  
 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, : 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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 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, : 0,0,0,0,0,0,0,0,0,0,10, : 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, : 0,0,0,0,0,0,0,0,0,2,10, :  
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, : 0,0,0,0,0,0,0,0,0,3,10, :  
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, : 0,0,0,0,0,0,0,0,0,4,10, : 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, : 0,0,0,0,0,0,0,0,0,5,10, :  
 0,0,0,0,0,0,0,0,0,6,8, : 0,0,0,0,0,0,0,0,0,6,9, : 0,0,0,0,0,0,0,0,0,6,10, :  
 0,0,0,0,0,0,0,0,0,7,9, : 0,0,0,0,0,0,0,0,0,7,10, : 0,0,0,0,0,0,0,0,0,8,10, :  
 0,0,0,0,0,0,0,0,0,9,1, : 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, : 0,0,0,0,0,0,0,0,2,4,10, :  
 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, :  
 0,0,0,0,0,0,0,0,2,5,10, : 0,0,0,0,0,0,0,0,2,6,8, : 0,0,0,0,0,0,0,0,2,6,9, :  
 0,0,0,0,0,0,0,0,2,6,10, : 0,0,0,0,0,0,0,0,2,7,9, : 0,0,0,0,0,0,0,0,2,7,10, :  
 0,0,0,0,0,0,0,0,2,8,10, : 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, : 0,0,0,0,0,0,0,0,3,5,10, : 0,0,0,0,0,0,0,0,3,6,8, :  
 0,0,0,0,0,0,0,0,3,6,9, : 0,0,0,0,0,0,0,0,3,6,10, : 0,0,0,0,0,0,0,0,3,7,9, :  
 0,0,0,0,0,0,0,0,3,7,10, : 0,0,0,0,0,0,0,0,3,8,10, : 0,0,0,0,0,0,0,0,4,6,8, :  
 0,0,0,0,0,0,0,0,4,6,9, : 0,0,0,0,0,0,0,0,4,6,10, : 0,0,0,0,0,0,0,0,4,7,9, :  
 0,0,0,0,0,0,0,0,4,7,10, : 0,0,0,0,0,0,0,0,4,8,10, : 0,0,0,0,0,0,0,0,5,7,9, :  
 0,0,0,0,0,0,0,0,5,7,10, : 0,0,0,0,0,0,0,0,5,8,10, : 0,0,0,0,0,0,0,0,6,8,10, :  
 0,0,0,0,0,0,0,2,4,6,8, : 0,0,0,0,0,0,0,2,4,6,9, : 0,0,0,0,0,0,0,2,4,6,10, :  
 0,0,0,0,0,0,0,2,4,7,9, : 0,0,0,0,0,0,0,2,4,7,10, : 0,0,0,0,0,0,0,2,4,8,10, :  
 0,0,0,0,0,0,0,2,5,7,9, : 0,0,0,0,0,0,0,2,5,7,10, : 0,0,0,0,0,0,0,2,5,8,10, :  
 0,0,0,0,0,0,0,2,6,8,10, : 0,0,0,0,0,0,0,3,5,7,9, : 0,0,0,0,0,0,0,3,5,7,10, :  
 0,0,0,0,0,0,0,3,5,8,10, : 0,0,0,0,0,0,0,3,6,8,10, : 0,0,0,0,0,0,0,4,6,8,10, :  
 0,0,0,0,0,0,2,4,6,8,10, :

Number new nodes in level n is given by : 1,2,3,5,7,10,15,23,36,57,91,

-----Class

1350-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][100][101][110][120]]$

-----

--

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,--
- 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,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--
- 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,--0,0,0,0,0,0,1,--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,--

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

R21)

0,0,0,0,0,5,-->0,0,0,0,4,--0,0,0,0,5,2,--0,0,0,0,5,3,--0,0,0,0,4,--0,0,0,0,1,--

R22) 0,0,0,0,4,2,-->0,0,0,0,2,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--

R23)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--

R26)

0,0,0,0,0,0,3,-->0,0,0,0,0,0,2,--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,--

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,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--

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,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--

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,--0,0,0,0,0,0,5,--0,0,0,0,0,0,1,--

R30) 0,0,0,0,0,4,2,-->0,0,0,0,0,2,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--

R31) 0,0,0,0,0,5,2,-->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,--

R32) 0,0,0,0,0,5,3,-->0,0,0,0,0,4,2,--0,0,0,0,0,4,2,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--

R33)

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

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,--0,0,0,0,0,4,2,--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,--0,0,0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--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,--0,0,0,0,0,0,1,--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,--0,0,0,0,1,--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,-->0,0,0,0,0,0,0,0,5,--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,--0,0,0,1,--0,0,0,2,--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,--0,0,0,0,1,--  
0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R58)

0,0,0,0,0,0,0,0,5,3,-->0,0,0,0,0,0,0,0,4,2,--0,0,0,0,0,0,0,0,4,2,--0,0,0,0,0,1,--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,--0,0,0,0,0,0,4,2,--0,0,0,0,0,  
0,3,--0,0,0,1,--0,0,0,2,--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,--0,0,0,0,0,2,--0,0,0,0,  
0,2,--0,0,0,1,--0,0,0,2,--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,--  
0,0,0,0,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R62)

0,0,0,0,0,0,0,0,7,2,-->0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,4,--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,--

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,--0,0,0,0,0,3,--0,0,0,0,  
0,4,2,--0,0,0,0,0,3,--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,--  
0,0,0,0,2,--0,0,0,0,2,--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,--0,0,0,1,--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,--0,0,0,0,1,--0,0,0,1,--0,0,0,2,  
--0,0,0,3,--

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,--0,0,0,0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,0,10,--

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,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--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,--0,0,0,0,0,0,0,0,9,--

R69)

0,0,0,0,0,0,0,0,0,2,-->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  
,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R70)

0,0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,2,--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,  
,0,0,6,--0,0,0,0,0,0,0,0,7,--

R71)

0,0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,4,2,--0,0,0,0,0,0,0,0,  
0,0,3,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,  
,5,--0,0,0,0,0,0,0,6,--

R72)

0,0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,2,--0,0,0,0,0,0,0,0,  
0,0,5,3,--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,  
,4,--0,0,0,0,0,0,5,--

R73)

0,0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,2,--0,0,0,0,0,0,0,0,  
0,0,6,3,--0,0,0,0,0,0,0,0,0,6,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,  
,0,0,3,--0,0,0,0,0,4,--

R74)

0,0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,7,2,--0,0,0,0,0,0,0,0,  
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,--0,0,0,0,0,0,0,0,0,6,--0,0,  
,0,1,--0,0,0,0,2,--0,0,0,0,3,--

R75)

0,0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,2,--0,0,0,0,0,0,0,0,  
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,  
,0,0,0,0,0,0,0,0,0,7,--0,0,1,--0,0,2,--

R76)

0,0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,2,--0,0,0,0,0,0,0,0,  
0,0,9,3,--0,0,0,0,0,0,0,0,0,9,4,--0,0,0,0,0,0,0,0,0,9,5,--0,0,0,0,0,0,0,0,0,9,6,--0,  
,0,0,0,0,0,0,0,0,0,9,7,--0,0,0,0,0,0,0,0,0,8,--0,1,--

R77)

0,0,0,0,0,0,0,0,0,4,2,-->0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--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,--

R78)

0,0,0,0,0,0,0,0,0,5,2,-->0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,2,--0,0,  
0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--

R79)

0,0,0,0,0,0,0,0,0,5,3,-->0,0,0,0,0,0,0,0,0,4,2,--0,0,0,0,0,0,0,0,0,4,2,--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,--

R80)

0,0,0,0,0,0,0,0,0,6,2,-->0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,2,--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,--

R81)

0,0,0,0,0,0,0,0,0,6,3,-->0,0,0,0,0,0,0,0,0,5,2,--0,0,0,0,0,0,0,0,0,5,2,--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,--

R82)

0,0,0,0,0,0,0,0,0,6,4,-->0,0,0,0,0,0,0,0,0,5,3,--0,0,0,0,0,0,0,0,0,6,4,2,--0,0,0,0,0,0,0,  
0,5,3,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--

R83)

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,  
0,0,0,0,0,0,0,0,5,3,--0,0,0,0,0,0,0,0,4,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R84)

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,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R85)

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,  
0,6,3,--0,0,0,0,0,0,2,--0,0,0,0,0,0,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R86)

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,  
0,7,5,3,--0,0,0,0,0,0,0,0,6,4,--0,0,0,0,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R87)

0,0,0,0,0,0,0,0,8,2,-->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,  
0,0,0,0,0,0,0,0,6,3,--0,0,0,0,0,0,0,0,6,4,--0,0,0,0,0,0,0,0,5,--0,0,1,--0,0,2,--

R88)

0,0,0,0,0,0,0,0,8,3,-->0,0,0,0,0,0,0,0,7,2,--0,0,0,0,0,0,0,0,7,2,--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,--0,0,1,--0,0,2,--

R89)

0,0,0,0,0,0,0,0,8,4,-->0,0,0,0,0,0,0,0,7,3,--0,0,0,0,0,0,0,0,8,4,2,--0,0,0,0,0,0,0,0,  
0,7,3,--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,--

R90)

0,0,0,0,0,0,0,0,8,5,-->0,0,0,0,0,0,0,0,7,4,--0,0,0,0,0,0,0,0,8,5,2,--0,0,0,0,0,0,0,0,  
0,8,5,3,--0,0,0,0,0,0,0,0,7,4,--0,0,0,0,0,2,--0,0,0,0,0,2,--0,0,1,--0,0,2,--

R91)

0,0,0,0,0,0,0,0,8,6,-->0,0,0,0,0,0,0,0,7,5,--0,0,0,0,0,0,0,0,8,6,2,--0,0,0,0,0,0,0,0,  
0,8,6,3,--0,0,0,0,0,0,0,0,8,6,4,--0,0,0,0,0,0,0,0,7,5,--0,0,0,1,--0,0,1,--0,0,2,--

R92)

0,0,0,0,0,0,0,0,6,4,2,-->0,0,0,0,0,0,0,0,4,2,--0,0,0,0,0,0,0,2,--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,--

R93)

0,0,0,0,0,0,0,0,7,4,2,-->0,0,0,0,0,0,0,0,5,2,--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,--

R94)

0,0,0,0,0,0,0,0,7,5,2,-->0,0,0,0,0,0,0,0,5,3,--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,--

R95)

0,0,0,0,0,0,0,0,7,5,3,-->0,0,0,0,0,0,0,0,6,4,2,--0,0,0,0,0,0,0,0,6,4,2,--0,0,0,0,0,0,2,--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,:  
 0,0,0,0,0,0,0,4,2,: 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,: 0,0,0,0,0,0,0,0,0,1,: 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,: 0,0,0,0,0,0,0,0,4,2,: 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,:  
 0,0,0,0,0,0,0,0,6,4,2,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 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,: 0,0,0,0,0,0,0,0,0,4,2,: 0,0,0,0,0,0,0,0,0,5,2,:  
 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,:  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0,0,: 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,: 0,0,0,0,0,0,0,0,0,0,0,0,10,: 0,0,0,0,0,0,0,0,0,0,4,2,:  
 0,0,0,0,0,0,0,0,0,0,5,2,: 0,0,0,0,0,0,0,0,0,0,5,3,: 0,0,0,0,0,0,0,0,0,0,6,2,:  
 0,0,0,0,0,0,0,0,0,0,6,3,: 0,0,0,0,0,0,0,0,0,0,6,4,: 0,0,0,0,0,0,0,0,0,0,7,2,:  
 0,0,0,0,0,0,0,0,0,0,7,3,: 0,0,0,0,0,0,0,0,0,0,7,4,: 0,0,0,0,0,0,0,0,0,0,7,5,:  
 0,0,0,0,0,0,0,0,0,0,8,2,: 0,0,0,0,0,0,0,0,0,0,8,3,: 0,0,0,0,0,0,0,0,0,0,8,4,:  
 0,0,0,0,0,0,0,0,0,0,8,5,: 0,0,0,0,0,0,0,0,0,0,8,6,: 0,0,0,0,0,0,0,0,0,0,9,2,:  
 0,0,0,0,0,0,0,0,0,0,9,3,: 0,0,0,0,0,0,0,0,0,0,9,4,: 0,0,0,0,0,0,0,0,0,0,9,5,:  
 0,0,0,0,0,0,0,0,0,0,9,6,: 0,0,0,0,0,0,0,0,0,0,9,7,: 0,0,0,0,0,0,0,0,0,6,4,2,:  
 0,0,0,0,0,0,0,0,0,7,4,2,: 0,0,0,0,0,0,0,0,0,7,5,2,: 0,0,0,0,0,0,0,0,0,7,5,3,:  
 0,0,0,0,0,0,0,0,0,8,4,2,: 0,0,0,0,0,0,0,0,0,8,5,2,: 0,0,0,0,0,0,0,0,0,8,5,3,:  
 0,0,0,0,0,0,0,0,0,8,6,2,: 0,0,0,0,0,0,0,0,0,8,6,3,: 0,0,0,0,0,0,0,0,0,8,6,4,:  
 Number new nodes in level n is given by : 1,2,3,4,5,7,10,14,20,29,42,

-----Class

1351-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][100][101][110][201]]$

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,0,1,--
- 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,--0,0,0,0,0,0,1,--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,--0,0,0,0,4,--0,0,0,0,5,--

R18)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--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,-->0,0,0,0,1,--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,--0,0,0,0,0,4,--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,--0,0,0,0,4,--0,0,0,0,0,5,--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,--0,0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,0,0,0,0,1,--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,-->0,0,0,0,0,0,0,1,--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,--

R35)

0,0,0,0,0,0,0,0,5,-->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,--

R36)

0,0,0,0,0,0,0,0,6,-->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,--

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,--0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R39)

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,--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,--0,0,0,0,0,0,0,0,0,0,10,--

R40)

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,--0,0,0,0,0,0,0,0,0,3,--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)

0,0,0,0,0,0,0,0,0,3,-->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,--0,0,0,0,0,0,0,0,0,4,--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)

0,0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,3,--

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,--0,0,0,0,0,0,0,0,9,--

R43)

0,0,0,0,0,0,0,0,0,5,-->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,--0,0,0,0,0,0,0,0,9,--

R44)

0,0,0,0,0,0,0,0,0,6,-->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,--0,0,0,0,0,0,0,0,9,--

R45)

0,0,0,0,0,0,0,0,0,7,-->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,--0,0,0,0,0,0,0,0,9,--

R46)

0,0,0,0,0,0,0,0,0,8,-->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,--0,0,0,0,0,0,0,0,9,--

R47)

0,0,0,0,0,0,0,0,0,9,-->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,--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,:

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, :

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 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, :

0,0,0,0,0,0,0,0,0,0,10, :

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

-----Class

1352-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][011][100][101][110][210]]

-----

--

Rules of T[L]:

R1) 0, -->0,0, --0,1, --  
R2) 0,0, -->0,0,0, --0,0,1, --0,0,1, --  
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, --0,0,0,0,0,0,0,0,5, --0,0,0,0,0,0,0,0,6, --0,0,0,0,0,0,0,0,7, --

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,--0,0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,3,--0,0,  
0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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,-->0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,  
0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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,-->0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,1,--0,0,0,0,  
0,1,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,5,--0,0,0,0,  
0,4,--0,0,0,0,3,--0,0,0,0,1,--0,0,1,--0,0,0,0,0,0,0,0,8,--

R39)  
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,--  
-0,0,0,0,0,0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,0,0,0,0,10,--

R40)

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,--0,0,0,0,0,0,0,0,0,0,0,3,--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)

0,0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,3,--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)

0,0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,0,9,--

R43)

0,0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,5,--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)

0,0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,6,--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)

0,0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,6,--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)

0,0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R47)

0,0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,9,--

List of different nodes in T[L]

LEN=1) 0, :

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

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

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, : 0,0,0,0,0,0,0,0,0,0,1, : 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, :

LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,0,0,3, :

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, :

0,0,0,0,0,0,0,0,0,0,10,:

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

-----Class

1353-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][100][101][120][201]]$

-----  
--

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,  
0,0,0,0,0,4,--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,--0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--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,--0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R31)

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

R42)





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=11) 0,0,0,0,0,0,0,0,0,0,0: 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: 0,0,0,0,0,0,0,0,0,0,10:  
 Number new nodes in level n is given by : 1,2,3,4,5,6,7,8,9,10,11,

-----Class

1354-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][100][101][120][210]]$

-----

--

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,--0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,6,--  
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,



0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R51)

0,0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,2,--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,--

R52)

0,0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,4,--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,--

R53)

0,0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,5,--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,--

R54)

0,0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,6,--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,--

R55)

0,0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,6,--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,--

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=11) 0,0,0,0,0,0,0,0,0,0,0,: 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, : 0,0,0,0,0,0,0,0,0,0,10,:

Number new nodes in level n is given by : 1,2,3,4,5,6,7,8,9,10,11,

-----Class

1355-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][011][100][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,  
0,0,0,0,0,4,--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,--0,0,0,0,0,0,0,4,--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,--0,0,0,0,0,0,6,--  
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,--0,0,0,0,0,0,0,3,--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,--0,0,0,0,0,0,5,--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,--0,0,0,0,0,0,7,--

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,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--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,--0,0,0,0,0,6,--0,0,0,0,0,7,--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,--0,0,0,0,6,--0,0,0,0,7,--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,--0,0,0,8,--

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,--0,0,8,--

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,--0,0,0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,0,0,10,--

R40)

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,--0,0,0,0,0,0,0,0,0,3,--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)

0,0,0,0,0,0,0,0,0,3,-->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,

--0,0,0,0,0,0,0,0,0,4,--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)

0,0,0,0,0,0,0,0,0,4,-->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,--0,0,0,0,0,0,0,0,0,5,--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)

0,0,0,0,0,0,0,0,0,5,-->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,--0,0,0,0,0,0,0,0,5,--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)

0,0,0,0,0,0,0,0,0,6,-->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,--0,0,0,0,0,0,0,0,6,--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)

0,0,0,0,0,0,0,0,0,7,-->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,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R46)

0,0,0,0,0,0,0,0,0,8,-->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,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R47)

0,0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,9,--

List of different nodes in T[L]

LEN=1) 0, :

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

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

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

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

LEN=6) 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, :

LEN=7) 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, :

LEN=8) 0,0,0,0,0,0,0,0, : 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, :

LEN=9) 0,0,0,0,0,0,0,0,0, : 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, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 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, :

LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,0,0,3, :

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, :

0,0,0,0,0,0,0,0,0,0,0,10, :

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

-----Class

1356-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][100][102][110][120]]$

-----



--

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

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

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

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

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

R9)  $0, 0, 0, 2, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 1, \rightarrow 0, 0, 2, \rightarrow$

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

R11)  $0, 0, 2, 1, \rightarrow$

R12)

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

$0, 0, 0, 0, 0, 5, \rightarrow$

R13)  $0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow$

R14)  $0, 0, 0, 0, 2, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 0, 1, \rightarrow 0, 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow$

R15)  $0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 3, 1, \rightarrow 0, 0, 0, 3, 1, \rightarrow 0, 0, 1, \rightarrow 0, 0, 2, \rightarrow$

R16)  $0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 4, 1, \rightarrow 0, 0, 0, 0, 4, 2, \rightarrow 0, 0, 0, 0, 4, 1, \rightarrow 0, 1, \rightarrow$

R17)  $0, 0, 0, 3, 1, \rightarrow 0, 0, 2, 1, \rightarrow$

R18)

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

$0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 6, \rightarrow$

R19)

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

--

R20)  $0, 0, 0, 0, 0, 2, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow$

R21)  $0, 0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 3, 1, \rightarrow 0, 0, 0, 0, 3, 1, \rightarrow 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, 3, \rightarrow$

R22)  $0, 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 4, 1, \rightarrow 0, 0, 0, 0, 4, 2, \rightarrow 0, 0, 0, 0, 4, 1, \rightarrow 0, 0, 1, \rightarrow 0, 0, 2, \rightarrow$

R23)

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

--

R24)  $0, 0, 0, 0, 4, 1, \rightarrow 0, 0, 0, 3, 1, \rightarrow 0, 0, 0, 3, 1, \rightarrow$

R25)  $0, 0, 0, 0, 4, 2, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow$

R26)

$0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, 0, 0, 0,$

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

R27)

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

$0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 6, \rightarrow$

R28)

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

$0, 0, 0, 0, 0, 5, \rightarrow$

R29)

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

$0, 4, \rightarrow$

R30)

$0, 0, 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 4, 1, \rightarrow 0, 0, 0, 0, 4, 2, \rightarrow 0, 0, 0, 0, 4, 1, \rightarrow 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 2, \rightarrow 0, 0,$

$0, 3, \rightarrow$

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,-->0,0,0,0,0,6,1,--0,0,0,0,0,6,2,--0,0,0,0,0,6,3,--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,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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,-->0,0,0,0,0,6,1,--0,0,0,0,0,6,2,--0,0,0,0,0,6,3,--0,0,0,0,0,6,4,--0,0,0,0,0,6,1,--0,0,1,--0,0,2,--

R43)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,7,1,--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,--0,1,--

R44)

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,--0,0,0,0,0,0,0,0,1,--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,--

R49)

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,--

R50)

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,--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,-->0,0,0,0,0,6,1,--0,0,0,0,0,6,2,--0,0,0,0,0,6,3,--0,0,0,0,0,6,4,--0,0,0,0,0,6,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--

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,--0,0,0,0,0,0,7,4,--0,0,0,0,0,0,7,5,--0,0,0,0,0,0,7,1,--0,0,1,--0,0,2,--

R56)

0,0,0,0,0,0,0,0,8,-->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)

0,0,0,0,0,0,0,0,7,1,-->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)

0,0,0,0,0,0,0,0,7,2,-->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,--0,0,0,0,5,1,--

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,--

R62)

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--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,--0,0,0,0,0,0,0,0,0,10,--

R63)

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,--0,0,0,0,0,0,0,0,0,9,--

R64)

0,0,0,0,0,0,0,0,0,2,-->0,0,2,1,--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,--

R65)

0,0,0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,0,1,--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,--  
R66)  
0,0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,4,1,--0,0,0,0,0,4,2,--0,0,0,0,0,4,1,--0,0,0,0,0,0,1,--0,  
0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R67)  
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,  
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,--  
R68)  
0,0,0,0,0,0,0,0,0,6,-->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,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R69)  
0,0,0,0,0,0,0,0,0,7,-->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,--0,0,0,1,--0,0,0,2,--0,0,  
,0,3,--  
R70)  
0,0,0,0,0,0,0,0,0,8,-->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,--0,0,1,--0,0,2,--  
R71)  
0,0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,0,9,1,--0,0,0,0,0,0,0,0,0,9,2,--0,0,0,0,0,0,  
0,0,0,9,3,--0,0,0,0,0,0,0,0,9,4,--0,0,0,0,0,0,0,0,9,5,--0,0,0,0,0,0,0,0,9,6,--  
-0,0,0,0,0,0,0,0,9,7,--0,0,0,0,0,0,0,0,9,1,--0,1,--  
R72)  
0,0,0,0,0,0,0,0,8,1,-->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,--  
R73)  
0,0,0,0,0,0,0,0,8,2,-->0,0,2,1,--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,--  
R74)  
0,0,0,0,0,0,0,0,8,3,-->0,0,0,3,1,--0,0,0,3,1,--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,--  
R75)  
0,0,0,0,0,0,0,0,8,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,4,1,--0,0,  
0,0,4,2,--0,0,0,0,4,1,--  
R76)  
0,0,0,0,0,0,0,0,8,5,-->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,--0,0,0,3,1,--0,0,0,3,1,--  
R77)  
0,0,0,0,0,0,0,0,8,6,-->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,--0,0,0,2,1,--  
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,: 0,0,0,0,0,0,0,0,7,1,: 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,: 0,0,0,0,0,0,0,0,0,1,: 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,:  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0,0,: 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,: 0,0,0,0,0,0,0,0,0,0,10,: 0,0,0,0,0,0,0,0,0,0,9,1,:  
 0,0,0,0,0,0,0,0,0,0,9,2,: 0,0,0,0,0,0,0,0,0,0,9,3,: 0,0,0,0,0,0,0,0,0,0,9,4,:  
 0,0,0,0,0,0,0,0,0,0,9,5,: 0,0,0,0,0,0,0,0,0,0,9,6,: 0,0,0,0,0,0,0,0,0,0,9,7,:  
 Number new nodes in level n is given by : 1,2,3,5,6,8,10,12,14,16,18,

-----Class

1357-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][100][102][110][201]]$

-----

--

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,--
- 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,--0,0,0,3,2,--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,--0,0,0,0,0,6,--

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,--0,0,0,0,0,6,--

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,--0,0,0,0,0,6,--

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,  
--0,0,0,0,0,6,--

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,  
--0,0,0,0,0,6,--

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,--0,0,0,0,0,6,--

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,--0,0,0,0,0,0,0,0,1,--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) 0,0,0,0,0,0,0,6,5,-->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,--0,0,0,0,0,0,0,0,0,0,1,--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,--

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,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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,-->0,0,2,1,--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,--0,0,0,0,0,0,0,0,6,--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,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,0,0,6,5,--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,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,0,0,6,5,--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,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,0,0,6,5,--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)

0,0,0,0,0,0,0,0,7,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,0,0,6,5,--

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,--0,0,0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,0,0,10,--

R53)

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,--0,0,0,0,0,0,0,0,0,0,0,0,--

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,--

R54)

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,--0,0,0,0,0,0,0,0,0,9,--

R55)

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

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

R57)

0,0,0,0,0,0,0,0,0,5,-->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,--0,0,0,0,0,0,0,0,0,6,--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,--

R58)

0,0,0,0,0,0,0,0,0,6,-->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,--0,0,0,0,0,0,0,0,0,6,--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)

0,0,0,0,0,0,0,0,0,7,-->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,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R60)

0,0,0,0,0,0,0,0,0,8,-->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,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R61)

0,0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,0,9,8,--0,0,0,0,0,0,0,0,0,9,--

R62)

0,0,0,0,0,0,0,0,8,7,-->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,--

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, :

0,0,0,0,0,0,0,6,5, :



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, : 0,0,0,0,0,0,0,0,7,6, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,1, : 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, : 0,0,0,0,0,0,0,0,0,0,8,7, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0,0,0, : 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, :  
 0,0,0,0,0,0,0,0,0,0,0,0,3, : 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, : 0,0,0,0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,0,0,0,0,9,8, :  
 Number new nodes in level n is given by : 1,2,3,5,6,7,8,9,10,11,12,

-----Class

1358-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][100][102][110][210]]$

- 
- 
- 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,--
  - 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,--0,0,0,0,0,0,0,0,1,--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,--

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,--0,0,0,0,0,0,2,7,--

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

0,0,0,0,0,0,0,0,1,-->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,--0,0,0,0,0,0,0,0,4,7,--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,--0,0,0,2,1,--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,--0,0,0,0,0,4,1,--0,0,0,0,3,1,--0,0,0,0,2,1,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,7,9,--

R75)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,1,--0,0,0,0,0,0,0,7,1,--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,--0,0,0,0,2,1,--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,--0,0,0,0,0,0,0,2,4,--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,--

R77)

0,0,0,0,0,0,0,2,5,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,2,5,--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,--

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,--0,0,0,0,0,0,0,2,6,--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,--0,0,0,0,0,0,2,8,--  
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,--0,0,0,0,0,0,3,5,8,--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,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,  
0,0,0,0,0,3,7,--0,0,0,0,0,0,3,7,9,--  
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,--0,0,0,0,0,0,3,8,--  
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,--0,0,0,0,0,0,4,6,8,--0,0,0,0,0,0,4,6,9,--  
R86)  
0,0,0,0,0,0,0,4,7,-->0,0,0,0,4,1,--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,--0,0,0,0,0,0,4,7,9,--  
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,--0,0,0,0,0,0,4,8,--  
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,-->0,0,0,0,0,0,6,1,--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)  
0,0,0,0,0,0,0,7,1,-->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,--

R103)

0,  
0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,0,0,5,-  
-0,0,0,0,0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,  
0,0,0,0,0,9,--0,0,0,0,0,0,0,0,0,10,--

R104)

0,0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,2,--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,--

R105)

0,0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,2,4,--0,0,  
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,  
,0,2,8,--0,0,0,0,0,0,0,2,9,--0,0,0,0,0,0,0,2,10,--

R106)

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,  
0,3,5,--0,0,0,0,0,0,0,0,3,6,--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,--0,0,0,0,0,0,0,3,10,--

R107)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,4,--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,  
,0,0,4,9,--0,0,0,0,0,0,0,4,10,--

R108)

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,--0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,5,8,--0,0,0,0,0,0,0,5,9,  
,--0,0,0,0,0,0,0,5,10,--

R109)

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,--0,0,0,0,0,0,6,--0,0,0,0,0,0,6,8,--0,0,0,0,0,0,6,9,--0,0,  
,0,0,0,0,0,6,10,--

R110)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,7,1,--0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,

0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,7,9,--0,0,0,0,0,0,0,0,7,10,--

R111)

0,0,0,0,0,0,0,0,0,8,-->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,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,8,10,--

R112)

0,0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,9,1,--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,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,9,--

R113)

0,0,0,0,0,0,0,0,2,4,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,2,4,--0,0,0,0,0,0,0,0,2,4,6,--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,--0,0,0,0,0,0,0,0,2,4,10,--

R114)

0,0,0,0,0,0,0,0,2,5,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,0,2,5,7,--0,0,0,0,0,0,0,0,2,5,8,--0,0,0,0,0,0,0,0,2,5,9,--0,0,0,0,0,0,0,0,2,5,10,--

R115)

0,0,0,0,0,0,0,0,2,6,-->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,--0,0,0,0,0,0,0,0,2,6,8,--0,0,0,0,0,0,0,0,2,6,9,--0,0,0,0,0,0,0,0,2,6,10,--

R116)

0,0,0,0,0,0,0,0,2,7,-->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,--0,0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,0,2,7,9,--0,0,0,0,0,0,0,0,2,7,10,--

R117)

0,0,0,0,0,0,0,0,2,8,-->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,--0,0,0,0,0,0,0,0,2,8,--0,0,0,0,0,0,0,0,2,8,10,--

R118)

0,0,0,0,0,0,0,0,2,9,-->0,0,2,1,--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,--0,0,0,0,0,0,0,0,2,9,--

R119)

0,0,0,0,0,0,0,0,3,5,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,3,5,--0,0,0,0,0,0,0,0,3,5,7,--0,0,0,0,0,0,0,0,3,5,8,--0,0,0,0,0,0,0,0,3,5,9,--0,0,0,0,0,0,0,0,3,5,10,--

R120)

0,0,0,0,0,0,0,0,3,6,-->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,--0,0,0,0,0,0,0,0,3,6,8,--0,0,0,0,0,0,0,0,3,6,9,--0,0,0,0,0,0,0,0,3,6,10,--

R121)

0,0,0,0,0,0,0,0,3,7,-->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,--0,0,0,0,0,0,0,0,3,7,9,--0,0,0,0,0,0,0,0,3,7,10,--

R122)

0,0,0,0,0,0,0,0,3,8,-->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,--0,0,0,0,0,0,0,0,3,8,--0,0,0,0,0,0,0,0,3,8,10,--

R123)

0,0,0,0,0,0,0,0,3,9,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,3,9,--

R124)

0,0,0,0,0,0,0,0,4,6,-->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,--0,0,0,0,0,0,0,0,4,6,8,--0,0,0,0,0,0,0,0,4,6,9,--0,0,0,0,0,0,0,0,4,6,10,--

R125)

0,0,0,0,0,0,0,0,4,7,-->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,  
0,0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,0,4,7,9,--0,0,0,0,0,0,0,0,4,7,10,--

R126)

0,0,0,0,0,0,0,0,4,8,-->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,--0,0,0,0,0,0,0,0,4,8,--0,0,0,0,0,0,0,0,4,8,10,--

R127)

0,0,0,0,0,0,0,0,4,9,-->0,0,0,0,4,1,--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,--0,0,0,0,0,0,0,0,4,9,--

R128)

0,0,0,0,0,0,0,0,5,7,-->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,  
--0,0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,0,5,7,9,--0,0,0,0,0,0,0,0,5,7,10,--

R129)

0,0,0,0,0,0,0,0,5,8,-->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,--0,0,0,0,0,0,0,0,5,8,10,--

R130)

0,0,0,0,0,0,0,0,5,9,-->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,  
4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,5,9,--

R131)

0,0,0,0,0,0,0,0,6,8,-->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,--0,0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,0,6,8,10,--

R132)

0,0,0,0,0,0,0,0,6,9,-->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,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,6,9,--

R133)

0,0,0,0,0,0,0,0,7,9,-->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,--0,0,0,0,0,0,0,0,7,9,--

R134)

0,0,0,0,0,0,0,0,8,1,-->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,--

R135)

0,0,0,0,0,0,0,0,2,4,6,-->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,  
0,0,0,2,4,6,8,--0,0,0,0,0,0,0,2,4,6,9,--0,0,0,0,0,0,0,2,4,6,10,--

R136)

0,0,0,0,0,0,0,0,2,4,7,-->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,--0,0,0,0,0,0,0,2,4,7,9,--0,0,0,0,0,0,0,2,4,7,10,--

R137)

0,0,0,0,0,0,0,0,2,4,8,-->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,--0,0,0,0,0,0,0,2,4,8,10,--

R138)

0,0,0,0,0,0,0,0,2,4,9,-->0,0,2,1,--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,--0,0,0,0,0,0,0,2,4,9,--

R139)

0,0,0,0,0,0,0,0,2,5,7,-->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,--0,0,0,0,0,0,0,2,5,7,9,--0,0,0,0,0,0,0,2,5,7,10,--

R140)

0,0,0,0,0,0,0,0,2,5,8,-->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,--0,0,0,0,0,0,0,2,5,8,10,--

R141)

0,0,0,0,0,0,0,0,2,5,9,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,  
0,2,1,--0,0,0,0,0,0,0,2,5,9,--



R142)

0,0,0,0,0,0,0,2,6,8,-->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,--0,0,0,0,0,0,0,2,6,8,10,--

R143)

0,0,0,0,0,0,0,2,6,9,-->0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,2,6,9,--

R144)

0,0,0,0,0,0,0,2,7,9,-->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,--0,0,2,1,--0,0,0,0,0,0,2,7,9,--

R145)

0,0,0,0,0,0,0,3,5,7,-->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,--0,0,0,0,0,0,0,3,5,7,9,--0,0,0,0,0,0,0,3,5,7,10,--

R146)

0,0,0,0,0,0,0,3,5,8,-->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,--0,0,0,0,0,0,0,3,5,8,10,--

R147)

0,0,0,0,0,0,0,3,5,9,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,3,5,9,--

R148)

0,0,0,0,0,0,0,3,6,8,-->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,--0,0,0,0,0,0,0,3,6,8,10,--

R149)

0,0,0,0,0,0,0,3,6,9,-->0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,3,6,9,--

R150)

0,0,0,0,0,0,0,3,7,9,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,3,7,9,--

R151)

0,0,0,0,0,0,0,4,6,8,-->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,--0,0,0,0,0,0,0,4,6,8,10,--

R152)

0,0,0,0,0,0,0,4,6,9,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,4,6,9,--

R153)

0,0,0,0,0,0,0,4,7,9,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,4,7,9,--

R154)

0,0,0,0,0,0,0,5,7,9,-->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,--0,0,2,1,--0,0,0,0,0,0,5,7,9,--

R155)

0,0,0,0,0,0,2,4,6,8,-->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,--0,0,0,0,0,0,2,4,6,8,10,--

R156)

0,0,0,0,0,0,2,4,6,9,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,2,4,6,9,--

R157)

0,0,0,0,0,0,2,4,7,9,-->0,0,2,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,2,4,7,9,--

R158)

0,0,0,0,0,0,2,5,7,9,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,2,5,7,9,--

0,0,2,5,7,9,--

R159)

0,0,0,0,0,0,3,5,7,9,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,  
0,0,3,5,7,9,--

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,,: 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,: 0,0,0,0,0,0,0,0,0,1,,: 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,,: 0,0,0,0,0,0,0,2,4,,: 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,: 0,0,0,0,0,0,0,0,0,0,1,,: 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,,: 0,0,0,0,0,0,0,0,2,4,,: 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,,: 0,0,0,0,0,0,2,4,6,:

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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 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, : 0,0,0,0,0,0,0,0,0,0,10, : 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, : 0,0,0,0,0,0,0,0,0,2,10, :  
 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, : 0,0,0,0,0,0,0,0,0,3,10, :  
 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, : 0,0,0,0,0,0,0,0,0,4,10, : 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, : 0,0,0,0,0,0,0,0,0,5,10, :  
 0,0,0,0,0,0,0,0,0,6,8, : 0,0,0,0,0,0,0,0,0,6,9, : 0,0,0,0,0,0,0,0,0,6,10, :  
 0,0,0,0,0,0,0,0,0,7,9, : 0,0,0,0,0,0,0,0,0,7,10, : 0,0,0,0,0,0,0,0,0,8,10, :  
 0,0,0,0,0,0,0,0,0,9,1, : 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, : 0,0,0,0,0,0,0,0,2,4,10, :  
 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, :  
 0,0,0,0,0,0,0,0,2,5,10, : 0,0,0,0,0,0,0,0,2,6,8, : 0,0,0,0,0,0,0,0,2,6,9, :  
 0,0,0,0,0,0,0,0,2,6,10, : 0,0,0,0,0,0,0,0,2,7,9, : 0,0,0,0,0,0,0,0,2,7,10, :  
 0,0,0,0,0,0,0,0,2,8,10, : 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, : 0,0,0,0,0,0,0,0,3,5,10, : 0,0,0,0,0,0,0,0,3,6,8, :  
 0,0,0,0,0,0,0,0,3,6,9, : 0,0,0,0,0,0,0,0,3,6,10, : 0,0,0,0,0,0,0,0,3,7,9, :  
 0,0,0,0,0,0,0,0,3,7,10, : 0,0,0,0,0,0,0,0,3,8,10, : 0,0,0,0,0,0,0,0,4,6,8, :  
 0,0,0,0,0,0,0,0,4,6,9, : 0,0,0,0,0,0,0,0,4,6,10, : 0,0,0,0,0,0,0,0,4,7,9, :  
 0,0,0,0,0,0,0,0,4,7,10, : 0,0,0,0,0,0,0,0,4,8,10, : 0,0,0,0,0,0,0,0,5,7,9, :  
 0,0,0,0,0,0,0,0,5,7,10, : 0,0,0,0,0,0,0,0,5,8,10, : 0,0,0,0,0,0,0,0,6,8,10, :  
 0,0,0,0,0,0,0,2,4,6,8, : 0,0,0,0,0,0,0,2,4,6,9, : 0,0,0,0,0,0,0,2,4,6,10, :  
 0,0,0,0,0,0,0,2,4,7,9, : 0,0,0,0,0,0,0,2,4,7,10, : 0,0,0,0,0,0,0,2,4,8,10, :  
 0,0,0,0,0,0,0,2,5,7,9, : 0,0,0,0,0,0,0,2,5,7,10, : 0,0,0,0,0,0,0,2,5,8,10, :  
 0,0,0,0,0,0,0,2,6,8,10, : 0,0,0,0,0,0,0,3,5,7,9, : 0,0,0,0,0,0,0,3,5,7,10, :  
 0,0,0,0,0,0,0,3,5,8,10, : 0,0,0,0,0,0,0,3,6,8,10, : 0,0,0,0,0,0,0,4,6,8,10, :  
 0,0,0,0,0,0,2,4,6,8,10, :

Number new nodes in level n is given by : 1,2,3,5,7,10,15,23,36,57,91,

-----Class

1359-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][100][102][120][201]]$

--

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, --
- 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,-->0,0,2,1,--0,0,0,3,2,--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,-->0,0,2,1,--0,0,0,3,2,--0,0,1,--0,0,2,--  
R16) 0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,--  
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,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--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,-->0,0,2,1,--0,0,0,0,3,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R22) 0,0,0,0,0,4,-->0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,4,3,--0,0,1,--0,0,2,--  
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,--0,1,--  
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,--0,0,0,0,0,0,0,1,--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,-->0,0,2,1,--0,0,0,0,3,2,--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,-->0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R30)  
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,--0,0,1,--0,0,2,  
--  
R31)  
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,--0,1,--  
R32) 0,0,0,0,0,5,4,-->0,0,2,1,--0,0,0,0,3,2,--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,--0,0,0,0,0,0,0,2,--0,0,  
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,--0,0,0,0,0,0,0,0,8,--  
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,--0,0,0,0,0,5,4,--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,--0,0,0,0,0,5,4,--0,0,0,0,0,0,  
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,--0,0,0,0,0,5,4,--0,0,0,0,0,0,  
6,5,--0,0,0,0,0,0,7,6,--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,--0,0,0,0,0,5,4,--

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,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--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,  
--0,0,0,0,0,0,0,4,--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,--0,0,0,0,0,5,4,--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,--0,0,0,0,0,5,4,--0,0,0,0,0,  
0,6,5,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R49)

0,0,0,0,0,0,0,7,-->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)

0,0,0,0,0,0,0,8,-->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,--

R52)

0,0,0,0,0,0,0,0,0,0,-->0,1,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,0,0,9,--0,0,0,0,0,0,0,0,0,0,0,0,0,10,--

R53)

0,0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,2,--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,--

R54)

0,0,0,0,0,0,0,0,0,2,-->0,0,2,1,--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,--

R55)

0,0,0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,0,0,1,--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,--

R56)

0,0,0,0,0,0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R57)

0,0,0,0,0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,1,--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)

0,0,0,0,0,0,0,0,0,6,-->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,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R59)

0,0,0,0,0,0,0,0,0,7,-->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,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--

R60)

0,0,0,0,0,0,0,0,0,8,-->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,--0,0,0,1,--0,0,0,2,--

R61)

0,0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,9,8,--0,1,--

R62)

0,0,0,0,0,0,0,0,8,7,-->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,--

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, : 0,0,0,0,0,0,0,0,0,1, : 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, : 0,0,0,0,0,0,0,0,7,6, :  
 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, :  
 0,0,0,0,0,0,0,0,0,0,0,3, : 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, : 0,0,0,0,0,0,0,0,0,0,8,7, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0,0,0, : 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, :  
 0,0,0,0,0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,0,0,0,0,5, :  
 0,0,0,0,0,0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,0,0,0,0,8, :  
 0,0,0,0,0,0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,0,0,0,0,9,8, :  
 Number new nodes in level n is given by : 1,2,3,5,6,7,8,9,10,11,12,

-----Class

1360-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][100][102][120][210]]$

-----

--

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,--
- 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,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--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,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--

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,--0,0,0,0,0,0,0,5,--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,--0,0,0,0,0,0,0,1,--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,-->0,0,0,3,1,--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,--

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,-->0,0,0,0,0,0,6,1,--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,--0,0,2,--

R40)

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,--0,0,0,0,3,1,--0,0,0,2,1,--0,1,--

R41) 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,--

R42)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--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



,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,  
0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,0,1,--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)  
0,0,0,0,0,0,0,0,3,-->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)  
0,0,0,0,0,0,0,0,4,-->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)  
0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,1,  
--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R48)  
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,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R49)  
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,--0,0,1,--0,0,2,--  
R50)  
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,--0,0,0,0,3,1,--0,0,2,1,--0,1,--  
R51)  
0,0,0,0,0,0,0,0,7,1,-->0,0,0,0,0,0,0,6,1,--0,0,0,0,0,0,5,1,--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,-->0,1,--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,--0,0,0,0,0,0,0,0,0,0,5,--  
--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,  
0,0,0,0,0,9,--0,0,0,0,0,0,0,0,0,0,0,10,--  
R53)  
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,  
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,  
0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--  
R54)  
0,0,0,0,0,0,0,0,0,2,-->0,0,2,1,--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,--  
R55)  
0,0,0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,1,--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,--  
R56)  
0,0,0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,1,--0,0,0,0,  
0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R57)

0,0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,5,1,--0,0,0,0,0,4,1,--0,0,0,0,3,1,--0,0,0,2,1,--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,--

R58)

0,0,0,0,0,0,0,0,0,6,-->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,--0,0,0,2,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--0,0,0,4,--

R59)

0,0,0,0,0,0,0,0,0,7,-->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,--0,0,0,2,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R60)

0,0,0,0,0,0,0,0,0,8,-->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,--0,0,1,--0,0,2,--

R61)

0,0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,9,1,--0,0,0,0,8,1,--0,0,0,0,7,1,--0,0,0,6,1,--0,0,0,5,1,--0,0,0,4,1,--0,0,3,1,--0,0,2,1,--0,1,--

R62)

0,0,0,0,0,0,0,0,8,1,-->0,0,0,0,0,7,1,--0,0,0,6,1,--0,0,0,5,1,--0,0,4,1,--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, : 0,0,0,0,5, : 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, : 0,0,0,0,0,4, : 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, : 0,0,0,0,0,0,0,1, : 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, : 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, : 0,0,0,0,0,0,0,8, : 0,0,0,0,0,0,7,1, :

LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 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, :

LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 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, : 0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,9,1, :

Number new nodes in level n is given by : 1,2,3,5,6,7,8,9,10,11,12,

-----Class

1361-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][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,--  
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)  
0,0,0,0,0,2,-->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,--  
R20) 0,0,0,0,0,3,-->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,--  
R21) 0,0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R22) 0,0,0,0,0,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,5,--  
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,--0,0,0,0,0,0,4,--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,-->0,0,2,1,--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,--  
R26)  
0,0,0,0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,  
--0,0,0,0,0,0,6,--  
R27)  
0,0,0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,  
0,0,0,0,6,--  
R28)  
0,0,0,0,0,0,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,5,--0,0,0,0,0,  
0,6,--  
R29)  
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,--  
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,

0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--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)

0,0,0,0,0,0,1,-->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,--0,0,0,0,0,0,7,--

R32)

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

0,0,0,0,0,0,3,-->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,--0,0,0,0,0,0,7,--

R34)

0,0,0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R35)

0,0,0,0,0,0,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R36)

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,--0,0,0,0,0,0,7,--

R37)

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,--

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,--0,0,0,0,0,0,0,0,0,2,--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)

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

0,0,0,0,0,0,0,2,-->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,--0,0,0,0,0,0,0,8,--

R41)

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

0,0,0,0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--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)

0,0,0,0,0,0,0,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R44)

0,0,0,0,0,0,0,6,-->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,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--

R45)

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,--0,0,0,0,0,0,0,8,--

R46)

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,--0,0,0,0,0,0,0,8,--

R47)

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,0,10,--

R48)

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,--0,0,0,0,0,0,0,0,0,9,--

R49)

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,--0,0,0,0,0,0,0,0,0,9,--

R50)

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,--0,0,0,0,0,0,0,0,0,9,--

R51)

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,--0,0,0,0,0,0,0,0,0,9,--

R52)

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,--0,0,0,0,0,0,0,0,0,9,--

R53)

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,--0,0,0,0,0,0,0,0,0,9,--

R54)

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,--0,0,2,1,--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,--

R55)

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,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R56)

0,0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,0,0,9,--

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, : 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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 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, : 0,0,0,0,0,0,0,0,0,0,10, :  
 Number new nodes in level n is given by : 1,2,3,5,5,6,7,8,9,10,11,

-----Class

1362-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][100][110][120][201]]$

-----

--

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, --
- 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, --0,0,0,0,0,0,0,1, --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,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,  
0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

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,  
0,4,--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,--0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,  
--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,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--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,-->0,0,0,0,0,1,--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,-->0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,  
0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--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,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--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,--0,0,0,0,0,0,3,--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,-->0,0,0,0,0,1,--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,--0,0,0,0,2,--0,0,0,0,3,--

R44)

0,0,0,0,0,0,0,0,7,-->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,--0,0,0,0,6,--0,0,0,1,--0,0,2,--

R45)

0,0,0,0,0,0,0,0,8,-->0,0,0,1,--0,0,0,2,--0,0,0,3,--0,0,0,4,--0,0,0,5,--0,0,0,6,--0,0,0,7,--0,1,--

R46)

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,--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,--0,0,0,0,0,0,0,0,0,0,10,--

R47)

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

0,0,0,0,0,0,0,0,0,2,-->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,--

R49)

0,0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--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,--0,0,0,0,0,0,0,0,7,--

R50)

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,--0,0,0,0,0,0,0,0,3,--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,--0,0,0,0,0,6,--

R51)

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,--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,--

R52)

0,0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,0,



0,0,4,--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,--  
R53)  
0,0,0,0,0,0,0,0,0,7,-->0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R54)  
0,0,0,0,0,0,0,0,8,-->0,0,0,1,--0,0,0,2,--0,0,0,3,--0,0,0,4,--0,0,0,0,  
0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,1,--0,0,2,--  
R55)  
0,0,0,0,0,0,0,0,9,-->0,0,1,--0,0,2,--0,0,3,--0,0,4,--0,0,0,0,5,--  
0,0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 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, : 0,0,0,0,0,0,0,0,0,0,10, :  
Number new nodes in level n is given by : 1,2,3,4,5,6,7,8,9,10,11,

-----Class

1363-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][100][110][120][210]]$

-----

--

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,--  
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,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--  
R14) 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,--  
R15) 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,--  
R16)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,  
0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--  
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,-->0,0,0,0,0,2,--0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--  
R20) 0,0,0,0,0,4,-->0,0,0,0,0,3,--0,0,0,0,0,2,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--  
R21) 0,0,0,0,0,5,-->0,0,0,0,0,4,--0,0,0,0,0,3,--0,0,0,0,0,2,--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,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--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,-->0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,1,--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,--  
R26)  
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,--0,0,0,0,2,--0,0,  
0,3,--  
R27)  
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,--0,0,0,0,1,--0,0,0,0,1,--0,0,2,  
--  
R28)  
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,--0,0,0,0,1,--0,0,1,--  
R29)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--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,  
0,0,0,0,0,7,--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,  
--0,0,0,0,0,0,4,--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,-->0,0,0,0,0,0,0,0,2,--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,

0,0,0,0,3,--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,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--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,--0,0,0,0,0,1,--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,--0,0,0,0,0,1,--0,0,0,0,0,2,--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,--0,0,0,0,0,3,--0,0,0,0,0,2,--0,0,0,0,0,1,--0,0,0,0,0,1,--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,--0,0,0,0,0,4,--0,0,0,0,0,3,--0,0,0,0,0,2,--0,0,0,0,0,1,--0,0,0,0,0,1,--

R46)

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,--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,--0,0,0,0,0,0,0,0,0,10,--

R47)

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,--0,0,0,0,0,0,0,0,0,0,0,0,--

0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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,--

R48)

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,--0,0,0,0,0,0,0,0,8,--

R49)

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,--0,0,0,0,0,0,0,0,7,--

R50)

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,--0,0,0,0,0,0,0,0,6,--

R51)

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,--0,0,0,0,0,0,0,0,5,--

R52)

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,--0,0,0,0,0,0,0,0,4,--

R53)

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,--0,0,0,0,0,0,0,0,3,--

R54)

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,--0,0,0,0,0,0,0,0,2,--

R55)

0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,7,--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, :

LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 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,: 0,0,0,0,0,0,0,0,0,0,10,:  
 Number new nodes in level n is given by : 1,2,3,4,5,6,7,8,9,10,11,

-----Class

1364-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][100][110][201][210]]$

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





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=11) 0,0,0,0,0,0,0,0,0,0,0,0,: 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,:  
 0,0,0,0,0,0,0,0,0,0,10,:

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

-----Class

1365-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][100][120][201][210]]$

-----

--

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,--
- 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,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R14) 0,0,0,0,3,-->0,0,0,1,--0,0,0,1,--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,--0,0,0,0,1,--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,--0,0,0,0,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--
- R20) 0,0,0,0,0,4,-->0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,1,--0,0,2,--
- R21) 0,0,0,0,0,5,-->0,0,1,--0,0,1,--0,0,1,--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,-->0,0,0,0,0,1,--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,-->0,0,0,0,1,--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,--

R27) 0,0,0,0,0,0,5,-->0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,1,--0,0,2,--

R28) 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,--0,1,--

R29)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,0,5,--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,--

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

R34)

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,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R35)

0,0,0,0,0,0,0,6,-->0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,1,--0,0,2,--

R36) 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,--0,1,--

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

R41)

0,0,0,0,0,0,0,0,4,-->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,--0,0,0,0,0,2,--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,-->0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--



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=11) 0,0,0,0,0,0,0,0,0,0,0, : 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, : 0,0,0,0,0,0,0,0,0,0,10, :  
 Number new nodes in level n is given by : 1,2,3,4,5,6,7,8,9,10,11,

-----Class

1366-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][101][102][110][120]]$

-----

--

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, --
- 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,--0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,6,1,--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,-->0,0,0,0,0,6,1,--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,--0,0,1,--0,0,2,--

R43)

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,--0,1,--

R44)

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,--0,0,0,0,0,0,0,0,0,1,--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,  
0,0,0,3,--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,  
0,0,0,0,0,0,0,7,4,--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,-->0,0,0,0,0,0,0,8,1,--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,  
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,--0,1,--

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,--0,0,0,0,0,0,6,1,--

R58)

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,--

R59)

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)

0,0,0,0,0,0,0,7,4,-->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)

0,0,0,0,0,0,0,7,5,-->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,--

R62)

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,0,0,10,--

R63)

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,--0,0,0,0,0,0,0,0,0,9,--

R64)

0,0,0,0,0,0,0,0,0,2,-->0,0,2,1,--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,--

R65)

0,0,0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,0,0,0,1,--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,--

R66)

0,0,0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--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,--

R67)

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,--0,0,0,0,0,5,1,--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,--

R68)

0,0,0,0,0,0,0,0,0,6,-->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,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R69)

0,0,0,0,0,0,0,0,0,7,-->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,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R70)

0,0,0,0,0,0,0,0,0,8,-->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,--0,0,0,0,0,0,0,8,1,--0,0,1,--0,0,2,--

R71)

0,0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,0,9,1,--0,0,0,0,0,0,0,0,0,9,2,--0,0,0,0,0,0,0,0,0,9,3,--0,0,0,0,0,0,0,0,0,9,4,--0,0,0,0,0,0,0,0,0,9,5,--0,0,0,0,0,0,0,0,0,9,6,--0,0,0,0,0,0,0,0,0,9,7,--0,0,0,0,0,0,0,0,0,9,1,--0,1,--

R72)

0,0,0,0,0,0,0,0,8,1,-->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,--

R73)

0,0,0,0,0,0,0,0,8,2,-->0,0,2,1,--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,--

R74)

0,0,0,0,0,0,0,0,8,3,-->0,0,0,3,1,--0,0,0,3,1,--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,--

R75)

0,0,0,0,0,0,0,0,8,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--

R76)

0,0,0,0,0,0,0,0,8,5,-->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,--0,0,0,0,3,1,--0,0,0,0,3,1,--

R77)

0,0,0,0,0,0,0,0,8,6,-->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,--0,0,2,1,--

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, :

LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 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, : 0,0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,0,0,9,1, : 0,0,0,0,0,0,0,0,0,0,9,2, : 0,0,0,0,0,0,0,0,0,0,9,3, : 0,0,0,0,0,0,0,0,0,0,9,4, : 0,0,0,0,0,0,0,0,0,0,9,5, : 0,0,0,0,0,0,0,0,0,0,9,6, : 0,0,0,0,0,0,0,0,0,0,9,7, :

Number new nodes in level n is given by : 1,2,3,5,6,8,10,12,14,16,18,

-----Class

1367-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][011][101][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,  
0,0,4,--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)



R60)  
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,--0,0,0,0,0  
,0,0,0,0,9,--

R61)  
0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,9,8,--0,0,0,0,  
,0,0,0,0,9,--

R62)  
0,0,0,0,0,0,0,0,8,7,-->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,--

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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 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,: 0,0,0,0,0,0,0,0,0,0,10,: 0,0,0,0,0,0,0,0,9,8,:

Number new nodes in level n is given by : 1,2,3,5,6,7,8,9,10,11,12,

-----Class

1368-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][101][102][110][210]]$

-----

--

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,--

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,-->0,0,0,0,0,0,6,1,--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,-->0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

R46)

0,0,0,0,0,0,0,2,-->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,--0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,7,--

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,--



0,0,0,0,0,4,6,--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,--  
0,0,0,0,0,0,2,4,7,9,--

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,--  
0,0,0,0,0,0,2,5,7,9,--

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,--  
0,0,0,0,0,0,3,5,7,9,--

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,--

R103)

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,0,0,10,--

R104)

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,



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,--

R105)

0,0,0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,2,4,--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,--0,0,0,0,0,0,0,0,0,2,10,--

R106)

0,0,0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,3,5,--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,--0,0,0,0,0,0,0,0,0,3,10,--

R107)

0,0,0,0,0,0,0,0,0,4,-->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,--0,0,0,0,0,0,0,0,0,4,6,--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,--0,0,0,0,0,0,0,0,0,4,10,--

R108)

0,0,0,0,0,0,0,0,0,5,-->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,--0,0,0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,0,0,5,8,--0,0,0,0,0,0,0,0,0,5,9,--0,0,0,0,0,0,0,0,0,5,10,--

R109)

0,0,0,0,0,0,0,0,0,6,-->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,--0,0,0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,0,0,6,9,--0,0,0,0,0,0,0,0,0,6,10,--

R110)

0,0,0,0,0,0,0,0,0,7,-->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,--0,0,0,0,0,0,0,0,0,7,9,--0,0,0,0,0,0,0,0,0,7,10,--

R111)

0,0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,1,--0,0,0,0,0,0,7,1,--0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,8,10,--

R112)

0,0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,9,1,--0,0,0,0,0,0,8,1,--0,0,0,0,0,0,7,1,--0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--0,0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,9,--

R113)

0,0,0,0,0,0,0,0,2,4,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,2,4,--0,0,0,0,0,0,0,0,2,4,6,--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,--0,0,0,0,0,0,0,0,2,4,10,--

R114)

0,0,0,0,0,0,0,0,2,5,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,2,5,--0,0,0,0,0,0,0,2,5,7,--0,0,0,0,0,0,0,0,2,5,8,--0,0,0,0,0,0,0,0,2,5,9,--0,0,0,0,0,0,0,0,2,5,10,--

R115)

0,0,0,0,0,0,0,0,2,6,-->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,--0,0,0,0,0,0,0,0,2,6,8,--0,0,0,0,0,0,0,0,2,6,9,--0,0,0,0,0,0,0,0,2,6,10,--

R116)

0,0,0,0,0,0,0,0,2,7,-->0,0,2,1,--0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,0,2,7,9,--0,0,0,0,0,0,0,0,2,7,10,--

R117)

0,0,0,0,0,0,0,0,2,8,-->0,0,2,1,--0,0,0,0,6,1,--0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,0,0,0,0,0,2,8,--0,0,0,0,0,0,0,0,2,8,9,--0,0,0,0,0,0,0,0,2,8,10,--

0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,2,8,--0,0,0,0,0,0,0,0,2,8,10,--  
R118)  
0,0,0,0,0,0,0,0,2,9,-->0,0,2,1,--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,--0,0,0,0,0,0,0,2,9,--  
R119)  
0,0,0,0,0,0,0,0,3,5,-->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,  
0,0,0,0,0,3,5,7,--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,  
5,10,--  
R120)  
0,0,0,0,0,0,0,0,3,6,-->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,--0,0,0,0,0,0,0,0,3,6,8,--0,0,0,0,0,0,0,0,3,6,9,--0,0,0,0,0,0,0,0,3,6,10,--  
R121)  
0,0,0,0,0,0,0,0,3,7,-->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,--0,0,0,0,0,0,0,0,3,7,9,--0,0,0,0,0,0,0,0,3,7,10,--  
R122)  
0,0,0,0,0,0,0,0,3,8,-->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,--0,0,0,0,0,0,0,0,3,8,--0,0,0,0,0,0,0,0,3,8,10,--  
R123)  
0,0,0,0,0,0,0,0,3,9,-->0,0,0,3,1,--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,--0,0,0,0,0,0,0,0,3,9,--  
R124)  
0,0,0,0,0,0,0,0,4,6,-->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,--0,0,0,0,0,0,0,0,4,6,8,--0,0,0,0,0,0,0,0,4,6,9,--0,0,0,0,0,0,0,0,4,6,10,--  
R125)  
0,0,0,0,0,0,0,0,4,7,-->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,--0,0,0,0,0,0,0,0,4,7,9,--0,0,0,0,0,0,0,0,4,7,10,--  
R126)  
0,0,0,0,0,0,0,0,4,8,-->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,--0,0,0,0,0,0,0,0,4,8,--0,0,0,0,0,0,0,0,4,8,10,--  
R127)  
0,0,0,0,0,0,0,0,4,9,-->0,0,0,0,4,1,--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,--0,0,0,0,0,0,0,0,4,9,--  
R128)  
0,0,0,0,0,0,0,0,5,7,-->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,  
--0,0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,0,5,7,9,--0,0,0,0,0,0,0,0,5,7,10,--  
R129)  
0,0,0,0,0,0,0,0,5,8,-->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,--0,0,0,0,0,0,0,0,5,8,10,--  
R130)  
0,0,0,0,0,0,0,0,5,9,-->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,  
4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,5,9,--  
R131)  
0,0,0,0,0,0,0,0,6,8,-->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,--0,0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,0,6,8,10,--  
R132)  
0,0,0,0,0,0,0,0,6,9,-->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,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,6,9,--  
R133)  
0,0,0,0,0,0,0,0,7,9,-->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,--0,0,0,0,0,0,0,0,7,9,--

R134)

0,0,0,0,0,0,0,0,8,1,-->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,--

R135)

0,0,0,0,0,0,0,2,4,6,-->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,--0,0,0,0,0,0,2,4,6,10,--

R136)

0,0,0,0,0,0,0,2,4,7,-->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,--0,0,0,0,0,0,2,4,7,10,--

R137)

0,0,0,0,0,0,0,2,4,8,-->0,0,2,1,--0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,2,4,8,--0,0,0,0,0,0,2,4,8,10,--

R138)

0,0,0,0,0,0,0,2,4,9,-->0,0,2,1,--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,--0,0,0,0,0,2,4,9,--

R139)

0,0,0,0,0,0,0,2,5,7,-->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,--0,0,0,0,0,0,2,5,7,10,--

R140)

0,0,0,0,0,0,0,2,5,8,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,2,5,8,--0,0,0,0,0,0,2,5,8,10,--

R141)

0,0,0,0,0,0,0,2,5,9,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,2,5,9,--

R142)

0,0,0,0,0,0,0,2,6,8,-->0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,2,6,8,--0,0,0,0,0,0,2,6,8,10,--

R143)

0,0,0,0,0,0,0,2,6,9,-->0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,2,6,9,--

R144)

0,0,0,0,0,0,0,2,7,9,-->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,--0,0,2,1,--0,0,0,0,0,2,7,9,--

R145)

0,0,0,0,0,0,0,3,5,7,-->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,--0,0,0,0,0,0,3,5,7,10,--

R146)

0,0,0,0,0,0,0,3,5,8,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,3,5,8,--0,0,0,0,0,0,3,5,8,10,--

R147)

0,0,0,0,0,0,0,3,5,9,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,3,5,9,--

R148)

0,0,0,0,0,0,0,3,6,8,-->0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,3,6,8,--0,0,0,0,0,0,3,6,8,10,--

R149)

0,0,0,0,0,0,0,3,6,9,-->0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,3,6,9,--

R150)

0,0,0,0,0,0,0,3,7,9,-->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,

0,2,1,--0,0,0,0,0,0,0,3,7,9,--  
R151)  
0,0,0,0,0,0,0,4,6,8,-->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,--0,0,0,0,0,0,4,6,8,10,--  
R152)  
0,0,0,0,0,0,0,4,6,9,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,3,1,--0,  
0,2,1,--0,0,0,0,0,0,4,6,9,--  
R153)  
0,0,0,0,0,0,0,4,7,9,-->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,  
0,2,1,--0,0,0,0,0,0,4,7,9,--  
R154)  
0,0,0,0,0,0,0,5,7,9,-->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,  
--0,0,2,1,--0,0,0,0,0,0,5,7,9,--  
R155)  
0,0,0,0,0,0,2,4,6,8,-->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,  
--0,0,0,0,0,0,2,4,6,8,10,--  
R156)  
0,0,0,0,0,0,2,4,6,9,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,  
0,0,2,4,6,9,--  
R157)  
0,0,0,0,0,0,2,4,7,9,-->0,0,2,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,  
0,0,2,4,7,9,--  
R158)  
0,0,0,0,0,0,2,5,7,9,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,  
0,0,2,5,7,9,--  
R159)  
0,0,0,0,0,0,3,5,7,9,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,  
0,0,3,5,7,9,--

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, : 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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 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,: 0,0,0,0,0,0,0,0,0,0,10,: 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,: 0,0,0,0,0,0,0,0,0,2,10,:  
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,: 0,0,0,0,0,0,0,0,0,3,10,:  
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,: 0,0,0,0,0,0,0,0,0,4,10,: 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,: 0,0,0,0,0,0,0,0,0,5,10,:  
0,0,0,0,0,0,0,0,0,6,8,: 0,0,0,0,0,0,0,0,0,6,9,: 0,0,0,0,0,0,0,0,0,6,10,:  
0,0,0,0,0,0,0,0,0,7,9,: 0,0,0,0,0,0,0,0,0,7,10,: 0,0,0,0,0,0,0,0,0,8,10,:  
0,0,0,0,0,0,0,0,0,9,1,: 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,: 0,0,0,0,0,0,0,0,2,4,10,:  
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,:  
0,0,0,0,0,0,0,0,2,5,10,: 0,0,0,0,0,0,0,0,2,6,8,: 0,0,0,0,0,0,0,0,2,6,9,:  
0,0,0,0,0,0,0,0,2,6,10,: 0,0,0,0,0,0,0,0,2,7,9,: 0,0,0,0,0,0,0,0,2,7,10,:  
0,0,0,0,0,0,0,0,2,8,10,: 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,: 0,0,0,0,0,0,0,0,3,5,10,: 0,0,0,0,0,0,0,0,3,6,8,:  
0,0,0,0,0,0,0,0,3,6,9,: 0,0,0,0,0,0,0,0,3,6,10,: 0,0,0,0,0,0,0,0,3,7,9,:  
0,0,0,0,0,0,0,0,3,7,10,: 0,0,0,0,0,0,0,0,3,8,10,: 0,0,0,0,0,0,0,0,4,6,8,:  
0,0,0,0,0,0,0,0,4,6,9,: 0,0,0,0,0,0,0,0,4,6,10,: 0,0,0,0,0,0,0,0,4,7,9,:  
0,0,0,0,0,0,0,0,4,7,10,: 0,0,0,0,0,0,0,0,4,8,10,: 0,0,0,0,0,0,0,0,5,7,9,:

0,0,0,0,0,0,0,0,5,7,10, : 0,0,0,0,0,0,0,0,5,8,10, : 0,0,0,0,0,0,0,0,6,8,10, :  
0,0,0,0,0,0,0,2,4,6,8, : 0,0,0,0,0,0,0,2,4,6,9, : 0,0,0,0,0,0,0,2,4,6,10, :  
0,0,0,0,0,0,0,2,4,7,9, : 0,0,0,0,0,0,0,2,4,7,10, : 0,0,0,0,0,0,0,2,4,8,10, :  
0,0,0,0,0,0,0,2,5,7,9, : 0,0,0,0,0,0,0,2,5,7,10, : 0,0,0,0,0,0,0,2,5,8,10, :  
0,0,0,0,0,0,0,2,6,8,10, : 0,0,0,0,0,0,0,3,5,7,9, : 0,0,0,0,0,0,0,3,5,7,10, :  
0,0,0,0,0,0,0,3,5,8,10, : 0,0,0,0,0,0,0,3,6,8,10, : 0,0,0,0,0,0,0,4,6,8,10, :  
0,0,0,0,0,0,2,4,6,8,10, :

Number new nodes in level n is given by : 1,2,3,5,7,10,15,23,36,57,91,

-----Class

1369-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][101][102][120][201]]$

-----

--

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,--
- 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,-->0,0,2,1,--0,0,0,3,2,--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,-->0,0,2,1,--0,0,0,3,2,--0,0,1,--0,0,2,--
- R16) 0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,1,--
- 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,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R21) 0,0,0,0,0,3,-->0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--
- R22) 0,0,0,0,0,4,-->0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,0,4,3,--0,0,1,--0,0,2,--
- R23) 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,--0,1,--
- R24) 0,0,0,0,0,4,3,-->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,--0,0,0,0,0,6,--

R27)

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)

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

R29)

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

R30)

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,--0,0,1,--0,0,2,  
--

R31)

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,--

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

0,0,0,0,0,0,1,-->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,  
0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R35)

0,0,0,0,0,0,2,-->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,  
0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--

R36)

0,0,0,0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--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,--

R37)

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)

0,0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,1,--0,  
0,0,2,--0,0,0,3,--

R39)

0,0,0,0,0,0,6,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,  
6,5,--0,0,1,--0,0,2,--

R40)

0,0,0,0,0,0,7,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,0,0,  
6,5,--0,0,0,0,0,0,7,6,--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,--0,0,0,0,0,5,4,--

R42)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,  
2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--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,-->0,0,0,0,0,0,1,--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,--0,0,0,  
,0,0,0,0,0,8,--

R44)

0,0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,1,--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,--

R45)

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

0,0,0,0,0,0,0,0,4,-->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)

0,0,0,0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,1,  
--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

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,--0,0,0,1,--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,--0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,8,7,--0,1,--

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,--

R52)

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,--0,0,0,0,0,0,0,0,0,0,10,--

R53)

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,--0,0,0,0,0,0,0,0,0,9,--

R54)

0,0,0,0,0,0,0,0,0,2,-->0,0,2,1,--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,--

R55)

0,0,0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,  
,7,--

R56)

0,0,0,0,0,0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,1,--0,0,0,0,  
0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R57)

0,0,0,0,0,0,0,0,0,5,-->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,  
0,1,--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)

0,0,0,0,0,0,0,0,0,6,-->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,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--



R59)  
0,0,0,0,0,0,0,0,7,-->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,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R60)  
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,--0,0,1,--0,0,2,--

R61)  
0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,9,8,--0,1,--

R62)  
0,0,0,0,0,0,0,0,8,7,-->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,--

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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 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,: 0,0,0,0,0,0,0,0,0,0,10,: 0,0,0,0,0,0,0,0,0,9,8,:

Number new nodes in level n is given by : 1,2,3,5,6,7,8,9,10,11,12,

-----Class

1370-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][101][102][120][210]]$

-----

--

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,--

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,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--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,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R26)  
0,0,0,0,0,0,1,-->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,--0,0,0,0,0,0,0,0,1,--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)



R51)  
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,--0,0,0,0,0,0,4,1,--0,0,0,0,3,1,--0,  
0,2,1,--

R52)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--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,-  
-0,0,0,0,0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,0,0,0,0,10,--

R53)  
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,--0,0,0,0,0,0,0,0,0,9,--

R54)  
0,0,0,0,0,0,0,0,0,2,-->0,0,2,1,--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,  
,0,7,--0,0,0,0,0,0,0,0,8,--

R55)  
0,0,0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,  
,7,--

R56)  
0,0,0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,1,--0,0,0,0,  
0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R57)  
0,0,0,0,0,0,0,0,0,5,-->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,  
0,1,--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)  
0,0,0,0,0,0,0,0,0,6,-->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,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R59)  
0,0,0,0,0,0,0,0,0,7,-->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,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R60)  
0,0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,1,--0,0,0,0,0,0,7,1,--0,0,0,0,0,0,6,1,--  
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,--0,0,2,--

R61)  
0,0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,9,1,--0,0,0,0,0,0,8,1,--0,0,0,0,0,0,0,  
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,--0,1,--

R62)  
0,0,0,0,0,0,0,0,8,1,-->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,--

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,: 0,0,0,0,0,0,1,,: 0,0,0,0,0,0,2,,: 0,0,0,0,0,0,3,:

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,:  
 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,: 0,0,0,0,0,0,0,0,7,1,:  
 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,: 0,0,0,0,0,0,0,0,0,8,1,:  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 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,: 0,0,0,0,0,0,0,0,0,0,10,: 0,0,0,0,0,0,0,0,0,0,9,1,:  
 Number new nodes in level n is given by : 1,2,3,5,6,7,8,9,10,11,12,

-----Class

1371-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][101][102][201][210]]$

-----

--

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,--
- 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) 0,0,0,0,0,2,-->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,--
- R20) 0,0,0,0,0,3,-->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,--

R21) 0,0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R22) 0,0,0,0,0,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,5,--  
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,  
0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R25)  
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,--  
R26)  
0,0,0,0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,  
--0,0,0,0,0,0,6,--  
R27)  
0,0,0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,  
0,0,0,0,6,--  
R28)  
0,0,0,0,0,0,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,5,--0,0,0,0,0,  
0,6,--  
R29)  
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,--  
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,-->0,0,0,0,0,0,0,1,--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,-->0,0,2,1,--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,--  
R33)  
0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--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,-->0,0,2,1,--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,--  
R35)  
0,0,0,0,0,0,0,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,5,--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,-->0,0,2,1,--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,--  
R37)  
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,--  
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,  
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,--

R39)

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,-->0,0,2,1,--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,--

R41)

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,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R42)

0,0,0,0,0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R43)

0,0,0,0,0,0,0,0,5,-->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,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R44)

0,0,0,0,0,0,0,0,6,-->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,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R45)

0,0,0,0,0,0,0,0,7,-->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,--0,0,0,0,0,0,0,0,8,--

R46)

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,--0,0,0,0,0,0,0,0,8,--

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,--0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,0,0,0,0,9,--0,0,0,0,0,0,0,0,0,0,0,0,0,0,10,--

R48)

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,--0,0,0,0,0,0,0,0,0,0,9,--

R49)

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,--0,0,0,0,0,0,0,0,0,9,--

R50)

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,--0,0,0,0,0,0,0,0,0,9,--

R51)

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,--0,0,0,0,0,0,0,0,0,9,--

R52)

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,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R53)

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,--0,0,0,0,0,0,0,6,--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,--

R54)

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,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R55)

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,--0,0,0,0,0,0,0,0,9,--

R56)

0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,9,--

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,: 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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 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,: 0,0,0,0,0,0,0,0,0,0,10,:

Number new nodes in level n is given by : 1,2,3,5,5,6,7,8,9,10,11,

-----Class

1372-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][101][110][120][201]]$

-----

--

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,-->0,1,--

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,--0,0,0,0,0,2,--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,--0,0,0,0,4,--0,1,--  
R22)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--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,--  
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,--0,0,0,0,0,4,--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,--0,0,0,0,0,5,--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,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,2,--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,--0,0,0,0,0,0,3,--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,  
2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--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,--0,0,0,0,0,0,0,0,2,--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,--0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,2,--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,--0,0,0,0,0,0,0,2,--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,--

R42)

0,0,0,0,0,0,0,0,5,-->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,--0,0,0,0,1,--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,  
0,0,0,0,0,0,0,5,--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,--

R46)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--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,-

-0,0,0,0,0,0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,0,0,0,0,0,10,--

R47)

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,--0,0,0,0,0,0,0,0,0,0,9,--

R48)

0,0,0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,1,--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,--

R49)

0,0,0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,2,--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,--

R50)

0,0,0,0,0,0,0,0,0,0,4,-->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,--0,0,0,0,0,0,0,0,0,0,1,--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,--

R51)

0,0,0,0,0,0,0,0,0,0,5,-->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,--0,0,0,0,0,0,0,0,0,0,1,--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,--

R52)

0,0,0,0,0,0,0,0,0,0,6,-->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,--0,0,0,0,0,0,0,0,0,0,1,--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,--

R53)

0,0,0,0,0,0,0,0,0,0,7,-->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,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,3,--

R54)

0,0,0,0,0,0,0,0,0,0,8,-->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,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,2,--

R55)

0,0,0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,0,0,0,1,--

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) 0,0,0,0,0,0,0,0,0,0,1, : 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, :

LEN=8) 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, :

LEN=9) 0,0,0,0,0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,0,0,0,0,0,2, :

0,0,0,0,0,0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,0,0,0,0,0,5, : 0,0,0,0,0,0,0,0,0,0,0,0,0,0,6, :

0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,8, :

LEN=10) 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,2, :

0,0,0,0,0,0,0,0,0,3,: 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=11) 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,: 0,0,0,0,0,0,0,0,0,0,10,:  
 Number new nodes in level n is given by : 1,2,3,4,5,6,7,8,9,10,11,

-----Class

1373-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][101][110][120][210]]$

-----

--  
 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,-->0,1,--
- 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,--0,0,0,0,0,0,0,1,--0,0,0,0,  
0,0,2,--0,0,0,0,0,0,3,--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,--0,0,0,0,0,0,0,2,--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,--

R42)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,3,--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,--

R43)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,3,--0,0,0,0,  
0,2,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--

R44)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,4,--0,0,0,0,  
0,3,--0,0,0,0,2,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,2,--

R45)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,5,--0,0,0,0,  
0,4,--0,0,0,0,3,--0,0,0,0,2,--0,0,0,0,1,--0,0,0,0,1,--

R46)

0,0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,  
0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,0,3,--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,  
0,0,0,0,9,--0,0,0,0,0,0,0,0,0,0,10,--

R47)

0,0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,2,--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,  
0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R48)

0,0,0,0,0,0,0,0,2,-->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,--0,0,0,0,0,0,0,0,8,--

R49)

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,--0,0,0,0,0,0,3,--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,--

R50)

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,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,  
0,0,0,0,6,--

R51)

0,0,0,0,0,0,0,0,5,-->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,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,  
--

R52)

0,0,0,0,0,0,0,0,6,-->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,--  
0,0,0,0,0,0,2,--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,--

R53)

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,--  
0,0,0,0,0,0,3,--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,--

R54)

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,--

0,0,0,0,0,0,4,--0,0,0,0,0,3,--0,0,0,0,2,--0,0,0,1,--0,0,1,--0,0,2,--  
R55)  
0,0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,6,--  
0,0,0,0,0,0,5,--0,0,0,0,4,--0,0,0,0,3,--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=11) 0,0,0,0,0,0,0,0,0,0,0, : 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, : 0,0,0,0,0,0,0,0,0,0,10, :  
Number new nodes in level n is given by : 1,2,3,4,5,6,7,8,9,10,11,

-----Class

1374-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][011][101][110][201][210]]

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,0,1,--0,0,1,--  
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,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--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,--0,0,0,0,0,0,6,--

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,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--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,--0,0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,0,7,--

R31)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--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,--





R45)  
 0,0,0,0,0,0,0,0,0,7,-->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,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R46)  
 0,0,0,0,0,0,0,0,0,8,-->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,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R47)  
 0,0,0,0,0,0,0,0,0,9,-->0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,1,--0,0,  
 1,--0,0,0,0,0,0,0,0,9,--

List of different nodes in T[L]

- LEN=1) 0, :
- LEN=2) 0,0, : 0,1, :
- LEN=3) 0,0,0, : 0,0,1, :
- 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, :
- LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 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, :  
 0,0,0,0,0,0,0,0,0,0,10, :

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

-----Class

1375-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][101][120][201][210]]$

-----

--  
 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,-->0,1,--
- 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,--0,0,0,0,1,--0,0,0,0,2,--  
R15) 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,--  
R16)  
0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,  
0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--  
R17)  
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,  
--  
R18) 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,--  
R19) 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,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--  
R20) 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,--0,0,0,0,0,0,2,--  
R21) 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,--0,0,0,0,0,0,1,--  
R22)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,  
0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--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,  
0,0,0,0,0,5,--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,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,  
0,4,--0,0,0,0,0,0,5,--  
R25)  
0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,3,--0,  
0,0,0,0,4,--  
R26)  
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,--0,0,0,0,2,--0,0,0,0,3,--  
R27) 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,--0,0,0,0,0,1,--0,0,0,0,2,--  
R28) 0,0,0,0,0,0,6,-->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,--  
R29)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,0,5,--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,--  
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,  
--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R32)  
0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,1,--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,  
0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--  
R33)  
0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,2,  
--0,0,0,0,3,--0,0,0,0,4,--  
R34)  
0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,1,--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,  
2,--0,0,0,3,--



R50)  
0,0,0,0,0,0,0,0,0,4,-->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,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--

R51)  
0,0,0,0,0,0,0,0,0,5,-->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,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--

R52)  
0,0,0,0,0,0,0,0,0,6,-->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,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--

R53)  
0,0,0,0,0,0,0,0,0,7,-->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,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--

R54)  
0,0,0,0,0,0,0,0,0,8,-->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,--0,0,0,0,0,0,0,2,--

R55)  
0,0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,2,--

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,: 0,0,0,0,0,0,0,1,,: 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,: 0,0,0,0,0,0,0,0,0,1,,: 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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,0,1,,: 0,0,0,0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,0,0,0,0,3,,: 0,0,0,0,0,0,0,0,0,0,0,4,,: 0,0,0,0,0,0,0,0,0,0,0,5,:

0,0,0,0,0,0,0,0,0,0,0,0,6,,: 0,0,0,0,0,0,0,0,0,0,0,7,,: 0,0,0,0,0,0,0,0,0,0,0,8,:

0,0,0,0,0,0,0,0,0,0,0,0,9,,: 0,0,0,0,0,0,0,0,0,0,0,10,:

Number new nodes in level n is given by : 1,2,3,4,5,6,7,8,9,10,11,

-----Class

1376-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][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, --  
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, -->0,0,2,1, --0,0,0,3,2, --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, -->0,0,2,1, --0,0,0,3,2, --0,0,1, --0,0,2, --  
R16) 0,0,0,0,4, -->0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --0,1, --  
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, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --  
R21) 0,0,0,0,0,3, -->0,0,2,1, --0,0,0,0,3,2, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --  
R22) 0,0,0,0,0,4, -->0,0,2,1, --0,0,0,0,3,2, --0,0,0,0,4,3, --0,0,1, --0,0,2, --  
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, --0,1, --  
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, --0,0,0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --0,0,0,0,0,0,7, --  
R26)  
0,0,0,0,0,0,1, -->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, --0,0,0,0,0,0,1, --0,0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,0,0,0,4, --  
0,0,0,0,0,5, --  
R28)  
0,0,0,0,0,0,3, -->0,0,2,1, --0,0,0,0,3,2, --0,0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,  
4, --  
R29)  
0,0,0,0,0,0,4, -->0,0,2,1, --0,0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --  
R30)  
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, --0,0,1, --0,0,2,  
--  
R31)  
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, --0,1, --

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,--0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--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,--0,0,0,0,0,5,4,--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,--0,0,0,0,0,5,4,--0,0,0,0,0,0,  
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,--0,0,0,0,0,5,4,--0,0,0,0,0,0,  
6,5,--0,0,0,0,0,0,7,6,--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,--0,0,0,0,0,5,4,--  
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,-->0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,1,--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)  
0,0,0,0,0,0,0,0,3,-->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)  
0,0,0,0,0,0,0,0,4,-->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)  
0,0,0,0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--0,0,0,0,1,  
--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
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,--0,0,0,1,--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,--0,0,0,0,0,0,0,8,7,--0,1,--

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,--

R52)

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,--0,0,0,0,0,0,0,0,0,0,10,--

R53)

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,  
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,--

R54)

0,0,0,0,0,0,0,0,0,2,-->0,0,2,1,--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,--0,0,0,0,0,0,0,0,0,5,--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,--

R55)

0,0,0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,0,1,--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,--

R56)

0,0,0,0,0,0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,1,--0,0,0,0,  
0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R57)

0,0,0,0,0,0,0,0,0,5,-->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,  
0,1,--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)

0,0,0,0,0,0,0,0,0,6,-->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,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R59)

0,0,0,0,0,0,0,0,0,7,-->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,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R60)

0,0,0,0,0,0,0,0,0,8,-->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,--0,0,1,--0,0,2,--

R61)

0,0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,9,8,--0,1,--

R62)

0,0,0,0,0,0,0,0,8,7,-->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,--

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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 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, : 0,0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,0,9,8, :  
 Number new nodes in level n is given by : 1,2,3,5,6,7,8,9,10,11,12,

-----Class

1377-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][102][110][120][210]]$

-----

--

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, --
- 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, --0,0,0,0,0,0,1, --0,0,0,0,0,0,2, --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,--0,0,0,0,1,--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,--0,0,0,0,0,0,0,1,--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,--  
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,--0,0,0,0,0,6,--  
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,--  
0,0,0,0,5,--  
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,  
0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--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)  
0,0,0,0,0,0,1,-->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,  
0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--  
R35)  
0,0,0,0,0,0,2,-->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)  
0,0,0,0,0,0,3,-->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)  
0,0,0,0,0,0,4,-->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)  
0,0,0,0,0,0,5,-->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)



,0,7,--0,0,0,0,0,0,0,0,8,--

R55)

0,0,0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,1,--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,--

R56)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,1,--0,0,0,0,  
0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R57)

0,0,0,0,0,0,0,0,5,-->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,  
0,1,--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)

0,0,0,0,0,0,0,0,6,-->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,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R59)

0,0,0,0,0,0,0,0,7,-->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,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R60)

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,--0,0,0,0,0,0,6,1,--  
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,--0,0,2,--

R61)

0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,9,1,--0,0,0,0,0,0,8,1,--0,0,0,0,0,0,0,  
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,--0,1,--

R62)

0,0,0,0,0,0,0,0,8,1,-->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,--

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, :

LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 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, : 0,0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,0,0,9,1, :

Number new nodes in level n is given by : 1,2,3,5,6,7,8,9,10,11,12,

-----Class

1378-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][102][110][201][210]]$

-----

--

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

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

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

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

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

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

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

R11)  $0,0,2,1, \rightarrow$

R12)

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

R13)  $0,0,0,0,1, \rightarrow 0,0,0,0,1, \rightarrow 0,0,0,0,2, \rightarrow 0,0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow$

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

R15)  $0,0,0,0,3, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow$

R16)  $0,0,0,0,4, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,0,0,4, \rightarrow$

R17)

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

R18)

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

--

R19)

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

R20)  $0,0,0,0,0,3, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,0,0,0,3, \rightarrow 0,0,0,0,0,4, \rightarrow 0,0,0,0,0,5, \rightarrow$

R21)  $0,0,0,0,0,4, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,0,0,0,4, \rightarrow 0,0,0,0,0,5, \rightarrow$

R22)  $0,0,0,0,0,5, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,0,0,0,5, \rightarrow$

R23)

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

R24)

$0,0,0,0,0,0,1, \rightarrow 0,0,0,0,0,0,1, \rightarrow 0,0,0,0,0,0,2, \rightarrow 0,0,0,0,0,0,3, \rightarrow 0,0,0,0,0,0,4, \rightarrow 0,$   
 $0,0,0,0,0,5, \rightarrow 0,0,0,0,0,0,6, \rightarrow$

R25)

$0,0,0,0,0,0,2, \rightarrow 0,0,2,1, \rightarrow 0,0,0,0,0,0,2, \rightarrow 0,0,0,0,0,0,3, \rightarrow 0,0,0,0,0,0,4, \rightarrow 0,0,0,0,$   
 $0,0,5, \rightarrow 0,0,0,0,0,0,6, \rightarrow$

R26)

$0,0,0,0,0,0,3, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,0,0,0,0,3, \rightarrow 0,0,0,0,0,0,4, \rightarrow 0,0,0,0,0,0,5,$   
 $\rightarrow 0,0,0,0,0,0,6, \rightarrow$

R27)



R43)

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,--0,0,0,0,0,0,0,0,5,--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,--

R44)

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,  
0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R45)

0,0,0,0,0,0,0,0,7,-->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,--0,0,0,0,0,0,0,0,8,--

R46)

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,--0,0,0,0,0,0,0,0,8,--

R47)

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,--  
-0,0,0,0,0,0,0,0,0,0,0,0,6,--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,  
0,0,0,0,0,0,9,--0,0,0,0,0,0,0,0,0,0,10,--

R48)

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,  
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)

0,0,0,0,0,0,0,0,0,2,-->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,--0,0,0,0,0,0,0,0,0,9,--

R50)

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,--0,0,0,0,0,0,0,0,0,9,--

R51)

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,--0,0,  
,0,0,0,0,0,0,0,9,--

R52)

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,--0,0,0,0,0,0,0,0,  
,0,9,--

R53)

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,--0,0,0,0,0,0,0,0,0,9,--

R54)

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,--0,0,0,0,0,0,0,0,0,9,--

R55)

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,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R56)

0,0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,0,0,9,--

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, : 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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 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, : 0,0,0,0,0,0,0,0,0,0,10, :  
 Number new nodes in level n is given by : 1,2,3,5,5,6,7,8,9,10,11,

-----Class

1379-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][102][120][201][210]]$

-----

--

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, --
- 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, -->0,0,2,1, --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, -->0,0,2,1, --0,0,2,1, --0,0,1, --0,0,2, --
- R16) 0,0,0,0,4, -->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, --0,0,0,0,0,0,1, --0,0,0,0,0,0,2, --0,0,0,0,0,0,3, --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) 0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R20) 0,0,0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R21) 0,0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,--0,0,2,--  
R22) 0,0,0,0,0,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,1,--  
R23)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--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,--  
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,-->0,0,2,1,--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,--  
R26)  
0,0,0,0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,  
--  
R27) 0,0,0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R28) 0,0,0,0,0,0,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,--0,0,2,--  
R29) 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,--  
R30)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--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,--  
R31)  
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,--  
R32)  
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,--  
R33)  
0,0,0,0,0,0,0,3,-->0,0,2,1,--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,--  
R34)  
0,0,0,0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,  
--0,0,0,0,4,--  
R35)  
0,0,0,0,0,0,0,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,1,--0,0,0,2,--0,0,  
0,3,--  
R36)  
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,--0,0,1,--0,0,2,  
--  
R37)  
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,--0,1,  
--  
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,



R53)

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,--0,0,0,0,1,  
--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R54)

0,0,0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--  
0,0,0,1,--0,0,0,2,--0,0,0,3,--

R55)

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,--0,0,1,--0,0,2,--

R56)

0,0,0,0,0,0,0,0,0,9,-->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,--

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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 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,: 0,0,0,0,0,0,0,0,0,0,10,:

Number new nodes in level n is given by : 1,2,3,5,5,6,7,8,9,10,11,

-----Class

1380-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][011][110][120][201][210]]$

-----

--

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,-->0,1,--

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,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R14) 0,0,0,0,3,-->0,0,0,1,--0,0,0,1,--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,--0,0,0,0,1,--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,--0,0,0,0,1,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R20) 0,0,0,0,0,4,-->0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,1,--0,0,2,--  
R21) 0,0,0,0,0,5,-->0,0,1,--0,0,1,--0,0,1,--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,-->0,0,0,0,0,1,--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,-->0,0,0,0,1,--0,0,0,0,1,--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,-->0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,0,1,--0,0,1,--0,0,2,--  
R28) 0,0,0,0,0,0,6,-->0,0,1,--0,0,1,--0,0,1,--0,0,1,--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,-->0,0,0,0,0,0,1,--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,--0,0,0,0,0,5,--  
R33)



,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--  
R49)

0,0,0,0,0,0,0,0,3,-->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,  
0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--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,--  
R50)

0,0,0,0,0,0,0,0,4,-->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,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,  
,0,6,--  
R51)

0,0,0,0,0,0,0,0,5,-->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,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R52)

0,0,0,0,0,0,0,0,6,-->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,  
0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
R53)

0,0,0,0,0,0,0,0,7,-->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,--  
0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--  
R54)

0,0,0,0,0,0,0,0,8,-->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,--  
0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,2,--  
R55)

0,0,0,0,0,0,0,0,9,-->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,  
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, : 0,0,2, :
- 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, : 0,0,0,0,0,0,0,1, : 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, : 0,0,0,0,0,0,0,0,1, : 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, : 0,0,0,0,0,0,0,0,0,1, : 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, : 0,0,0,0,0,0,0,0,0,0,1, : 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, :
- LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 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, : 0,0,0,0,0,0,0,0,0,0,0,10, :

Number new nodes in level n is given by : 1,2,3,4,5,6,7,8,9,10,11,

-----Class

1381-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][100][101][102]]$

-----  
--  
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)  $0,0,0,0,0,0, -->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--$
  - 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)  $0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--$
  - R11)  $0,0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--$
- 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=11)  $0,0,0,0,0,0,0,0,0,0,0, :$

Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,1,

-----Class

1382-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][100][101][110]]$

-----  
--  
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)  $0,0,0,0,0,0, -->0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--$
- 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,--  
R11)  
0,0,0,0,0,0,0,0,0,0,-->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, :  
LEN=11) 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  
1383-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][100][101][120]]$   
-----  
--  
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,--  
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,--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,--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,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,--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,:  
 LEN=11) 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

1384-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][100][101][201]]$

--

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,--
- 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,--
- 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,--
- 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,--

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=11) 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

1385-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][100][101][210]]$

--

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,--

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,--

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,--

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=11) 0,0,0,0,0,0,0,0,0,0,0,:

Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,1,1,

-----Class

1386-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][100][102][110]]$

--

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,--

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,--



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=11) 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

1388-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][100][102][201]]$

--  
 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,--
- 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,--
- 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,--

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=11) 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

1389-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][100][102][210]]$

--

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,--
- 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,--
- 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,--

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,:
- LEN=11) 0,0,0,0,0,0,0,0,0,0,0,:

Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,1,1,

-----Class

1390-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][100][110][120]]$

-----  
--

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,--
- 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,--

0,0,0,0,0,0,0,0,0,0,-->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,--

R11)

0,0,0,0,0,0,0,0,0,0,-->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,:

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=11) 0,0,0,0,0,0,0,0,0,0,0,:

Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,1,1,

-----Class

1391-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][012][021][100][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,-->0,0,0,0,0,0,0,0,0,0,--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,-->0,0,0,0,0,0,0,0,0,0,0,0,0,--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,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,--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) 0,0,0,0,0,0,0,0,0, :  
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, :  
LEN=11) 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

1392-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][100][110][210]]$

-----  
--  
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,--  
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,--  
R11)  
0,0,0,0,0,0,0,0,0,0,-->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, :  
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=11) 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

1393-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][100][120][201]]$

-----  
--  
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,--  
 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,--  
 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,--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=11) 0,0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,1,1,

-----Class

1394-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][100][120][210]]$

-----

--

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,--  
 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,--  
 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,--





LEN=10) 0,0,0,0,0,0,0,0,0,0,0,:  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0,0,:  
Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,1,1,

-----Class

1396-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][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,--
- 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,--
- 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,--

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=11) 0,0,0,0,0,0,0,0,0,0,0,:
- Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,1,1,

-----Class

1397-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][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,--

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,--0,1,--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,--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, :  
 LEN=11) 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

1398-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][101][102][201]]$

-----

--

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,--  
 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,--  
 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,--  
 R11)  
 0,0,0,0,0,0,0,0,0,0,-->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, :
- 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=11) 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

1399-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][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,--
- 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,--
- 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, :
- 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=11) 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

1400-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][101][110][120]]$

-----

--

Rules of  $T[L]$ :

- R1)  $0, \rightarrow 0,0, \rightarrow 0,1, \rightarrow$
- R2)  $0,0, \rightarrow 0,0,0, \rightarrow 0,1, \rightarrow 0,1, \rightarrow$
- 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)  $0,0,0,0,0,0,0,0, \rightarrow 0,0,0,0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow$
- R10)  $0,0,0,0,0,0,0,0,0, \rightarrow 0,0,0,0,0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow$
- R11)  $0,0,0,0,0,0,0,0,0,0, \rightarrow 0,0,0,0,0,0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow 0,1, \rightarrow$

List of different nodes in  $T[L]$

- LEN=1)  $0, :$
- LEN=2)  $0,0, : 0,1, :$
- LEN=3)  $0,0,0, :$
- 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=11)  $0,0,0,0,0,0,0,0,0,0,0, :$

Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,1,

-----Class

1401-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][101][110][201]]$

-----

--

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,-->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,--  
 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,--  
 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, :  
 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=11) 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

1402-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][101][110][210]]$   
 -----

--  
 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,--  
 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,--  
 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, :  
 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=11) 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

1403-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][101][120][201]]$

--  
 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, --  
 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, --0,1, --  
 R11)  
 0,0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0, --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, :  
 LEN=11) 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

1404-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][101][120][210]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

R2)  $0, 0, \rightarrow 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow$

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)

$0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow$   
 $1, \rightarrow$

R10)

$0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow$   
 $\rightarrow 0, 1, \rightarrow 0, 1, \rightarrow$

R11)

$0, 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow$   
 $0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow$

List of different nodes in  $T[L]$

LEN=1)  $0, :$

LEN=2)  $0, 0, : 0, 1, :$

LEN=3)  $0, 0, 0, :$

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=11)  $0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, :$

Number new nodes in level  $n$  is given by :  $1, 2, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,$

-----Class

1405-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][101][201][210]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

R2)  $0, 0, \rightarrow 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow$

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) 0,0,0,0,0,0,0,0,-->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,--  
R11) 0,0,0,0,0,0,0,0,0,0,0,0,-->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, :  
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=11) 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

1406-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][102][110][120]]$

-----  
--  
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,--  
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,--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,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,--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,:  
 LEN=11) 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

1407-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][102][110][201]]$

--

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,--
- 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,--
- 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,--

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=11) 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

1408-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][102][110][210]]$

--

Rules of  $T[L]$ :

R1)  $0, \rightarrow 0, 0, \rightarrow 0, 1, \rightarrow$

R2)  $0, 0, \rightarrow 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow$

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)

$0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow$

R10)

$0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow$

R11)

$0, 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow$

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=11)  $0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, :$

Number new nodes in level  $n$  is given by :  $1, 2, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,$

-----Class

1409-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][102][120][201]]$

--

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)  $0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow 0, 1, \rightarrow$

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,--0,1,--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, :  
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=11) 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  
1410-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][102][120][210]]$   
-----  
--  
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, --  
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, --  
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, --  
R11)  
0,0,0,0,0,0,0,0,0,0, -->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, :  
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=11) 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

1411-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][102][201][210]]$

--  
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,--
- 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,--
- 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,--

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=11) 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

1412-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][110][120][201]]$

--

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,--

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,--

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,--

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=11) 0,0,0,0,0,0,0,0,0,0,0,:

Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,1,1,

-----Class

1413-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][110][120][210]]$

-----

--

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,--

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,-->0,0,0,0,0,0,0,0,0,0,0,0,--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,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,--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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, :  
Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,1,1,

-----Class

1414-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][110][201][210]]$

-----

--  
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,--  
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,--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,--  
R11)  
0,0,0,0,0,0,0,0,0,0,0,0,-->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,:  
 LEN=11) 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

1415-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][021][120][201][210]]$

-----

--

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,--
- 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,--
- 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,--

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=11) 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

1416-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][100][101][102][110]]$

-----

--

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, --  
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,  
0,0,0,0,0,6, --  
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)  
0,0,0,0,0,0,7, -->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, --0,1, --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)  
0,0,0,0,0,0,0,8, -->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, --0,1, --  
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, --  
R24)  
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, --0,0,0,0,0,0,0,8, --0,0,0,0,0,0,0,  
,0,9, --0,0,0,0,0,0,0,0,0,10, --  
R25)  
0,0,0,0,0,0,0,9, -->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, --0,0,0,0,0,0,0,9,8, --0,1, --  
R26)  
0,0,0,0,0,0,0,8,7, -->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, --

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,:
  - LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,10,: 0,0,0,0,0,0,0,0,0,9,8,:
- Number new nodes in level n is given by : 1,2,2,3,3,3,3,3,3,3,3,3,

-----Class

1417-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][100][101][102][120]]$

-----

--

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,--
- 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,--0,0,0,0,0,6,5,--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,--0,0,0,0,0,6,--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,--0,0,0,0,0,6,5,--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,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--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  
,--  
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,--0,0,0,0,0,0,8,--  
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,--  
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,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,10,--  
R25)  
0,0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,9,8,--0,0,0,0,  
0,0,0,0,9,--  
R26)  
0,0,0,0,0,0,0,0,8,7,-->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,--  
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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,9,8, :  
Number new nodes in level n is given by : 1,2,2,3,3,3,3,3,3,3,3,

-----Class

1418-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][100][101][102][201]]$

-----

--

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,--
- 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,  
--0,0,0,0,0,6,--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,--0,1,--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,--0,0,0,0,0,0,7,6,--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,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,9  
,--  
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,--0,0,0,0,0,0,0,8,7,--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,--  
R24)  
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,--0,0,0,0,0,0,0,0,0,10,--  
R25)  
0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,9,8,--0,0,0,0,  
0,0,0,0,9,--  
R26)  
0,0,0,0,0,0,0,8,7,-->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,--  
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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,0,9,8, :  
 Number new nodes in level n is given by : 1,2,2,3,3,3,3,3,3,3,3,

-----Class

1419-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][100][101][102][210]]$

-----

--

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, --
- 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, --0,0,0,0,0,0,0,0,8, --
- 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, --0,1, --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, --0,0,0,0,0,8, --
- R19) 0,0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --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, --0,0,0,0,0,0,0,0,0,0,10, --



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,-->0,0,0,0,0,0,0,0,0,0,0,0,--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,--

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,--0,1,--

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,--

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,--0,1,--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,--0,0,0,0,0,0,0,0,0,0,10,--

R25) 0,0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,0,9,8,--0,1,--

R26) 0,0,0,0,0,0,0,0,8,7,-->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,--

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, :
  - LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,0,9,8, :
- Number new nodes in level n is given by : 1,2,2,3,3,3,3,3,3,3,3,3,

-----Class

1421-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][100][101][110][201]]$

-----

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,--
- 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,  
0,0,0,0,0,6,--  
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,--0,0,0,0,0,0,7,6,--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,--0,1,--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,  
,--  
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,--0,1,--  
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,--  
R24)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--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,  
0,9,--0,0,0,0,0,0,0,0,0,10,--  
R25)  
0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,9,8,--0,1,--  
R26)  
0,0,0,0,0,0,0,0,8,7,-->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,--

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,:  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,10,: 0,0,0,0,0,0,0,0,0,9,8,:  
 Number new nodes in level n is given by : 1,2,2,3,3,3,3,3,3,3,3,

-----Class

1422-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][100][101][110][210]]$

-----

--

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,-->0,0,2,1,--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,--0,0,0,0,0,5,--
- 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,--0,0,0,0,0,5,--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,--0,1,--
- 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,-->0,0,2,1,--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,--0,1,--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,-->0,0,2,1,--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,--0,1,--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,-->0,0,2,1,--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,--
- R19) 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--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,--0,0,0,0,0,0,0,0,10,--
- R20) 0,0,0,0,0,0,0,0,0,9,-->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,--

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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,10,:

Number new nodes in level n is given by : 1,2,2,3,2,2,2,2,2,2,2,

-----Class

1423-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][100][101][120][201]]$

-----

--

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,--

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,--0,1,--0,0,2,--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,--0,0,0,0,5,4,--  
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,--0,0,0,0,0,6,--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,--0,0,0,0,5,4,--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)  
0,0,0,0,0,0,7,6,-->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,--  
R24)  
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,--0,0,0,0,0,7,--0,0,0,0,0,8,--0,0,0,0,0,0,0,  
,0,9,--0,0,0,0,0,0,0,0,10,--  
R25)  
0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,7,6,--0,0,0,0,0,8,7,--0,0,0,0,0,9,8,--0,0,0,0,  
,0,0,0,0,9,--  
R26)  
0,0,0,0,0,0,8,7,-->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,--0,0,0,0,0,7,6,--  
List of different nodes in T[L]  
LEN=1) 0, :  
LEN=2) 0,0, : 0,1, :  
LEN=3) 0,0,0, : 0,0,2, :  
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, : 0,0,0,0,0,0,7, : 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, : 0,0,0,0,0,0,7,6, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,8,7, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,9,8, :  
Number new nodes in level n is given by : 1,2,2,3,3,3,3,3,3,3,3,

-----Class  
1424-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][100][101][120][210]]$   
-----

--  
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,--  
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,  
 0,0,0,0,0,6,--  
 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,  
 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,--  
 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,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,0,10,--  
 R20)  
 0,0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,0,9,--

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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :  
 Number new nodes in level n is given by : 1,2,2,3,2,2,2,2,2,2,2,

-----Class

1425-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][100][101][201][210]]$

-----

--

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)  $0, 1, \rightarrow 0, 1, \rightarrow$

R4)  $0, 0, 0, \rightarrow 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow$

R5)  $0, 0, 2, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, \rightarrow$

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)  $0, 0, 0, 3, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 0, 3, \rightarrow$

R8)  $0, 0, 2, 1, \rightarrow$

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)  $0, 0, 0, 0, 4, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 0, 0, 4, \rightarrow$

R11)

$0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 6, \rightarrow$

R12)  $0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 0, 0, 0, 5, \rightarrow$

R13)

$0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 0, 6, \rightarrow 0, 0, 0, 0, 0, 0, 0, 7, \rightarrow$

R14)

$0, 0, 0, 0, 0, 0, 6, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 0, 0, 0, 0, 6, \rightarrow$

R15)

$0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 0, 6, \rightarrow 0, 0, 0, 0, 0, 0, 0, 7, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 8, \rightarrow$

R16)

$0, 0, 0, 0, 0, 0, 0, 7, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 0, 0, 0, 7, \rightarrow$

R17)

$0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 0, 6, \rightarrow 0, 0, 0, 0, 0, 0, 0, 7, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 8, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 9, \rightarrow$

, --

R18)

$0, 0, 0, 0, 0, 0, 0, 0, 8, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 0, 0, 0, 0, 8, \rightarrow$

R19)

$0, 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 0, 6, \rightarrow 0, 0, 0, 0, 0, 0, 0, 7, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 8, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 9, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 10, \rightarrow$

R20)

$0, 0, 0, 0, 0, 0, 0, 0, 0, 9, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 0, 0, 0, 0, 9, \rightarrow$

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)  $0, 0, 0, 0, : 0, 0, 0, 3, : 0, 0, 2, 1, :$

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, : 0,0,0,0,0,0,0,0,0,8, :  
LEN=10) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,9, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :  
Number new nodes in level n is given by : 1,2,2,3,2,2,2,2,2,2,2,2,

-----Class

1426-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][100][102][110][120]]$

-----  
--

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, -->0,0,2,1, --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,  
0,0,0,0,0,6, --
- 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, --0,0,0,0,0,7,6, --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, --0,0,0,0,0,0,0,9,  
, --
- 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, --0,1, --
- 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,--  
R24)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--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,--0,0,0,0,0,0,0  
,0,9,--0,0,0,0,0,0,0,0,0,10,--  
R25)  
0,0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,9,8,--0,1,--  
R26)  
0,0,0,0,0,0,0,0,8,7,-->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,--  
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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,0,9,8, :  
Number new nodes in level n is given by : 1,2,2,3,3,3,3,3,3,3,3,

-----Class

1427-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][100][102][110][201]]$

-----

--  
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,--
- 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,  
0,0,0,0,0,6,--
- 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,--0,1,--0,0,2,--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,--0,1,--

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,--0,1,--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,--

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,--0,1,--

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,--

R24) 0,0,0,0,0,0,0,0,0,0,-->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,--0,0,0,0,0,0,0,0,0,0,10,--

R25) 0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,0,9,8,--0,1,--

R26) 0,0,0,0,0,0,0,8,7,-->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,--

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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,10,: 0,0,0,0,0,0,0,0,0,9,8,:

Number new nodes in level n is given by : 1,2,2,3,3,3,3,3,3,3,3,3,

-----Class

1428-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][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,--
- 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,--0,0,0,0,0,5,--
- 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,--0,0,0,0,0,5,--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,--0,1,--
- 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,-->0,0,2,1,--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,--0,1,--0,0,2,--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,--0,1,  
--
- 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,-->0,0,2,1,--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,--
- 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,--0,0,2,--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,  
0,9,--0,0,0,0,0,0,0,0,0,10,--
- R20)  
0,0,0,0,0,0,0,0,0,9,-->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,--

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) 0,0,0,0,0,0,0,0,0,0,9,:

LEN=11) 0,10,0,0,

Number new nodes in level n is given by : 1,2,2,3,2,2,2,2,2,2,2,2,2,2,2,2,

-----Class

1429-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][100][102][120][201]]$

-----

--

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, --

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, --0,0,0,0,0,6, --

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, --0,1, --0,0,2, --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, --0,0,0,0,0,0,6, --

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, -->0,0,0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --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, --

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, -->0,0,0,0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --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, --

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, --



R15)  
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,--

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,--0,1,--0,0,2,--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,--0,0,0,0,0,0,8,--

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,--0,0,2,--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,--0,0,0,0,0,8,--0,0,0,0,0,9,  
,0,9,--0,0,0,0,0,0,10,--

R20)  
0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,9,--

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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,10,:

Number new nodes in level n is given by : 1,2,2,3,2,2,2,2,2,2,2,

-----Class

1431-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][100][102][201][210]]$

-----

--

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,--

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,--0,0,0,0,5,--

R10) 0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,4,--

R11)  
 $0,0,0,0,0,0, \rightarrow 0,0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,0,5, \rightarrow 0,0,0,0,0,6, \rightarrow$   
R12)  $0,0,0,0,0,5, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,0,0,5, \rightarrow$   
R13)  
 $0,0,0,0,0,0,0, \rightarrow 0,0,0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,0,5, \rightarrow 0,0,0,0,0,6, \rightarrow 0,0,0,0,0,0,7, \rightarrow$   
R14)  
 $0,0,0,0,0,0,6, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,0,0,0,0,6, \rightarrow$   
R15)  
 $0,0,0,0,0,0,0,0, \rightarrow 0,0,0,0,0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,0,5, \rightarrow 0,0,0,0,0,6, \rightarrow 0,0,0,0,0,0,7, \rightarrow 0,0,0,0,0,0,0,8, \rightarrow$   
R16)  
 $0,0,0,0,0,0,0,7, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,0,0,0,7, \rightarrow$   
R17)  
 $0,0,0,0,0,0,0,0,0, \rightarrow 0,0,0,0,0,0,0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,5, \rightarrow 0,0,0,0,0,6, \rightarrow 0,0,0,0,0,0,7, \rightarrow 0,0,0,0,0,0,0,8, \rightarrow 0,0,0,0,0,0,0,0,9, \rightarrow$   
R18)  
 $0,0,0,0,0,0,0,0,8, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,0,0,0,8, \rightarrow$   
R19)  
 $0,0,0,0,0,0,0,0,0,0, \rightarrow 0,0,0,0,0,0,0,0,0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,0,5, \rightarrow 0,0,0,0,0,6, \rightarrow 0,0,0,0,0,0,7, \rightarrow 0,0,0,0,0,0,0,8, \rightarrow 0,0,0,0,0,0,0,0,9, \rightarrow 0,0,0,0,0,0,0,0,0,10, \rightarrow$   
R20)  
 $0,0,0,0,0,0,0,0,0,9, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,0,0,0,9, \rightarrow$

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)  $0,0,0,0, : 0,0,0,3, : 0,0,2,1, :$
  - 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)  $0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,9, :$
  - LEN=11)  $0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :$
- Number new nodes in level n is given by : 1,2,2,3,2,2,2,2,2,2,2,

-----Class

1432-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][100][110][120][201]]$   
-----

--  
Rules of T[L]:  
R1)  $0, \rightarrow 0,0, \rightarrow 0,1, \rightarrow$

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,  
0,0,0,0,0,6,--  
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,--0,0,0,0,0,0,7,6,--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,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,9,  
--  
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,--0,1,--  
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,--  
R24)  
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,--0,0,0,0,0,0,0,0,0,10,--  
R25)  
0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,9,8,--0,1,--  
R26)  
0,0,0,0,0,0,0,0,8,7,-->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,--

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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,0,9,8, :  
 Number new nodes in level n is given by : 1,2,2,3,3,3,3,3,3,3,3,3,

-----Class

1433-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][100][110][120][210]]$

-----

--

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, --
- 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, --0,0,0,0,0,5, --
- 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, --0,0,0,0,0,5, --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, --0,1, --
- 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, -->0,0,2,1, --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, --0,1, --0,0,2, --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, -->0,0,2,1, --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, --
- 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, --0,0,0,0,0,0,0,0,0,9, --
- 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, --0,1, --





```

--
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,--0,0,0,0,0,0,8,--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,--0,1,--
R19)
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--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,--
,0,9,--0,0,0,0,0,0,0,0,10,--
R20)
0,0,0,0,0,0,0,0,9,-->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,--
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,:
LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,10,:
Number new nodes in level n is given by : 1,2,2,3,2,2,2,2,2,2,

```

-----Class

1435-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][100][120][201][210]]$   
-----

```

--
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,--
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,--0,0,0,0,0,0,7,--

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,--0,1,--0,0,2,--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,--0,0,0,0,0,0,0,8,--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,--

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,--0,0,2,--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,  
,0,9,--0,0,0,0,0,0,0,0,0,10,--

R20)

0,0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,0,9,--

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, :

LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :

Number new nodes in level n is given by : 1,2,2,3,2,2,2,2,2,2,2,

-----Class

1436-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][101][102][110][120]]$

-----

--

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,--

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,--0,0,0,0,0,0,0,7,--  
 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,--  
 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,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,0,10,--  
 R19)  
 0,0,0,0,0,0,0,0,0,9,-->0,1,--0,0,2,--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,--0,1,--

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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,2,

-----Class

1437-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][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,--
- 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,--0,0,0,0,0,0,0,9  
,--
- 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,--
- R18)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,10,--
- R19)  
0,0,0,0,0,0,0,0,0,9,-->0,1,--0,0,2,--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,--0,1,--

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,:
- LEN=11) 0,0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,10,:

Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

1438-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][101][102][110][210]]$

-----

--

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, --
- 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, --0,0,0,0,5, --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, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --
- R18) 0,0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --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, --0,0,0,0,0,0,0,0,0,0,10, --
- R19) 0,0,0,0,0,0,0,0,0,9, -->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, : 0,0,2, :
- 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, :



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,:  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,10,:  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,2,

-----Class

1440-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][101][102][120][210]]$

--

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,--
- 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,--0,0,0,0,0,0,0,0,8,--
- 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,--0,0,0,0,0,0,0,8,--
- 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,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,10,--
- R19) 0,0,0,0,0,0,0,0,0,9,-->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,

0,0,0,9,--  
 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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

1441-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][101][102][201][210]]$

-----  
 --  
 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, --  
 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, --0,0,0,0,0,0,0,7, --  
 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, --0,0,0,0,0,0,0,8, --  
 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, --0,0,0,0,0,6, --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, --  
 R18)  
 0,0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --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,--0,0,0,0,0,10,--

R19)

0,0,0,0,0,0,0,9,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--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,: 0,0,2,:

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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,10,:

Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,2,

-----Class

1442-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][101][110][120][201]]$

-----

--  
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,--

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,--0,0,0,0,0,6,--

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,--0,0,0,0,0,6,--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,--0,1,--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,--0,0,2,--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,--0,0,0,0,0,0,6,--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,--0,1,--

R18)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,10,--

R19)

0,0,0,0,0,0,0,0,9,-->0,1,--0,0,2,--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,--0,1,--

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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,10,:

Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,2,

-----Class

1443-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][101][110][120][210]]$

-----

--

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,--

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,  
--0,0,0,0,0,6,--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,--0,0,0,0,0,0,7,--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,--0,1,--  
 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,--0,0,0,0,0,0,8,--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,--  
 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,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,10,--  
 R19) 0,0,0,0,0,0,0,0,0,9,-->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, : 0,0,2, :  
 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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,2,

-----Class

1444-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][101][110][201][210]]$   
 -----

--  
 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,--  
 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,--0,1,--0,0,2,--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,  
 --0,0,0,0,0,6,--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,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--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,--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,--0,0,2,--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,--0,1,--  
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,--0,1,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,10,--  
R19) 0,0,0,0,0,0,0,0,0,0,9,-->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, : 0,0,2, :  
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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :  
Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,2,

-----Class

1445-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][101][120][201][210]]$

--

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,--  
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,--0,1,--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,-->0,0,0,0,0,0,0,0,0,--0,1,--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,--0,1,--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,--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,--0,0,0,0,0,7,--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,--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,--0,0,0,4,--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  
,--  
R17)  
0,0,0,0,0,0,0,8,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,0,0,0,0,0,8,--  
R18)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--0,0,0,3,--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,  
0,9,--0,0,0,0,0,10,--  
R19)  
0,0,0,0,0,0,0,9,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,0,0,0,0,0,  
0,0,0,9,--

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,:
- LEN=11) 0,0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,10,:

Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,2,

-----Class

1446-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][102][110][120][201]]$

-----

--

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,--
- 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,--0,0,0,4,--
- 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,--0,0,0,4,--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,--0,0,0,4,--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,--0,1,--0,0,2,--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,--0,0,0,0,0,0,6,  
--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,--0,0,0,0,0,0,0,0,8,--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,--  
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,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,0,10,--  
R19)  
0,0,0,0,0,0,0,0,0,9,-->0,1,--0,0,2,--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,--0,1,--

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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :  
Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

1447-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][102][110][120][210]]$

-----

--

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,--  
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,--0,0,0,0,0,6,--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,--0,0,0,0,0,6,--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,--0,0,0,0,5,--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,--  
 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,--0,1,--  
 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,--0,1,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,10,--  
 R19) 0,0,0,0,0,0,0,0,0,9,-->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, : 0,0,2, :  
 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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,2,

-----Class

1448-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][012][102][110][201][210]]$

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,--  
 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,--0,0,0,0,0,6,--0,0,0,0,0,7,--  
 R13) 0,0,0,0,0,0,6,-->0,1,--0,1,--0,1,--0,1,--0,1,--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,--0,1,--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,--0,0,0,0,0,6,--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,--0,1,--  
 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,--0,1,--0,0,2,--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,--0,0,0,0,0,0,0,0,10,--  
 R19) 0,0,0,0,0,0,0,0,0,9,-->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, : 0,0,2, :  
 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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

1449-----  
 Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][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,--



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,--0,1,--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,--0,0,0,0,0,0,0,8,--  
 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,--0,0,0,0,0,6,--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,--0,0,0,0,0,0,0,8,--  
 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,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,10,--  
 R19)  
 0,0,0,0,0,0,0,0,0,9,-->0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,0,0,0,0,0,  
 0,0,0,9,--

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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :

Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,2,

-----Class

1450-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][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,--
- 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,--0,0,0,0,0,0,7,--
- 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,--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,--
- 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,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,10,--
- R19) 0,0,0,0,0,0,0,0,0,9,-->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,:
- LEN=11) 0,0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,10,:

Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,2,

-----Class

1451-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][021][100][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,--
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,--
--
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,--
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,--
R10)
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,
0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--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, :
LEN=11) 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

1452-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][021][100][101][102][120]]$

-----

```

--
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,--
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,--

```





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=11) 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

1455-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][021][100][101][110][120]]$

-----

--  
 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,--
- 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,--
- 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,--
- 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,--0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--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, :  
 LEN=11) 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

1456-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][021][100][101][110][201]]$

-----

--

Rules of  $T[L]$ :

R1)  $0, \rightarrow 0, 0, \rightarrow 0, \rightarrow$

R2)  $0, 0, \rightarrow 0, 0, 0, \rightarrow 0, 0, \rightarrow 0, \rightarrow$

R3)  $0, 0, 0, \rightarrow 0, 0, 0, 0, \rightarrow 0, 0, 0, \rightarrow 0, \rightarrow$

R4)  $0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, \rightarrow 0, 0, \rightarrow 0, \rightarrow$

R5)  $0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, \rightarrow 0, \rightarrow$

R6)

$0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, \rightarrow 0, \rightarrow$

--

R7)

$0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, \rightarrow 0, \rightarrow$   
 $0, \rightarrow 0, 0, \rightarrow 0, \rightarrow$

R8)

$0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, \rightarrow 0, \rightarrow$   
 $0, \rightarrow 0, 0, 0, \rightarrow 0, \rightarrow$

R9)

$0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, \rightarrow 0, \rightarrow$   
 $0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, \rightarrow 0, 0, 0, \rightarrow 0, \rightarrow$

R10)

$0, 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, \rightarrow 0, \rightarrow$   
 $0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, \rightarrow 0, 0, 0, \rightarrow 0, \rightarrow$   
 $-0, 0, \rightarrow 0, \rightarrow$

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)  $0, 0, 0, 0, 0, 0, 0, 0, 0, 0, :$

LEN=11)  $0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, :$

Number new nodes in level  $n$  is given by :  $1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,$

-----Class

1457-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][021][100][101][110][210]]$

-----

--

Rules of  $T[L]$ :

R1)  $0, \rightarrow 0, 0, \rightarrow 0, \rightarrow$

R2)  $0, 0, \rightarrow 0, 0, 0, \rightarrow 0, 0, \rightarrow 0, \rightarrow$

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,--  
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,--0,0,0,0,--0,0,0,--0,0,--0,--  
R10)  
0,0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,  
0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,1,1,

-----Class

1458-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][021][100][101][120][201]]$

-----

--

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,--0,0,--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,--





-0,0,--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, :  
 LEN=11) 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  
 1460-----  
 Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][021][100][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,--  
 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,--  
 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,--  
 R10)  
 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--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, :



```

-----
--
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,--
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,--
R10)
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,
0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--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, :
LEN=11) 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

1463-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][021][100][102][110][210]]$

```

-----
--
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,--
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,--0,0,--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,--

R10)

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,  
0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--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, :

LEN=11) 0,0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,1,

-----Class

1464-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][021][100][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,--0,0,--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,--  
--

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,--

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,--

R10)

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,  
0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--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, :
- LEN=11) 0,0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,1,

-----Class

1465-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][021][100][102][120][210]]$

-----

--

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,--0,0,--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,--0,0,0,0,--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,--
- R10)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,  
0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--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,:  
 LEN=11) 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

1466-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][021][100][102][201][210]]$

--

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,--
- R10) 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--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,:
- LEN=11) 0,0,0,0,0,0,0,0,0,0,0,:





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,--  
--  
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,--  
R10)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,  
0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,1,

-----Class

1469-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][021][100][110][201][210]]$

-----

--

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, --0,0,0,0,0, --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, --

R10)  
0,0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0,0,  
0,0, --0,0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0, --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, :
- LEN=11) 0,0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,1,

-----Class

1470-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][021][100][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, --0,0, --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, --
- 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, --
- 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, --
- R10)  
0,0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0,0,



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=11) 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

1472-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][021][101][102][110][201]]$

-----

--  
 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,--
- 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,--
- R10) 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--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,:  
 LEN=11) 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

1473-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][021][101][102][110][210]]$

---

--  
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)  $0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,0,0,0,0,0, --0,0,0,0,0, --0,0,0,0, --0,0,0, --0,0, --0, --$
- 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)  $0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0, --0,0,0,0,0,0, --0,0,0,0,0, --0,0,0,0,0, --0,0,0, --0,0, --0, --$
- R9)  $0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0, --0,0,0,0,0,0, --0,0,0,0,0, --0,0,0, --0,0, --0, --$
- R10)  $0,0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0, --0,0,0,0,0,0, --0,0,0,0,0, --0,0,0, --0,0, --0, --$

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)  $0,0,0,0,0,0,0,0,0,0, :$
  - LEN=11)  $0,0,0,0,0,0,0,0,0,0,0, :$
- Number new nodes in level  $n$  is given by :  $1,1,1,1,1,1,1,1,1,1,1,1,$

-----Class

1474-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][021][101][102][120][201]]$

---

--  
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)  $0,0,0,0, -->0,0,0,0,0, --0,0,0,0, --0,0,0, --0,0, --0, --$
- 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,--

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,--0,0,0,--0,0,--0,0,--0,--

R10)  
0,0,0,0,0,0,0,0,0,0,0,0,-->0,--0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,  
0,0,0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,0,0,--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) 0,0,0,0,0,0,0,0,0,0,0, :

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,1,

-----Class

1475-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][021][101][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,--0,0,--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,  
--

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,--0,0,0,--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,--  
R10)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,  
0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, :  
Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,1,

-----Class  
1476-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][021][101][102][201][210]]$   
-----  
--  
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,--  
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,--  
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,--  
R10)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,  
0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--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=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=11) 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

1483-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][021][102][110][201][210]]$

-----

--

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, --0,0,0, --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, --
- 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, --
- R10) 0,0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0, --0,0,0,0,0,0, --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, :  
 LEN=11) 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

1484-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][021][102][120][201][210]]$

-----

--

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,--0,0,--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,--

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,--

R10)

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,:

Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,1,

-----Class

1485-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][021][110][120][201][210]]$

-----

--

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,--0,0,--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,--  
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,--  
R10)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,  
0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, :  
Number new nodes in level n is given by : 1,1,1,1,1,1,1,1,1,1,1,1,

-----Class

1486-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][100][101][102][110][120]]$

-----

--

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,--0,0,0,3,1,--0,0,--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,  
0,0,0,0,5,--  
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,--0,0,0,3,1,--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) 0,0,0,3,1,-->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,--0,0,0,0,--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,--0,0,0,--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,--0,0,2,--  
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,--  
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,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
3,--0,0,0,0,0,0,0,4,--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,--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,--0,0,0,0,--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,--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,--0,0,2,--  
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,--0,0,0,0,0,6,1,--0,0,--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,--0,0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,  
0,0,0,7,--0,0,0,0,0,0,0,8,--  
R31)  
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,  
0,0,3,--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,--0,0,0,0,0,--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,--0,0,0,0,--  
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,--0,0,0,2,--0,0,0,3,--

R35)

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,--0,0,0,0,0,6,1,--0,0,0,--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,--

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,--0,0,0,0,0,0,0,0,0,2,  
--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,-->0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--  
0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,  
,0,7,--

R43)

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,--0,0,0,0,  
0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R44)

0,0,0,0,0,0,0,0,4,-->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,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R45)

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,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R46)

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,--0,0,0,0,0,6,1,--0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--

R47)

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,--0,0,0,0,0,0,7,1,--0,0,0,--0,0,--0,0,2,--

R48)

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,  
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,  
,0,8,1,--0,0,--0,0,--

R49)

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,--

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,--

R54)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,--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,--0,0,0,0,0,0,0,0,0,0,4,--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,--0,0,0,0,0,0,0,0,0,0,10,--

R55)

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,--0,0,0,0,0,0,0,0,0,0,2,--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,--

R56)

0,0,0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,0,3,1,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--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)

0,0,0,0,0,0,0,0,0,4,-->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,--0,0,0,0,0,0,0,0,--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,--

R58)

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,--0,0,0,0,0,5,1,--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)

0,0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,6,1,--0,0,0,0,0,0,6,2,--0,0,0,0,0,0,6,3,--0,0,0,0,0,0,0,6,4,--0,0,0,0,0,0,6,1,--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)

0,0,0,0,0,0,0,0,0,7,-->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,--0,0,0,0,0,2,--0,0,0,3,--

R61)

0,0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,8,1,--0,0,0,0,0,0,0,8,2,--0,0,0,0,0,0,0,0,0,8,3,--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,--0,0,0,0,0,0,0,0,8,1,--0,0,0,0,--0,0,--0,0,2,--

R62)

0,0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,9,1,--0,0,0,0,0,0,0,0,9,2,--0,0,0,0,0,0,0,0,0,9,3,--0,0,0,0,0,0,0,0,9,4,--0,0,0,0,0,0,0,0,9,5,--0,0,0,0,0,0,0,0,9,6,--0,0,0,0,0,0,0,0,9,7,--0,0,0,0,0,0,0,0,9,1,--0,0,--0,0,--

R63)

0,0,0,0,0,0,0,0,8,1,-->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,--

R64)

0,0,0,0,0,0,0,0,8,2,-->0,0,2,1,--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,--

R65)

0,0,0,0,0,0,0,0,8,3,-->0,0,0,3,1,--0,0,0,3,1,--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)  
0,0,0,0,0,0,0,0,8,4,-->0,0,0,0,4,1,--0,0,0,0,4,2,--0,0,0,0,4,1,--0,0,0,0,4,1,--0,0,  
0,0,4,2,--0,0,0,0,4,1,--  
R67)  
0,0,0,0,0,0,0,0,8,5,-->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,--0,0,0,3,1,--0,0,0,3,1,--  
R68)  
0,0,0,0,0,0,0,0,8,6,-->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,--0,0,0,2,1,--  
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, :  
LEN=11) 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, :  
0,0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,0,0,9,1, : 0,0,0,0,0,0,0,0,0,0,9,2, :  
0,0,0,0,0,0,0,0,0,0,9,3, : 0,0,0,0,0,0,0,0,0,0,9,4, : 0,0,0,0,0,0,0,0,0,0,9,5, :  
0,0,0,0,0,0,0,0,0,0,9,6, : 0,0,0,0,0,0,0,0,0,0,9,7, :  
Number new nodes in level n is given by : 1,1,2,4,5,7,9,11,13,15,17,

-----Class

1487-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][100][101][102][110][201]]$

-----

--

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,-->  
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,--0,0,0,3,2,--0,0,0,--0,0,0,0,3,--0,0,0,0,4,--  
R12) 0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,--0,0,0,0,4,--  
R13) 0,0,0,3,2,-->0,0,2,1,--  
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,--0,0,0,3,2,--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,--0,0,0,3,2,--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,--0,0,0,3,2,--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,--0,0,0,3,2,--  
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,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--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,--0,0,0,3,2,--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,  
0,0,0,0,5,--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,--  
R27)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--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,--0,0,0,0,0,0,0,7,--

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,--0,0,0,0,0,0,0,0,0,2,--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,--0,0,0,0,0,0,0,0,0,0,--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,--

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,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,0,7,--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,--0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,8,7,--0,0,--0,0,0,0,0,0,0,8,--

R43)

0,0,0,0,0,0,0,7,6,-->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,--



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, : 0,0,0,0,0,0,7,6, :  
 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, :  
 LEN=11) 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, :  
 0,0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,0,0,9,8, :  
 Number new nodes in level n is given by : 1,1,2,4,5,6,7,8,9,10,11,

-----Class

1488-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][100][101][102][110][210]]$

-----

--

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, -->

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, -->0,0,2,1, --

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, --0,0,0,0,0,2, --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,-->0,0,0,3,1,--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,--0,0,0,0,0,0,2,--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,--0,0,0,0,0,0,3,--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,--0,0,0,0,0,5,--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,--0,0,0,0,0,6,--  
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,-->0,0,0,0,4,1,--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,--0,0,0,0,0,0,0,0,2,--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,--  
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,--0,0,0,0,0,0,0,3,--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,-->0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,--0,0,0,0,0,0,0,4,  
--0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,4,7,--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,  
0,0,0,0,0,0,5,--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,-->0,0,0,0,0,6,1,--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,--0,0,0,0,0,0,6,8,--

R44)

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,--

R45)

0,0,0,0,0,0,2,4,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,--0,0,0,0,0,2,4,--0,0,0,0,0,2,  
4,6,--0,0,0,0,0,2,4,7,--0,0,0,0,0,2,4,8,--

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,--0,0,0,0,0,2,5,--0,0,  
0,0,0,0,2,5,7,--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,--0,0,0,0,0,2,6,8,--

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,--

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,--0,0,0,0,0,3,5,--0,0,  
0,0,0,0,3,5,7,--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,--0,0,0,0,0,3,6,8,--

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,--

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,--0,0,0,0,0,4,6,8,--

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,--

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,--0,0,0,0,0,5,7,--

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,--0,0,0,0,0,2,4,6,--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,--0,0,0,0,0,0,0,0,0,2,  
--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,--

R61)

0,0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,  
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,  
,0,0,0,2,8,--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,--0,0,0,0,0,0,0,3,6,--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,--

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,--0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,4,8,--0,0,0,0,0,  
,0,0,0,4,9,--

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,  
--0,0,0,0,0,0,0,5,--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,--

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,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,6,8,--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,  
4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,--0,0,0,0,0,0,0,7,--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,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--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,  
0,0,0,2,4,6,--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,--0,0,0,0,0,0,0,2,5,  
--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,--

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,  
0,0,0,0,2,6,--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,--0,0,0,0,0,0,2,7,--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,--0,0,0,0,0,0,2,8,--

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,--0,0,0,0,0,0,3,5,  
--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,  
0,0,0,3,6,--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,--0,0,0,0,0,0,3,8,--

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,  
0,0,0,0,4,6,--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,--0,0,0,0,0,0,4,8,--

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,--0,0,0,0,0,0,5,7,--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,-->0,0,0,0,0,0,6,1,--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,--0,0,0,0,0,0,6,8,--

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,--0,0,0,0,0,0,2,4,6,--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,--0,0,0,0,0,0,  
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,--  
0,0,0,0,0,0,2,4,8,--

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,--0,0,0,0,0,0,  
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,  
0,0,0,0,0,2,5,8,--

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,--  
0,0,0,0,0,0,2,6,8,--

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,--0,0,0,0,0,0,  
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,  
0,0,0,0,0,3,5,8,--

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,  
0,0,0,0,0,3,6,8,--

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,--  
0,0,0,0,0,0,4,6,8,--

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,--0,0,0,0,0,2,4,6,  
8,--

R95)

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,--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,--0,0,0,0,0,0,0,0,0,5,--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,  
0,0,0,0,9,--0,0,0,0,0,0,0,0,0,10,--

R96)

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,--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,--0,0,0,0,0,0,0,0,2,  
,7,--0,0,0,0,0,0,0,2,8,--0,0,0,0,0,0,0,2,9,--0,0,0,0,0,0,0,2,10,--

R97)

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,--0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,3,7,--0,0,0,0,0,  
,0,0,0,0,3,8,--0,0,0,0,0,0,0,3,9,--0,0,0,0,0,0,0,3,10,--

R98)

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,  
0,0,0,0,4,--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,--0,0,0,0,0,0,0,4,10,--

R99)

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,--0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,5,8,--0,0,0,0,  
,0,0,0,0,5,9,--0,0,0,0,0,0,0,5,10,--

R100)

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,--0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,  
,0,6,9,--0,0,0,0,0,0,0,6,10,--

R101)

0,0,0,0,0,0,0,0,7,-->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,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,7,9,  
,--0,0,0,0,0,0,0,7,10,--

R102)

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,--0,0,0,0,0,0,6,1,--  
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,--0,0,0,0,0,0,0,8,--0

,0,0,0,0,0,0,0,0,8,10,--

R103)

0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,9,1,--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,--0,0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,--0,0,0,0,0,0,0,9,--

R104)

0,0,0,0,0,0,0,0,2,4,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,4,--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,--0,0,0,0,0,0,0,0,0,2,4,9,--0,0,0,0,0,0,0,0,2,4,10,--

R105)

0,0,0,0,0,0,0,0,2,5,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,2,5,--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,--0,0,0,0,0,0,0,0,2,5,10,--

R106)

0,0,0,0,0,0,0,0,2,6,-->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,--0,0,0,0,0,0,0,0,2,6,--0,0,0,0,0,0,0,0,2,6,8,--0,0,0,0,0,0,0,0,2,6,9,--0,0,0,0,0,0,0,0,0,2,6,10,--

R107)

0,0,0,0,0,0,0,0,2,7,-->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,--0,0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,0,2,7,9,--0,0,0,0,0,0,0,0,2,7,10,--

R108)

0,0,0,0,0,0,0,0,2,8,-->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,--0,0,0,0,0,0,0,0,2,8,--0,0,0,0,0,0,0,0,2,8,10,--

R109)

0,0,0,0,0,0,0,0,2,9,-->0,0,2,1,--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,--0,0,0,0,0,0,0,0,2,9,--

R110)

0,0,0,0,0,0,0,0,3,5,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,3,5,--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,--0,0,0,0,0,0,0,0,3,5,10,--

R111)

0,0,0,0,0,0,0,0,3,6,-->0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,0,0,3,6,--0,0,0,0,0,0,0,0,3,6,8,--0,0,0,0,0,0,0,0,3,6,9,--0,0,0,0,0,0,0,0,3,6,10,--

R112)

0,0,0,0,0,0,0,0,3,7,-->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,--0,0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,0,3,7,9,--0,0,0,0,0,0,0,0,3,7,10,--

R113)

0,0,0,0,0,0,0,0,3,8,-->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,--0,0,0,0,0,0,0,0,3,8,--0,0,0,0,0,0,0,0,3,8,10,--

R114)

0,0,0,0,0,0,0,0,3,9,-->0,0,0,3,1,--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,--0,0,0,0,0,0,0,0,3,9,--

R115)

0,0,0,0,0,0,0,0,4,6,-->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,--0,0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,0,4,6,8,--0,0,0,0,0,0,0,0,4,6,9,--0,0,0,0,0,0,0,0,0,4,6,10,--

R116)

0,0,0,0,0,0,0,0,4,7,-->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,--0,0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,0,4,7,9,--0,0,0,0,0,0,0,0,4,7,10,--

R117)

0,0,0,0,0,0,0,0,4,8,-->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,--0,0,0,0,0,0,0,0,4,8,--0,0,0,0,0,0,0,4,8,10,--

R118)

0,0,0,0,0,0,0,0,4,9,-->0,0,0,0,4,1,--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,--0,0,0,0,0,0,0,4,9,--

R119)

0,0,0,0,0,0,0,0,5,7,-->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,--0,0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,0,5,7,9,--0,0,0,0,0,0,0,0,5,7,10,--

R120)

0,0,0,0,0,0,0,0,5,8,-->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,--0,0,0,0,0,0,0,0,5,8,--0,0,0,0,0,0,0,0,5,8,10,--

R121)

0,0,0,0,0,0,0,0,5,9,-->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,  
4,1,--0,0,0,3,1,--0,0,2,1,--0,0,--0,0,0,0,0,0,0,0,5,9,--

R122)

0,0,0,0,0,0,0,0,6,8,-->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,--0,0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,0,6,8,10,--

R123)

0,0,0,0,0,0,0,0,6,9,-->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,--0,0,0,3,1,--0,0,2,1,--0,0,--0,0,0,0,0,0,0,0,6,9,--

R124)

0,0,0,0,0,0,0,0,7,9,-->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,--0,0,--0,0,0,0,0,0,0,0,7,9,--

R125)

0,0,0,0,0,0,0,0,8,1,-->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,--

R126)

0,0,0,0,0,0,0,0,2,4,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,--0,0,0,0,0,0,0,2,4,  
6,--0,0,0,0,0,0,0,0,2,4,6,8,--0,0,0,0,0,0,0,0,2,4,6,9,--0,0,0,0,0,0,0,0,2,4,6,10,--

R127)

0,0,0,0,0,0,0,0,2,4,7,-->0,0,2,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,  
0,0,0,2,4,7,--0,0,0,0,0,0,0,0,2,4,7,9,--0,0,0,0,0,0,0,0,2,4,7,10,--

R128)

0,0,0,0,0,0,0,0,2,4,8,-->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,--0,0,0,0,0,0,0,0,2,4,8,--0,0,0,0,0,0,0,0,2,4,8,10,--

R129)

0,0,0,0,0,0,0,0,2,4,9,-->0,0,2,1,--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,--0,0,0,0,0,0,0,0,2,4,9,--

R130)

0,0,0,0,0,0,0,0,2,5,7,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,  
0,0,0,2,5,7,--0,0,0,0,0,0,0,0,2,5,7,9,--0,0,0,0,0,0,0,0,2,5,7,10,--

R131)

0,0,0,0,0,0,0,0,2,5,8,-->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,  
--0,0,0,0,0,0,0,0,2,5,8,--0,0,0,0,0,0,0,0,2,5,8,10,--

R132)

0,0,0,0,0,0,0,0,2,5,9,-->0,0,2,1,--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,--0,0,0,0,0,0,0,0,2,5,9,--

R133)

0,0,0,0,0,0,0,0,2,6,8,-->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,--0,0,0,0,0,0,0,2,6,8,--0,0,0,0,0,0,0,2,6,8,10,--  
R134)  
0,0,0,0,0,0,0,2,6,9,-->0,0,2,1,--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,--0,0,0,0,0,0,2,6,9,--  
R135)  
0,0,0,0,0,0,0,2,7,9,-->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,  
--0,0,2,1,--0,0,--0,0,0,0,0,0,2,7,9,--  
R136)  
0,0,0,0,0,0,0,3,5,7,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,  
0,0,0,3,5,7,--0,0,0,0,0,0,0,3,5,7,9,--0,0,0,0,0,0,0,3,5,7,10,--  
R137)  
0,0,0,0,0,0,0,3,5,8,-->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,  
--0,0,0,0,0,0,0,3,5,8,--0,0,0,0,0,0,0,3,5,8,10,--  
R138)  
0,0,0,0,0,0,0,3,5,9,-->0,0,0,3,1,--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,--0,0,0,0,0,0,0,3,5,9,--  
R139)  
0,0,0,0,0,0,0,3,6,8,-->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,  
--0,0,0,0,0,0,0,3,6,8,--0,0,0,0,0,0,0,3,6,8,10,--  
R140)  
0,0,0,0,0,0,0,3,6,9,-->0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,3,1,--0,0,  
2,1,--0,0,--0,0,0,0,0,0,0,3,6,9,--  
R141)  
0,0,0,0,0,0,0,3,7,9,-->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,  
0,2,1,--0,0,--0,0,0,0,0,0,0,3,7,9,--  
R142)  
0,0,0,0,0,0,0,4,6,8,-->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,--0,0,0,0,0,0,0,4,6,8,--0,0,0,0,0,0,0,4,6,8,10,--  
R143)  
0,0,0,0,0,0,0,4,6,9,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,3,1,--0,  
0,2,1,--0,0,--0,0,0,0,0,0,0,4,6,9,--  
R144)  
0,0,0,0,0,0,0,4,7,9,-->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,  
0,2,1,--0,0,--0,0,0,0,0,0,0,4,7,9,--  
R145)  
0,0,0,0,0,0,0,5,7,9,-->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,  
--0,0,2,1,--0,0,--0,0,0,0,0,0,0,5,7,9,--  
R146)  
0,0,0,0,0,0,2,4,6,8,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,--0,0,0,0,0,0,  
2,4,6,8,--0,0,0,0,0,0,2,4,6,8,10,--  
R147)  
0,0,0,0,0,0,2,4,6,9,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,--0,  
0,0,0,0,0,2,4,6,9,--  
R148)  
0,0,0,0,0,0,2,4,7,9,-->0,0,2,1,--0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,--0,  
0,0,0,0,0,2,4,7,9,--  
R149)  
0,0,0,0,0,0,2,5,7,9,-->0,0,2,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,--0,  
0,0,0,0,0,2,5,7,9,--  
R150)

0,0,0,0,0,0,3,5,7,9,-->0,0,0,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,--0,  
0,0,0,0,0,3,5,7,9,--

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,:

LEN=11) 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,:



0,0,0,0,0,0,0,0,0,0,10, : 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, : 0,0,0,0,0,0,0,0,0,2,10, : 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, : 0,0,0,0,0,0,0,0,0,3,10, : 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, :  
 0,0,0,0,0,0,0,0,0,4,10, : 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, : 0,0,0,0,0,0,0,0,0,5,10, : 0,0,0,0,0,0,0,0,0,6,8, :  
 0,0,0,0,0,0,0,0,0,6,9, : 0,0,0,0,0,0,0,0,0,6,10, : 0,0,0,0,0,0,0,0,0,7,9, :  
 0,0,0,0,0,0,0,0,0,7,10, : 0,0,0,0,0,0,0,0,0,8,10, : 0,0,0,0,0,0,0,0,0,9,1, :  
 0,0,0,0,0,0,0,0,0,2,4,6, : 0,0,0,0,0,0,0,0,0,2,4,7, : 0,0,0,0,0,0,0,0,0,2,4,8, :  
 0,0,0,0,0,0,0,0,0,2,4,9, : 0,0,0,0,0,0,0,0,0,2,4,10, : 0,0,0,0,0,0,0,0,0,2,5,7, :  
 0,0,0,0,0,0,0,0,0,2,5,8, : 0,0,0,0,0,0,0,0,0,2,5,9, : 0,0,0,0,0,0,0,0,0,2,5,10, :  
 0,0,0,0,0,0,0,0,0,2,6,8, : 0,0,0,0,0,0,0,0,0,2,6,9, : 0,0,0,0,0,0,0,0,0,2,6,10, :  
 0,0,0,0,0,0,0,0,0,2,7,9, : 0,0,0,0,0,0,0,0,0,2,7,10, : 0,0,0,0,0,0,0,0,0,2,8,10, :  
 0,0,0,0,0,0,0,0,0,3,5,7, : 0,0,0,0,0,0,0,0,0,3,5,8, : 0,0,0,0,0,0,0,0,0,3,5,9, :  
 0,0,0,0,0,0,0,0,0,3,5,10, : 0,0,0,0,0,0,0,0,0,3,6,8, : 0,0,0,0,0,0,0,0,0,3,6,9, :  
 0,0,0,0,0,0,0,0,0,3,6,10, : 0,0,0,0,0,0,0,0,0,3,7,9, : 0,0,0,0,0,0,0,0,0,3,7,10, :  
 0,0,0,0,0,0,0,0,0,3,8,10, : 0,0,0,0,0,0,0,0,0,4,6,8, : 0,0,0,0,0,0,0,0,0,4,6,9, :  
 0,0,0,0,0,0,0,0,0,4,6,10, : 0,0,0,0,0,0,0,0,0,4,7,9, : 0,0,0,0,0,0,0,0,0,4,7,10, :  
 0,0,0,0,0,0,0,0,0,4,8,10, : 0,0,0,0,0,0,0,0,0,5,7,9, : 0,0,0,0,0,0,0,0,0,5,7,10, :  
 0,0,0,0,0,0,0,0,0,5,8,10, : 0,0,0,0,0,0,0,0,0,6,8,10, : 0,0,0,0,0,0,0,0,2,4,6,8, :  
 0,0,0,0,0,0,0,0,2,4,6,9, : 0,0,0,0,0,0,0,0,2,4,6,10, : 0,0,0,0,0,0,0,0,2,4,7,9, :  
 0,0,0,0,0,0,0,0,2,4,7,10, : 0,0,0,0,0,0,0,0,2,4,8,10, : 0,0,0,0,0,0,0,0,2,5,7,9, :  
 0,0,0,0,0,0,0,0,2,5,7,10, : 0,0,0,0,0,0,0,0,2,5,8,10, : 0,0,0,0,0,0,0,0,2,6,8,10, :  
 0,0,0,0,0,0,0,0,3,5,7,9, : 0,0,0,0,0,0,0,0,3,5,7,10, : 0,0,0,0,0,0,0,0,3,5,8,10, :  
 0,0,0,0,0,0,0,0,3,6,8,10, : 0,0,0,0,0,0,0,0,4,6,8,10, : 0,0,0,0,0,0,0,2,4,6,8,10, :  
 Number new nodes in level n is given by : 1,1,2,4,6,9,14,22,35,56,90,

-----Class

1489-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][100][101][102][120][201]]$

-----  
 --  
 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,-->  
 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) 0,0,0,0,3,2,-->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,--0,0,0,0,2,--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,--

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,--

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)

0,0,0,0,0,0,2,-->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)

0,0,0,0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R30)

0,0,0,0,0,0,4,-->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,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R31)

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,--0,0,2,--0,0,0,3,--

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,--0,0,0,0,0,0,0,6,--0,0,--0,0,2,--

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,--

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,--

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,--0,0,0,0,0,0,0,0,0,2,--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,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

R37)

0,0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,0,0,0,3,--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,--

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,--0,0,0,0,0,0,0,0,0,4,--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,--

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,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

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,--0,0,2,--0,0,3,--

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,--0,0,0,0,0,0,0,0,7,--0,0,--0,0,2,--

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,--0,0,0,0,0,0,0,0,8,7,--0,0,0,0,0,0,0,0,8,--0,--

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,--

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,--0,0,0,0,0,0,0,0,0,0,0,0,--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,--0,0,0,0,0,0,0,0,0,0,0,10,--

R45)

0,0,0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,--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)

0,0,0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,0,0,0,0,3,--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,--

R47)

0,0,0,0,0,0,0,0,0,4,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,0,0,0,0,4,--

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)

0,0,0,0,0,0,0,0,0,5,-->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,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,-

R49)

0,0,0,0,0,0,0,0,0,6,-->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,--0,0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R50)

0,0,0,0,0,0,0,0,0,7,-->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,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,2,--0,0,0,3,--

R51)

0,0,0,0,0,0,0,0,0,8,-->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,--0,0,0,2,--

R52)

0,0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,0,9,8,--0,0,0,0,0,0,0,9,--0,--

R53)

0,0,0,0,0,0,0,0,8,7,-->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,--

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, : 0,0,0,0,0,0,5,4, :

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, : 0,0,0,0,0,0,0,6,5, :

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, :

LEN=11) 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, : 0,0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,0,9,8, :

Number new nodes in level n is given by : 1,1,2,4,5,6,7,8,9,10,11,

-----Class

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][100][101][102][120][210]]$

-----  
--

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)  $0,0,2,1, -->$

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)  $0,0,0,0,4, -->0,0,0,4,1, --0,0,0,3,1, --0,0,2,1, --0,0,0,0,0,4, --0, --$

R13)  $0,0,0,3,1, -->0,0,2,1, --$

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)  $0,0,0,0,4,1, -->0,0,0,3,1, --0,0,2,1, --$

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,--0,0,0,0,0,0,0,6,--0,--

R26) 0,0,0,0,0,5,1,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--

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,--0,0,0,0,0,0,0,0,2,--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,--0,0,0,0,0,0,0,0,2,--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,--

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,--0,0,0,0,0,0,0,0,2,--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,--0,0,0,0,0,0,0,2,--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,--0,0,0,0,0,2,--0,0,0,3,--

R32)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,6,1,--0,0,0,0,5,1,--0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,6,--0,0,0,2,--

R33)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,7,1,--0,0,0,0,0,6,1,--0,0,0,0,5,1,--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,--

R34) 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,--

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,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,0,0,2,--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,--0,0,0,0,0,0,0,7,--

R37)

0,0,0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,3,--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,--

R38)

0,0,0,0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,0,4,--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,--

R39)

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,--0,0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R40)

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,--0,0,0,0,2,--0,0,0,3,--

R41)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,7,1,--0,0,0,0,6,1,--0,0,0,0,5,1,--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)

0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,8,1,--0,0,0,0,7,1,--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,--0,0,0,0,0,0,0,0,0,8,--0,--

R43)

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,--

R44)

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--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,--0,0,0,0,0,0,0,0,0,5,--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,  
0,0,0,0,9,--0,0,0,0,0,0,0,0,0,10,--

R45)

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,--0,0,0,0,0,0,0,8,--

R46)

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,  
--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--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)

0,0,0,0,0,0,0,0,4,-->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,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,  
,0,0,0,6,--

R48)

0,0,0,0,0,0,0,0,5,-->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,--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)

0,0,0,0,0,0,0,0,6,-->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,--0,0,0,2,--0,0,0,3,--0,0,0,4,--

R50)

0,0,0,0,0,0,0,0,7,-->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,--0,0,2,--0,0,3,--

R51)

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,--0,0,0,0,0,0,6,1,--  
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,--0,0,--0,  
,0,2,--

R52)

0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,9,1,--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,  
,0,0,0,0,0,9,--0,--

R53)

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,--

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,: 0,0,0,0,0,0,5,1,:  
 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,: 0,0,0,0,0,0,0,6,1,:  
 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,: 0,0,0,0,0,0,0,0,7,1,:  
 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,:  
 0,0,0,0,0,0,0,0,0,8,1,:  
 LEN=11) 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,:  
 0,0,0,0,0,0,0,0,0,0,10,: 0,0,0,0,0,0,0,0,0,0,9,1,:  
 Number new nodes in level n is given by : 1,1,2,4,5,6,7,8,9,10,11,

-----Class

1491-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][100][101][102][201][210]]$

-----

--

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,--
- 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,--0,0,2,1,--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,--0,0,0,0,3,--0,0,0,0,4,--
- R11) 0,0,0,0,3,-->0,0,2,1,--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)
  - 0,0,0,0,0,0,-->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,-->0,0,2,1,--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,--
- R15)
  - 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,--0,0,0,0,0,4,--0,0,0,0,0,5,--
- R16)
  - 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,--0,0,0,0,0,5,--
- R17)



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,  
--

R18)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
3,--0,0,0,0,0,0,0,4,--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)

0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--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,-->0,0,2,1,--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,  
4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R21)

0,0,0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,4,--0,  
0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R22)

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,--0,0,0,0,0,0,6,--

R23)

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,--

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,--0,0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,  
,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R25)

0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,  
--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)

0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,3,--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,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,  
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,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,5,--0,0,  
0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R29)

0,0,0,0,0,0,0,6,-->0,0,2,1,--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,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R30)

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,--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,--0,0,0,0,0,0,0,0,2,  
--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--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)

0,0,0,0,0,0,0,0,2,-->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,  
0,0,0,3,--0,0,0,0,0,0,0,4,--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,--

R33)

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,--  
0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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,-->0,0,2,1,--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,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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,-->0,0,2,1,--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,--0,0,0,0,0,0,0,0,6,--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,-->0,0,2,1,--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,--0,0,0,0,0,0,0,0,6,--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,-->0,0,2,1,--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,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R38)

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,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,8,--

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,--0,0,0,0,0,0,0,0,0,0,0,0,--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,  
,0,0,0,0,0,0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,0,0,0,0,10,--

R40)

0,0,0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,2,--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)

0,0,0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,0,0,3,--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)

0,0,0,0,0,0,0,0,0,4,-->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,  
0,0,0,0,0,0,4,--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)

0,0,0,0,0,0,0,0,0,5,-->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,  
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,--0,0,0,0,0,0,0,0,0,9,--

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,  
0,0,0,0,0,6,--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,--0,0,  
,0,0,0,0,0,0,0,9,--

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,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,  
,0,9,--

R46)

0,0,0,0,0,0,0,0,0,8,-->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,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--  
R47)

0,0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,0,0,9,--0,0,0,0,0,0,0,0,9,--

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,:

LEN=11) 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,:

0,0,0,0,0,0,0,0,0,0,10,:

Number new nodes in level n is given by : 1,1,2,4,4,5,6,7,8,9,10,

-----Class

1492-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][100][101][110][120][201]]$

--

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,-->0,0,2,1,--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,-->0,0,2,1,--0,0,0,3,2,--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,-->0,0,0,2,1,--0,0,0,0,3,2,--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) 0,0,0,2,1,-->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,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--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,-->0,0,0,0,2,1,--0,0,0,0,0,3,2,--0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--

R18)

0,0,0,0,0,4,-->0,0,0,2,1,--0,0,0,0,3,2,--0,0,0,0,0,4,3,--0,0,0,--0,0,--0,0,2,--

R19) 0,0,0,0,0,5,-->0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,5,4,--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) 0,0,0,0,3,2,-->0,0,0,0,2,1,--0,0,0,0,--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,--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,-->0,0,0,0,0,2,1,--0,0,0,0,0,0,3,2,--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,-->0,0,0,0,2,1,--0,0,0,0,0,3,2,--0,0,0,0,0,0,4,3,--0,0,0,0,--0,0,0,--0,0,0,2,--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,--0,0,2,--

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,--

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,--0,0,0,2,--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,--0,0,2,--

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,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--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)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--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,--0,0,0,0,0,--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,  
--0,0,0,0,--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,--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,--0,0,2,--

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,--

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,--0,0,0,0,0,6,--

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,--0,0,0,0,0,0,0,0,0,2,  
--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,--

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,  
0,0,0,0,2,--0,0,0,0,0,0,3,--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,-->0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,3,2,--0,0,0,0,0,0,0,--0,0,  
0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,  
,0,6,--

R48)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,3,2,--0,0,0,0,0,0,0,0,4,3,--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,--

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,--0,0,0,0,0,0,4,3,--0,0,0,0,  
0,0,0,0,5,4,--0,0,0,0,0,--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,--0,0,0,0,0,0,0,  
5,4,--0,0,0,0,0,0,0,6,5,--0,0,0,0,--0,0,0,--0,0,2,--0,0,3,--

R51)

0,0,0,0,0,0,0,0,7,-->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,--0,0,2,--

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,--0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,8,7,--0,0,--0,--

R53)

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,--0,0,0,0,0,0,4,--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,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R55)

0,0,0,0,0,0,0,4,3,-->0,0,0,0,0,0,2,1,--0,0,0,0,0,0,3,2,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R56)

0,0,0,0,0,0,0,5,4,-->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,--0,0,0,0,2,--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,--0,0,0,0,0,0,6,5,--0,0,--0,0,2,--

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,--0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,2,--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,--0,0,0,0,0,0,0,0,0,0,0,10,--

R60)

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,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--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,--

R61)

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,--0,0,0,0,0,0,0,0,0,--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,--

R62)

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,--0,0,0,0,0,0,0,0,0,4,3,--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,--0,0,0,0,0,0,6,--

R63)

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,--0,0,0,0,0,0,0,5,4,--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,--

R64)

0,0,0,0,0,0,0,0,6,-->0,0,0,0,2,1,--0,0,0,0,0,3,2,--0,0,0,0,0,4,3,--0,0,0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--0,0,0,0,--0,0,0,2,--0,0,0,3,--0,0,0,4,--

R65)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,2,1,--0,0,0,0,0,3,2,--0,0,0,0,0,4,3,--0,0,0,0,0,0,5,4,--0,0,0,0,0,0,6,5,--0,0,0,0,0,0,7,6,--0,0,0,0,--0,0,0,2,--0,0,0,3,--

R66)

0,0,0,0,0,0,0,0,0,8,-->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,--  
0,0,0,0,0,0,0,0,6,5,--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,  
,2,--

R67)

0,0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,9,8,--0,0,--0,  
,--

R68)

0,0,0,0,0,0,0,0,2,1,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--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,--

R69)

0,0,0,0,0,0,0,0,3,2,-->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,  
0,0,0,0,0,3,--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,  
,--

R70)

0,0,0,0,0,0,0,0,4,3,-->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,  
0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--

R71)

0,0,0,0,0,0,0,0,5,4,-->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,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--

R72)

0,0,0,0,0,0,0,0,6,5,-->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,--0,0,0,2,--0,0,0,3,--0,0,0,4,--

R73)

0,0,0,0,0,0,0,0,7,6,-->0,0,0,0,2,1,--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,--0,0,2,--0,0,3,--

R74)

0,0,0,0,0,0,0,0,8,7,-->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,--0,0,0,0,0,7,6,--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,:  
 0,0,0,0,0,0,0,0,2,1,: 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,:  
 LEN=11) 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,: 0,0,0,0,0,0,0,0,0,0,6,:  
 0,0,0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,0,0,0,9,:  
 0,0,0,0,0,0,0,0,0,0,0,10,: 0,0,0,0,0,0,0,0,0,0,2,1,: 0,0,0,0,0,0,0,0,0,0,3,2,:  
 0,0,0,0,0,0,0,0,0,0,4,3,: 0,0,0,0,0,0,0,0,0,0,5,4,: 0,0,0,0,0,0,0,0,0,0,6,5,:  
 0,0,0,0,0,0,0,0,0,0,7,6,: 0,0,0,0,0,0,0,0,0,0,8,7,: 0,0,0,0,0,0,0,0,0,0,9,8,:  
 Number new nodes in level n is given by : 1,1,2,4,6,8,10,12,14,16,18,

-----Class

1493-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][100][101][110][120][210]]$

--

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,-->0,0,2,1,--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,--0,0,2,1,--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,--0,0,0,0,5,--
- 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,--0,0,0,0,2,1,--0,0,0,--0,0,--0,0,2,--
- R12) 0,0,0,0,4,-->0,0,0,0,4,1,--0,0,0,0,3,1,--0,0,2,1,--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,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--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,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--
- R17) 0,0,0,0,0,3,-->0,0,0,0,0,3,1,--0,0,0,0,2,1,--0,0,0,0,0,--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,--0,0,0,0,3,1,--0,0,0,2,1,--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) 0,0,0,0,2,1,-->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,--0,0,0,2,--0,0,0,3,--
- R22) 0,0,0,0,4,1,-->0,0,0,0,3,1,--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,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,  
0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--

R25)

0,0,0,0,0,0,3,-->0,0,0,0,0,0,3,1,--0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,2,  
--0,0,0,0,0,3,--0,0,0,0,0,4,--

R26)

0,0,0,0,0,0,4,-->0,0,0,0,0,0,4,1,--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,--  
0,0,0,2,--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,--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,--

R29)

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,  
--

R30)

0,0,0,0,0,3,1,-->0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--

R31) 0,0,0,0,0,4,1,-->0,0,0,0,0,0,3,1,--0,0,0,0,0,2,1,--0,0,0,0,0,0,2,--0,0,0,0,3,--

R32) 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,--0,0,0,0,2,--

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,--0,0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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,-->0,0,0,0,0,0,0,0,2,1,--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,  
--0,0,0,0,0,0,3,--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,-->0,0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--  
0,0,0,0,0,2,--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,-->0,0,0,0,0,0,0,0,4,1,--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,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R37)

0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,0,5,1,--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,--0,0,0,2,--0,0,0,3,--

R38)

0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,0,6,1,--0,0,0,0,0,0,0,5,1,--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,--0,0,0,2,--

R39)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,6,1,--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,--

R40)

0,0,0,0,0,0,2,1,-->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,  
0,0,0,0,0,5,--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,--0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,2,--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,--0,0,0,0,0,0,0,0,0,0,--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,--

R47)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,0,2,1,--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,--

R48)

0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,4,1,--0,0,0,0,0,0,0,3,1,--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,--

R49)

0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,0,0,0,5,1,--0,0,0,0,0,0,0,4,1,--0,0,0,0,0,0,3,1,--0,0,0,0,0,2,1,--0,0,0,0,0,--0,0,0,0,2,--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,--0,0,0,0,0,0,0,5,1,--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,--0,0,0,2,--0,0,0,3,--

R51)

0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,0,7,1,--0,0,0,0,0,0,0,6,1,--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,--0,0,2,--

R52)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,8,1,--0,0,0,0,0,0,0,7,1,--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,--

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,--0,0,0,0,0,0,3,--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,--

R54)

0,0,0,0,0,0,0,3,1,-->0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,0,3,--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,--0,0,0,0,4,--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,--0,0,0,2,--0,0,0,3,--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,--

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,--0,0,0,0,0,0,0,0,0,0,0,0,--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,--0,0,0,0,0,0,0,0,0,0,0,10,--

R60)

0,0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,0,0,--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,--

R61)

0,0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

R62)

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,--0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--

R63)

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,--0,0,0,0,0,0,0,3,1,--0,0,0,0,0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R64)

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,--0,0,0,0,0,0,0,4,1,--0,0,0,0,0,0,3,1,--0,0,0,0,0,2,1,--0,0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R65)

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,--0,0,0,0,0,0,0,5,1,--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,--0,0,0,0,2,--0,0,0,0,3,--

R66)

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,--0,0,0,0,0,0,0,6,1,--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,--0,0,0,0,2,--

R67)

0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,9,1,--0,0,0,0,0,0,0,0,8,1,--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,--0,0,0,0,3,1,--0,0,0,2,1,--0,0,0,0,--

R68)

0,0,0,0,0,0,0,0,2,1,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R69)

0,0,0,0,0,0,0,0,3,1,-->0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--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

,--  
R70)  
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,  
0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R71)  
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,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--

R72)  
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,--  
0,0,0,0,0,0,2,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--

R73)  
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,--  
0,0,0,0,0,0,3,1,--0,0,0,0,0,0,2,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--

R74)  
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,--  
0,0,0,0,0,0,4,1,--0,0,0,0,0,0,3,1,--0,0,0,0,0,0,2,1,--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, : 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, :

LEN=11) 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, :

0,0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,0,2,1, : 0,0,0,0,0,0,0,0,0,3,1, :

0,0,0,0,0,0,0,0,0,4,1, : 0,0,0,0,0,0,0,0,0,5,1, : 0,0,0,0,0,0,0,0,0,6,1, :

0,0,0,0,0,0,0,0,0,7,1, : 0,0,0,0,0,0,0,0,0,8,1, : 0,0,0,0,0,0,0,0,0,9,1, :

Number new nodes in level n is given by : 1,1,2,4,6,8,10,12,14,16,18,

-----Class

1494-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][100][101][110][201][210]]$

--

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)  $0,0,2, -->0,0,2,1, --0,0, --0,0,2, --$

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)  $0,0,0,3, -->0,0,2,1, --0,0,2,1, --0,0, --0,0,0,3, --$

R8)  $0,0,2,1, -->0,0, --0,0,2, --$

R9)

$0,0,0,0,0, -->0,0,0,0,0,0, --0,0,0,0,0, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5, --$

R10)  $0,0,0,0,2, -->0,0,0,0,2,1, --0,0,0,0, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --$

R11)  $0,0,0,0,3, -->0,0,0,2,1, --0,0,0,2,1, --0,0,0, --0,0,0,0,3, --0,0,0,0,4, --$

R12)  $0,0,0,0,4, -->0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0, --0,0,0,0,4, --$

R13)  $0,0,0,2,1, -->0,0,0, --0,0,0,2, --0,0,0,3, --$

R14)

$0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,0,0,0,0,0, --0,0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --$

R15)

$0,0,0,0,0,2, -->0,0,0,0,0,2,1, --0,0,0,0,0, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5, --$

R16)

$0,0,0,0,0,3, -->0,0,0,0,2,1, --0,0,0,0,2,1, --0,0,0,0, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5, --$

R17)

$0,0,0,0,0,4, -->0,0,0,2,1, --0,0,0,2,1, --0,0,0,2,1, --0,0,0, --0,0,0,0,0,4, --0,0,0,0,0,5, --$

R18)  $0,0,0,0,0,5, -->0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0, --0,0,0,0,0,5, --$

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)

$0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0, --0,0,0,0,0,0,0,2, --0,0,0,0,0,0,0,3, --0,0,0,0,0,0,0,4, --0,0,0,0,0,0,0,5, --0,0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --$

R21)

$0,0,0,0,0,0,2, -->0,0,0,0,0,0,2,1, --0,0,0,0,0,0, --0,0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --$

R22)

$0,0,0,0,0,0,3, -->0,0,0,0,0,2,1, --0,0,0,0,0,2,1, --0,0,0,0,0, --0,0,0,0,0,0,3, --0,0,0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --$

R23)

$0,0,0,0,0,0,4, -->0,0,0,0,2,1, --0,0,0,0,2,1, --0,0,0,0,2,1, --0,0,0,0, --0,0,0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --$

R24)

$0,0,0,0,0,0,5, -->0,0,0,2,1, --0,0,0,2,1, --0,0,0,2,1, --0,0,0,2,1, --0,0,0, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --$

R25)

$0,0,0,0,0,0,6, -->0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0, --0,0,0,0,0,0,6, --$

0,6,--

R26)

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,  
--

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)

0,0,0,0,0,0,2,-->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,  
0,0,3,--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)

0,0,0,0,0,0,3,-->0,0,0,0,0,0,2,1,--0,0,0,0,0,0,2,1,--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,--0,0,0,0,0,0,7,--

R30)

0,0,0,0,0,0,4,-->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,  
0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R31)

0,0,0,0,0,0,5,-->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,  
--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R32)

0,0,0,0,0,0,6,-->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,--0,0,0,0,0,0,6,--0,0,0,0,0,0,7,--

R33)

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,--

R34)

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,--

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,--0,0,0,0,0,0,0,0,2,  
--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--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,--

R36)

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,--0,0,0,0,0,0,0,2,--0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--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)

0,0,0,0,0,0,0,3,-->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,--0,0,0,  
0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--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,--

R38)

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,--0,0,0,0,0,0,4,--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)

0,0,0,0,0,0,0,5,-->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,--0,0,0,0,0,0,0,5,--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,--

R40)

0,0,0,0,0,0,0,0,6,-->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,--0,0,0,0,0,0,0,0,6,--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,-->0,0,0,2,1,--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,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R42)

0,0,0,0,0,0,0,0,8,-->0,0,2,1,--0,0,2,1,--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,--

R43)

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,--

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,--0,0,0,0,0,0,0,0,0,0,0,0,--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,--0,0,0,0,0,0,0,0,0,0,5,--0,  
,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,--0,0,0,0,0,0,0,0,0,0,10,--

R45)

0,0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,0,0,--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)

0,0,0,0,0,0,0,0,0,3,-->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,  
--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,--

R47)

0,0,0,0,0,0,0,0,0,4,-->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,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--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,--

R48)

0,0,0,0,0,0,0,0,0,5,-->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,--0,0,0,0,0,0,0,0,5,--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,--

R49)

0,0,0,0,0,0,0,0,0,6,-->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,--0,0,0,0,0,0,0,6,--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,--

R50)

0,0,0,0,0,0,0,0,0,7,-->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,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,  
,0,0,0,0,0,9,--

R51)

0,0,0,0,0,0,0,0,0,8,-->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,--0,0,0,2,1,--0,0,0,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R52)

0,0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,0,9,--

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,--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,: 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, : 0,0,0,0,0,0,0,2,1, :
  - 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, :
  - LEN=11) 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, :
  - 0,0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,0,0,2,1, :
- Number new nodes in level n is given by : 1,1,2,4,5,6,7,8,9,10,11,

-----Class

1495-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][100][101][120][201][210]]$

-----

--

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,-->0,0,2,1,--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,--0,0,2,1,--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,
- 0,0,0,0,5,--
- 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,--0,0,0,2,1,--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) 0,0,0,2,1,-->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,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--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,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

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,--0,0,0,2,--0,0,0,3,--

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,--0,0,2,--

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) 0,0,0,0,2,1,-->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,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--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,--0,0,0,0,0,2,--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,-->0,0,0,0,0,2,1,--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,--

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,--0,0,0,2,--0,0,0,3,--

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,--0,0,2,--

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,--

R26)

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,--

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,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--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,--

R28)

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,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--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,-->0,0,0,0,0,2,1,--0,0,0,0,0,2,1,--0,0,0,0,0,0,0,3,--0,0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--

R30)

0,0,0,0,0,0,4,-->0,0,0,0,0,2,1,--0,0,0,0,0,2,1,--0,0,0,0,0,2,1,--0,0,0,0,0,0,0,4,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R31)

0,0,0,0,0,0,5,-->0,0,0,0,2,1,--0,0,0,0,2,1,--0,0,0,0,2,1,--0,0,0,0,2,1,--0,0,0,0,0,0,0,5,--0,0,0,--0,0,0,2,--0,0,0,3,--

R32)

0,0,0,0,0,0,6,-->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,--0,0,0,0,0,0,0,6,--0,0,--0,0,2,--

R33)

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,--0,0,0,0,0,0,7,--0,--

R34)

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,--

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,--0,0,0,0,0,0,0,0,0,0,3,--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,--

R36)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,2,--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,--

R37)

0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--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,-->0,0,0,0,0,0,2,1,--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,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--

R39)

0,0,0,0,0,0,0,0,5,-->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,--0,0,0,0,0,0,0,0,5,--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,-->0,0,0,0,2,1,--0,0,0,0,2,1,--0,0,0,0,2,1,--0,0,0,0,2,1,--0,0,0,0,2,1,--0,0,0,0,0,0,0,0,6,--0,0,0,--0,0,2,--0,0,3,--

R41)

0,0,0,0,0,0,0,0,7,-->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,--0,0,2,1,--0,0,0,0,0,0,0,0,7,--0,0,--0,0,2,--

R42)

0,0,0,0,0,0,0,0,8,-->0,0,2,1,--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,--0,0,0,0,0,0,0,0,8,--0,--

R43)

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,--

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,--0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,2,--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,--0,0,0,0,0,0,0,0,0,0,0,10,--

R45)

0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,2,--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,--

R46)

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,--0,0,0,0,0,0,0,0,0,0,3,--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,--

R47)

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,--

0,0,0,0,0,0,0,0,0,0,4,--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)

0,0,0,0,0,0,0,0,0,5,-->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,--0,0,0,0,0,0,0,0,0,5,--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)

0,0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,2,1,--0,0,0,0,0,0,2,1,--0,0,0,0,0,0,2,1,--0,0,0,0,0,2,  
1,--0,0,0,0,0,2,1,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,  
,0,4,--

R50)

0,0,0,0,0,0,0,0,0,7,-->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,--0,0,0,0,0,0,0,0,0,7,--0,0,0,--0,0,0,2,--0,0,0,3,--

R51)

0,0,0,0,0,0,0,0,0,8,-->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,--0,0,0,2,1,--0,0,0,0,0,0,0,0,0,8,--0,0,--0,0,2,--

R52)

0,0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,0,0,9,--0,--

R53)

0,0,0,0,0,0,0,0,2,1,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--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,--

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, : 0,0,0,0,0,0,0,2,1, :

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, :

LEN=11) 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, :

0,0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,0,2,1, :

Number new nodes in level n is given by : 1,1,2,4,5,6,7,8,9,10,11,

-----Class

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][100][102][110][120][201]]$

--

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)  $0,0,2,1, -->0,0,2,1, --$

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)  $0,0,0,0,3, -->0,0,2,1, --0,0,0,0,3,2, --0,0,0, --0,0, --0,0,2, --$

R12)  $0,0,0,0,4, -->0,0,2,1, --0,0,0,0,3,2, --0,0,0,0,4,3, --0,0, --0, --$

R13)  $0,0,0,3,2, -->0,0,0,3,2,1, --0,0,2,1, --$

R14)

$0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,0,0,0,0,0, --0,0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --$

R15)

$0,0,0,0,0,2, -->0,0,2,1, --0,0,0,0,0,0, --0,0,0,0, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --$

R16)  $0,0,0,0,0,3, -->0,0,2,1, --0,0,0,0,3,2, --0,0,0,0, --0,0,0, --0,0,0,2, --0,0,0,3, --$

R17)  $0,0,0,0,0,4, -->0,0,2,1, --0,0,0,0,3,2, --0,0,0,0,4,3, --0,0,0, --0,0, --0,0,2, --$

R18)  $0,0,0,0,0,5, -->0,0,2,1, --0,0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,5,4, --0,0, --0, --$

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)

$0,0,0,0,0,0,2, -->0,0,2,1, --0,0,0,0,0,0, --0,0,0,0,0, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5, --$

R23)

$0,0,0,0,0,0,3, -->0,0,2,1, --0,0,0,0,3,2, --0,0,0,0,0, --0,0,0,0, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --$

R24)

$0,0,0,0,0,0,4, -->0,0,2,1, --0,0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0, --0,0,0, --0,0,0,2, --0,0,0,3, --$

R25)

$0,0,0,0,0,0,5, -->0,0,2,1, --0,0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,5,4, --0,0,0, --0,0, --0,0,2, --$

R26)

$0,0,0,0,0,0,6, -->0,0,2,1, --0,0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,5,4, --0,0,0,0,0,0,6,5, --0,0, --0, --$

R27)  $0,0,0,0,0,5,4, -->0,0,0,3,2,1, --0,0,0,0,4,3,2, --0,0,0,0,5,4,3, --0,0,2,1, --$

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,--0,0,0,0,0,0,0,0,0,2,--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,--

R30)

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,--

R31)

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,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--

R32)

0,0,0,0,0,0,0,0,4,-->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,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R33)

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,--0,0,0,0,2,--0,0,0,0,3,--

R34)

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,--0,0,0,0,2,--

R35)

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,--0,0,--

R36)

0,0,0,0,0,0,0,0,6,5,-->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,--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,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--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,--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,--0,0,0,0,0,2,--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,--0,0,0,0,--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,--0,0,0,0,2,--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,--0,0,0,0,0,0,6,5,--0,0,0,0,0,0,7,6,--0,0,0,0,--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,--0,0,0,0,0,0,0,8,7,--0,0,--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,--  
R48)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,--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,--0,0,0,0,0,0,0,0,0,10,--  
R49)  
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,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--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,--0,0,0,0,0,0,0,0,8,--  
R50)  
0,0,0,0,0,0,0,0,0,3,-->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,  
0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--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)  
0,0,0,0,0,0,0,0,0,4,-->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,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6  
,--  
R52)  
0,0,0,0,0,0,0,0,0,5,-->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,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R53)  
0,0,0,0,0,0,0,0,0,6,-->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,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R54)  
0,0,0,0,0,0,0,0,0,7,-->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,--0,0,0,2,--0,0,0,3,--  
R55)  
0,0,0,0,0,0,0,0,0,8,-->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,--0,0,2,--  
R56)  
0,0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,0,9,8,--0,0,--0  
,--  
R57)  
0,0,0,0,0,0,0,0,8,7,-->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,--0,0,0,0,0,0,0,7,6,5,--0,0,0,0,0,0,0,0,8,7,6,--0,0,2,1,--  
R58)  
0,0,0,0,0,0,0,7,6,5,-->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,--

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, : 0,0,0,0,0,0,0,7,6, : 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, :  
 LEN=11) 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, :  
 0,0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,0,0,9,8, : 0,0,0,0,0,0,0,0,8,7,6, :  
 Number new nodes in level n is given by : 1,1,2,4,5,7,8,9,10,11,12,

-----Class

1497-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][100][102][110][120][210]]$

-----

--

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, --

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, -->0,0,2,1, --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, --0,0,0,0,2, --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, --0,0,0, --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, --0,0,2, --

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, --

R19) 0,0,0,0,4,1, -->0,0,0,3,1, --0,0,2,1, --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,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

R21)

0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--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,--0,0,0,0,0,--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,--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,--0,0,2,--

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,--0,0,0,2,1,--0,0,--0,0,--

R26) 0,0,0,0,0,5,1,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,2,1,--

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,--0,0,0,0,0,0,0,0,2,--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,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--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,--0,0,0,0,0,0,--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,--0,0,0,0,--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,--0,0,0,0,2,--0,0,0,0,3,--

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,--0,0,0,2,1,--0,0,0,0,--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,--0,0,0,0,3,1,--0,0,0,2,1,--0,0,0,--

R34)

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,--

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,--0,0,0,0,0,0,0,0,0,2,--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,--0,0,0,0,0,0,0,0,--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



,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,--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,--

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,--0,0,0,0,0,0,--  
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,  
--0,0,0,0,0,--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,--0,0,0,2,--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,--0,0,0,0,0,5,1,--0,0,0,0,0,  
4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,--0,0,--0,0,2,--

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,--0,0,0,0,0,6,1,--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,--

R43)

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,--0,0,2,1,--

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,--0,0,0,0,0,0,0,0,0,0,--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,--0,0,0,0,0,0,0,0,0,10,--

R45)

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,  
0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,  
,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R46)

0,0,0,0,0,0,0,0,0,3,-->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,--0,0,  
0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--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)

0,0,0,0,0,0,0,0,0,4,-->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,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,  
,--

R48)

0,0,0,0,0,0,0,0,0,5,-->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,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R49)

0,0,0,0,0,0,0,0,0,6,-->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,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R50)

0,0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,7,1,--0,0,0,0,0,6,1,--0,0,0,0,0,5,1,--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,--0,0,0,3,--

R51)

0,0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,8,1,--0,0,0,0,0,7,1,--0,0,0,0,0,6,1,--

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,--  
R52)  
0,0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,0,9,1,--0,0,0,0,0,0,0,0,8,1,--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,  
,--  
R53)  
0,0,0,0,0,0,0,0,8,1,-->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,--0,0,2,1,--  
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, :  
LEN=11) 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, :  
0,0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,0,0,9,1, :  
Number new nodes in level n is given by : 1,1,2,4,5,6,7,8,9,10,11,

-----Class

1498-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][100][102][110][201][210]]$   
-----

--  
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,--
- 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,

0,0,0,0,5,--  
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,--0,0,0,0,3,4,--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,--0,0,0,0,4,5,--  
R14) 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,--  
R15) 0,0,0,2,4,-->0,0,2,3,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,3,4,--  
R16) 0,0,0,3,4,-->0,0,2,3,1,--0,0,2,3,1,--0,0,0,0,--0,0,0,0,3,4,--  
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,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--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,--0,0,0,0,0,0,2,3,--0,0,0,0,0,0,2,4,--0,0,0,0,0,0,2,5,--  
--0,0,0,0,0,0,2,6,--  
R20)  
0,0,0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,0,3,4,--0,0,0,0,0,0,3,5,--0,0,0,0,0,0,3,6,--  
R21)  
0,0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,0,4,5,--0,0,0,0,0,0,4,6,--  
--  
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,--0,0,0,0,0,0,5,6,--  
R23)  
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,--0,0,0,0,0,0,2,5,--  
R24) 0,0,0,0,2,4,-->0,0,2,3,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,0,3,4,--0,0,0,0,0,0,3,5,--  
R25) 0,0,0,0,2,5,-->0,0,2,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,0,4,5,--  
R26) 0,0,0,0,3,4,-->0,0,2,3,1,--0,0,2,3,1,--0,0,0,0,--0,0,0,0,0,0,3,4,--0,0,0,0,0,0,3,5,--  
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,--0,0,0,0,0,0,4,5,--  
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,--0,0,0,0,0,0,4,5,--  
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,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--  
R30)  
0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,3,--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,--  
R31)  
0,0,0,0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,3,4,--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,--  
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,--0,0,0,0,0,0,0,0,4,5,--0,0,0,0,0,0,0,0,4,6,--0,0,0,0,0,0,0,0,4,7,--  
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,--0,0,0,0,0,0,0,0,5,6,--  
0,0,0,0,0,0,0,0,5,7,--  
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,--0,0,0,0,0,0,0,0,6,7,--  
R35)  
0,0,0,0,0,2,3,-->0,0,2,3,1,--0,0,0,0,0,0,--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,--  
R36)

0,0,0,0,0,2,4,-->0,0,2,3,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,3,4,--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,--0,0,0,0,0,4,5,--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,--0,0,0,0,0,5,6,--

R39)

0,0,0,0,0,3,4,-->0,0,2,3,1,--0,0,2,3,1,--0,0,0,0,--0,0,0,0,0,3,4,--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,--0,0,0,0,0,4,5,--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,--0,0,0,0,0,5,6,--

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,--0,0,0,0,0,4,5,--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,--0,0,0,0,0,5,6,  
--

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,--0,0,0,0,0,5,  
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,  
--0,0,0,0,0,0,0,2,5,--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,-->0,0,2,1,--0,0,2,1,--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,--

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,--0,0,0,0,0,0,0,4,5,--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,--

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,  
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,  
0,0,0,0,6,7,--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,  
--0,0,0,0,0,0,7,8,--

R52)

0,0,0,0,0,0,2,3,-->0,0,2,3,1,--0,0,0,0,0,0,--0,0,0,0,0,0,2,3,--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,--

R53)

0,0,0,0,0,0,2,4,-->0,0,2,3,1,--0,0,2,1,--0,0,0,0,0,--0,0,0,0,0,0,3,4,--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,--0,0,0,0,0,0,4,5,--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,--0,0,0,--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,-->0,0,2,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,--0,0,0,  
0,0,0,6,7,--

R57)

0,0,0,0,0,0,3,4,-->0,0,2,3,1,--0,0,2,3,1,--0,0,0,0,0,--0,0,0,0,0,0,3,4,--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,--0,0,0,0,0,0,4,5,--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,--0,0,0,--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,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,--0,0,  
0,0,0,0,6,7,--

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,--0,0,0,0,0,0,4,5,--  
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,--0,0,0,--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,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,2,1,--0,0,2,1,--0,0,--0,  
0,0,0,0,0,6,7,--

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,  
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,--  
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,  
--0,0,0,0,0,6,7,--

R67)

0,0,0,0,0,0,0,0,-->0,  
--0,0,0,0,0,0,0,0,0,0,3,--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,--

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,--0,0,0,0,0,0,0,0,3,4,--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,--0,0,0,0,0,0,0,0,6,7,--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,--0,0,0,0,0,0,0,0,7,8,--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,--0,0,0,0,--0,0,0,0,0,0,0,0,8,9,--

R75)

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,--

R76)

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,--0,0,0,0,0,0,0,0,3,4,--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)

0,0,0,0,0,0,0,2,5,-->0,0,2,3,1,--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)

0,0,0,0,0,0,0,2,6,-->0,0,2,3,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,0,0,0,5,6,--0,0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,0,5,8,--

R79)

0,0,0,0,0,0,0,2,7,-->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,--0,0,0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,0,6,8,--

R80)

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,--0,0,0,0,0,0,0,0,7,8,--

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,--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,--

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,--0,0,0,0,0,0,0,0,4,5,--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)

0,0,0,0,0,0,0,3,6,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,0,0,0,5,6,--0,0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,0,5,8,--

R84)

0,0,0,0,0,0,0,3,7,-->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,--0,0,0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,0,6,8,--



R100)

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,  
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,--0,0,0,0,0,0,0,0,5,10,--

R101)

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,--0,0,0,0,0,  
,0,0,0,0,6,10,--

R102)

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,--0,0,0,0,0,0,0,0,7,8,--0,0,0,0,0,0,0,0,7,9,--0,0,0,0,0,0,0,0,7,10,--

R103)

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,--0,0,0,0,0,0,0,0,8,9,--0,0,0,0,0,0,0,0,8,10,--

R104)

0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,0,9,10,--

R105)

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,--0,0,0,0,0,0,0,2,5,--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,--

R106)

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,--0,0,0,0,0,0,0,0,3,4,--  
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,--0,0,0,0,0,0,0,3,9,--

R107)

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,--0,0,0,0,0,0,0,  
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,  
,0,0,0,4,9,--

R108)

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,  
0,0,0,0,0,5,6,--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,--

R109)

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,  
--0,0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,6,9,--

R110)

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,--0,0,0,0,0,0,0,7,8,--0,0,0,0,0,0,0,7,9,--

R111)

0,0,0,0,0,0,0,2,9,-->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,  
--0,0,2,1,--0,0,--0,0,0,0,0,0,0,8,9,--

R112)

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,--0,0,0,0,0,0,0,0,3,4,  
--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,--0,0,0,0,0,0,0,0,  
,3,8,--0,0,0,0,0,0,0,3,9,--

R113)

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,--0,0,0,0,0,0,  
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,  
,0,0,0,0,4,9,--

R114)



0,0,0,0,0,0,0,0,3,6,-->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,  
0,0,0,0,0,0,5,6,--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,-  
-

R115)

0,0,0,0,0,0,0,0,3,7,-->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,--0,0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,6,9,--

R116)

0,0,0,0,0,0,0,0,3,8,-->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,--0,0,0,0,0,0,7,8,--0,0,0,0,0,0,0,7,9,--

R117)

0,0,0,0,0,0,0,0,3,9,-->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,--0,0,2,1,--0,0,--0,0,0,0,0,0,8,9,--

R118)

0,0,0,0,0,0,0,0,4,5,-->0,0,2,3,1,--0,0,2,3,1,--0,0,2,3,1,--0,0,0,0,0,0,--0,0,0,0,0,  
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,  
,0,0,0,0,0,4,9,--

R119)

0,0,0,0,0,0,0,0,4,6,-->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,  
0,0,0,0,0,0,5,6,--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  
,--

R120)

0,0,0,0,0,0,0,0,4,7,-->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,--0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,6,9,--

R121)

0,0,0,0,0,0,0,0,4,8,-->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,--0,0,0,0,0,0,7,8,--0,0,0,0,0,0,0,7,9,--

R122)

0,0,0,0,0,0,0,0,4,9,-->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,--0,0,2,1,--0,0,--0,0,0,0,0,0,8,9,--

R123)

0,0,0,0,0,0,0,0,5,6,-->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,--  
0,0,0,0,0,0,5,6,--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,--

R124)

0,0,0,0,0,0,0,0,5,7,-->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,--0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,6,9,--

R125)

0,0,0,0,0,0,0,0,5,8,-->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,--0,0,0,0,0,0,7,8,--0,0,0,0,0,0,0,7,9,--

R126)

0,0,0,0,0,0,0,0,5,9,-->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,--0,0,2,1,--0,0,--0,0,0,0,0,0,8,9,--

R127)

0,0,0,0,0,0,0,0,6,7,-->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,--0,0,0,0,0,0,6,7,--0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,6,9,--

R128)

0,0,0,0,0,0,0,0,6,8,-->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,--0,0,0,0,0,0,7,8,--0,0,0,0,0,0,0,7,9,--

R129)

0,0,0,0,0,0,0,0,6,9,-->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,--0,0,2,1,--0,0,--0,0,0,0,0,0,0,0,8,9,--
R130)
0,0,0,0,0,0,0,0,7,8,-->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,--0,0,0,--0,0,0,0,0,0,0,0,7,8,--0,0,0,0,0,0,0,7,9,--
R131)
0,0,0,0,0,0,0,0,7,9,-->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,--0,0,2,1,--0,0,--0,0,0,0,0,0,0,0,8,9,--
R132)
0,0,0,0,0,0,0,0,8,9,-->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,--0,0,0,0,0,0,0,0,8,9,--
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, :  
 LEN=11) 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, :  
 0,0,0,0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,0,0,2,3, : 0,0,0,0,0,0,0,0,0,0,2,4, :  
 0,0,0,0,0,0,0,0,0,0,2,5, : 0,0,0,0,0,0,0,0,0,0,2,6, : 0,0,0,0,0,0,0,0,0,0,2,7, :  
 0,0,0,0,0,0,0,0,0,0,2,8, : 0,0,0,0,0,0,0,0,0,0,2,9, : 0,0,0,0,0,0,0,0,0,0,2,10, :  
 0,0,0,0,0,0,0,0,0,0,3,4, : 0,0,0,0,0,0,0,0,0,0,3,5, : 0,0,0,0,0,0,0,0,0,0,3,6, :  
 0,0,0,0,0,0,0,0,0,0,3,7, : 0,0,0,0,0,0,0,0,0,0,3,8, : 0,0,0,0,0,0,0,0,0,0,3,9, :  
 0,0,0,0,0,0,0,0,0,0,3,10, : 0,0,0,0,0,0,0,0,0,0,4,5, : 0,0,0,0,0,0,0,0,0,0,4,6, :  
 0,0,0,0,0,0,0,0,0,0,4,7, : 0,0,0,0,0,0,0,0,0,0,4,8, : 0,0,0,0,0,0,0,0,0,0,4,9, :  
 0,0,0,0,0,0,0,0,0,0,4,10, : 0,0,0,0,0,0,0,0,0,0,5,6, : 0,0,0,0,0,0,0,0,0,0,5,7, :  
 0,0,0,0,0,0,0,0,0,0,5,8, : 0,0,0,0,0,0,0,0,0,0,5,9, : 0,0,0,0,0,0,0,0,0,0,5,10, :  
 0,0,0,0,0,0,0,0,0,0,6,7, : 0,0,0,0,0,0,0,0,0,0,6,8, : 0,0,0,0,0,0,0,0,0,0,6,9, :  
 0,0,0,0,0,0,0,0,0,0,6,10, : 0,0,0,0,0,0,0,0,0,0,7,8, : 0,0,0,0,0,0,0,0,0,0,7,9, :  
 0,0,0,0,0,0,0,0,0,0,7,10, : 0,0,0,0,0,0,0,0,0,0,8,9, : 0,0,0,0,0,0,0,0,0,0,8,10, :  
 0,0,0,0,0,0,0,0,0,0,9,10, :

Number new nodes in level n is given by : 1,1,2,5,8,11,16,22,29,37,46,

-----Class

1499-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][100][102][120][201][210]]$

-----

--

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, --

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)

0,0,0,0,0,0, -->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, -->0,0,2,1, --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, --

R15)

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, --

R16) 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, --

R17) 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, --

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,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

R19)

0,0,0,0,0,0,2,-->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,--

R20)

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,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R21)

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,--0,0,0,2,--0,0,0,3,--

R22)

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,--0,0,2,--

R23)

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,--

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,--0,0,0,0,0,0,0,0,2,--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,--

R25)

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,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R26)

0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R27)

0,0,0,0,0,0,0,4,-->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,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R28)

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,--0,0,0,2,--0,0,0,3,--

R29)

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,--0,0,2,1,--0,0,0,0,0,0,0,0,6,--0,0,--0,0,2,--

R30)

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,--

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,--0,0,0,0,0,0,0,0,0,2,--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,--

R32)

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,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--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)

0,0,0,0,0,0,0,0,3,-->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,--0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--

R34)

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,--

R35)

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,--

R36)

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,--

R37)

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,--

R38)

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,--

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,--0,0,0,0,0,0,0,0,0,0,0,0,--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,  
0,0,0,0,9,--0,0,0,0,0,0,0,0,10,--

R40)

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,--0,0,0,0,  
0,0,0,0,2,--0,0,0,0,0,0,0,3,--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,--

R41)

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,--0,0,0,0,0,0,0,--  
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,--

R42)

0,0,0,0,0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,4,--0,0,0,  
0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,  
,6,--

R43)

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,  
5,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--

R44)

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,--0,0,0,2,--0,0,0,3,--0,0,0,4,--

R45)

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,--  
0,0,0,0,0,0,0,7,--0,0,0,--0,0,2,--0,0,3,--

R46)

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,--0,0,--0,0,2,--

R47)

0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,9,--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, :  
 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, :  
 LEN=11) 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, :  
 0,0,0,0,0,0,0,0,0,0,10, :

Number new nodes in level n is given by : 1,1,2,4,4,5,6,7,8,9,10,

-----Class

1500-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][100][110][120][201][210]]$

-----

--

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, --0,0, --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, --0,0, --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, --0,0,0, --0,0, --0,0,2, --

R11) 0,0,0,0,4, -->0,0, --0,0, --0,0, --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, --0,0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,0,0,0,4, --

--

R14) 0,0,0,0,0,3, -->0,0,0,0, --0,0,0,0, --0,0,0,0, --0,0,0, --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, --0,0,2, --

R16) 0,0,0,0,0,5, -->0,0, --0,0, --0,0, --0,0, --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, --0,0,0,0,0,0,0,0,

3, --0,0,0,0,0,0,0,4, --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, --0,0,0,0,0, --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, --0,0,0,2, --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, --0,0,2, --  
R22) 0,0,0,0,0,0,6, -->0,0, --0,0, --0,0, --0,0, --0,0, --0,0, --0,0, --0,0, --  
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, --0,0,0,0,0,0,0,0,2, --0,0,0,  
0,0,0,0,0,3, --0,0,0,0,0,0,0,0,4, --0,0,0,0,0,0,0,0,5, --0,0,0,0,0,0,0,0,6, --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, --0,0,0,0,0,0,2, --0,  
0,0,0,0,0,3, --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, --0,0,0,0,0, --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, --0,0,0,0, --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, --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, --0,0,2, --  
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, --  
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,  
--0,0,0,0,0,0,0,0,3, --0,0,0,0,0,0,0,0,4, --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, --  
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,  
0,0,2, --0,0,0,0,0,0,0,3, --0,0,0,0,0,0,0,4, --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, --0,0,0,0,0,0, --  
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, --0,0,0,0,0,0, --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, --  
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, --0,0,0,0,2, --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, --0,0,0,0, --0,0,0,0, --0,0,0,0, --0,0,0,0, --0,





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, :  
 LEN=11) 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, :  
 0,0,0,0,0,0,0,0,0,0,10, :

Number new nodes in level n is given by : 1,1,2,3,4,5,6,7,8,9,10,

-----Class

1501-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[010][101][102][110][120][201]$

-----

--

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, --
- 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, --0,0,0, --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, --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, --0,0,0,0,0,4, --0,0,0,0,5, --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, --0,0,0,0,2, --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, --0,0,0, --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, --0,0,2, --
- R18) 0,0,0,0,0,5, -->0,0,2,1, --0,0,0,3,2, --0,0,0,0,4,3, --0,0,0,0,5,4, --0,0, --0, --
- R19) 0,0,0,0,4,3, -->0,0,2,1, --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, --0,0,0,0,0,2, --0,0,0,0,0,3, --0,0,0,0,4, --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, --0,0,0,0, --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, --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,--  
0,0,2,--

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,--

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,  
0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,0,0,--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,-->0,0,2,1,--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,--

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,  
0,2,--0,0,0,0,3,--0,0,0,0,4,--

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,--0,0,0,2,--0,0,0,3,--

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,--0,0,2,--

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,--0,0,0,0,0,0,7,6,--0,0,--0,--

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,  
,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,--0,0,0,0,0,0,0,0,--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)

0,0,0,0,0,0,0,3,-->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,  
0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R38)

0,0,0,0,0,0,0,4,-->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,--  
0,0,0,0,0,2,--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,-->0,0,2,1,--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,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

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,--0,0,0,2,--0,0,0,3,--

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,--0,0,2,--

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,--

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,--

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,--0,0,0,0,0,0,0,0,0,0,--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,  
,0,0,0,0,0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,0,0,0,0,10,--

R45)

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,--0,0,0,0,0,0,  
0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,  
,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R46)

0,0,0,0,0,0,0,0,0,3,-->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,  
0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--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)

0,0,0,0,0,0,0,0,0,4,-->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,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,  
,--

R48)

0,0,0,0,0,0,0,0,0,5,-->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,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R49)

0,0,0,0,0,0,0,0,0,6,-->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,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R50)

0,0,0,0,0,0,0,0,0,7,-->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,--0,0,0,2,--0,0,0,3,--

R51)

0,0,0,0,0,0,0,0,0,8,-->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,--0,0,2,--

R52)

0,0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,0,9,8,--0,0,--0,  
,--

R53)

0,0,0,0,0,0,0,0,0,8,7,-->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,--0,0,2,1,--

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, :  
 LEN=11) 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, :  
 0,0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,0,9,8, :  
 Number new nodes in level n is given by : 1,1,2,4,5,6,7,8,9,10,11,

-----Class

1502-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][101][102][110][120][210]]$

--

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, --
- 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, --0,0,0, --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, --
- 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, --0,0,0,0,2, --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, --0,0,0, --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, --0,0,2, --

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,--  
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,--0,0,0,0,0,0,2,--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)  
0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,  
0,0,0,4,--0,0,0,0,5,--  
R22)  
0,0,0,0,0,3,-->0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,--0,0,0,0,--0,0,0,2,--0,0,0,3,  
--0,0,0,4,--  
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,--0,0,0,--0,0,2,--0,  
0,0,3,--  
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,--  
0,0,2,--  
R25)  
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,--  
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,--0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,3,--0,0,0,0,0,0,0,4,--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)  
0,0,0,0,0,0,2,-->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,--0,0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--  
R29)  
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,--0,0,0,0,2,--0,  
0,0,0,3,--0,0,0,0,4,--0,0,0,0,5,--  
R30)  
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,  
0,2,--0,0,0,3,--0,0,0,4,--  
R31)  
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,--  
R32)  
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,--0,0,2,--  
R33)  
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,--  
R34)  
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,--0,0,0,0,0,0,0,2,  
--0,0,0,0,0,0,0,3,--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,--

R36)

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,--  
0,0,0,0,0,0,0,3,--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,--

R37)

0,0,0,0,0,0,0,3,-->0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,  
0,2,--0,0,0,0,0,3,--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,-->0,0,0,4,1,--0,0,3,1,--0,0,2,1,--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,--

R39)

0,0,0,0,0,0,0,5,-->0,0,0,0,5,1,--0,0,0,4,1,--0,0,3,1,--0,0,2,1,--0,0,0,0,0,  
--0,0,0,0,--0,0,0,2,--0,0,0,3,--0,0,0,4,--

R40)

0,0,0,0,0,0,0,6,-->0,0,0,0,6,1,--0,0,0,5,1,--0,0,0,4,1,--0,0,3,1,--0,  
0,2,1,--0,0,0,0,--0,0,0,2,--0,0,3,--

R41)

0,0,0,0,0,0,0,7,-->0,0,0,0,7,1,--0,0,0,6,1,--0,0,0,5,1,--0,0,0,0,  
4,1,--0,0,3,1,--0,0,2,1,--0,0,0,--0,0,--0,0,2,--

R42)

0,0,0,0,0,0,0,8,-->0,0,0,0,8,1,--0,0,0,7,1,--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,--

R43)

0,0,0,0,0,0,7,1,-->0,0,0,0,7,1,--0,0,0,6,1,--0,0,0,5,1,--0,0,0,0,  
4,1,--0,0,3,1,--0,0,2,1,--

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,--0,0,0,0,0,0,0,  
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,  
0,0,0,9,--0,0,0,0,0,0,0,10,--

R45)

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,--0,0,0,0,0,0,3,--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,--0,0,0,0,0,0,8,--

R46)

0,0,0,0,0,0,0,3,-->0,0,3,1,--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,  
,--0,0,0,0,0,0,7,--

R47)

0,0,0,0,0,0,0,4,-->0,0,0,4,1,--0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,--0,0,0,0,  
0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,  
,--

R48)

0,0,0,0,0,0,0,5,-->0,0,0,5,1,--0,0,0,4,1,--0,0,3,1,--0,0,2,1,--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,--

R49)

0,0,0,0,0,0,0,6,-->0,0,0,6,1,--0,0,0,5,1,--0,0,0,4,1,--0,0,3,1,--  
0,0,2,1,--0,0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R50)

0,0,0,0,0,0,0,7,-->0,0,0,7,1,--0,0,0,6,1,--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,--0,0,0,3,--  
R51)  
0,0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,8,1,--0,0,0,0,0,0,0,7,1,--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,--0,0,2,--  
R52)  
0,0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,9,1,--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,  
--  
R53)  
0,0,0,0,0,0,0,0,8,1,-->0,0,0,0,0,0,0,0,8,1,--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,--  
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, :  
LEN=11) 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, :  
0,0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,0,0,9,1, :  
Number new nodes in level n is given by : 1,1,2,4,5,6,7,8,9,10,11,

-----Class

1503-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][101][102][110][201][210]]$

-----

--

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,--
- 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,--0,0,2,1,--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,--0,0,0,0,3,--0,0,0,0,4,--

R11) 0,0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,3,--0,0,0,0,4,--

R12) 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,--

R13)

0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--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,-->0,0,2,1,--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,--

R15)

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,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R16)

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,--0,0,0,0,0,5,--

R17) 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,--

R18)

0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

R19)

0,0,0,0,0,0,2,-->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,--0,0,0,0,0,0,6,--

R20)

0,0,0,0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,3,--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,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--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,--

R22)

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,--0,0,0,0,0,0,6,--

R23)

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,--

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,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R25)

0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

R26)

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,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

R27)

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,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

R28)



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,--0,0,0,0,0,0,0,5,--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,-->0,0,2,1,--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,--

R30)

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,--

R31)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,0,0,--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,--

R32)

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,--0,0,0,0,0,0,0,0,0,3,--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)

0,0,0,0,0,0,0,0,3,-->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,--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,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,4,--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,-->0,0,2,1,--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,--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,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,0,0,0,6,--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,-->0,0,2,1,--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,--0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--

R38)

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,--0,0,0,0,0,0,0,8,--

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,--0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,4,--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,--0,0,0,0,0,0,0,0,0,0,10,--

R40)

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,--0,0,0,0,0,0,0,0,0,2,--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)

0,0,0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,3,--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)

0,0,0,0,0,0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,

0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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)

0,0,0,0,0,0,0,0,5,-->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,--0,0,0,0,0,0,0,0,6,--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)

0,0,0,0,0,0,0,0,6,-->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,--0,0,0,0,0,0,6,--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,--

R45)

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,--0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R46)

0,0,0,0,0,0,0,0,8,-->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,--0,0,0,0,0,0,0,0,9,--

R47)

0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,9,--

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, :

LEN=11) 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, :

0,0,0,0,0,0,0,0,0,0,10, :

Number new nodes in level n is given by : 1,1,2,4,4,5,6,7,8,9,10,

-----Class

1504-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][101][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,--  
R9)  
0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--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)  
0,0,0,0,0,0,-->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,-->0,0,2,1,--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,--  
R15)  
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,--  
R16) 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,--  
R17) 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,--  
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,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
3,--0,0,0,0,0,0,0,4,--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)  
0,0,0,0,0,0,2,-->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,--  
R20)  
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,--0,0,0,0,2,--0,0,0,  
0,3,--0,0,0,0,4,--  
R21)  
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,--0,0,0,2,--  
0,0,0,3,--  
R22)  
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,  
0,2,--  
R23)  
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,--  
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,--0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,  
,0,0,0,7,--0,0,0,0,0,0,0,0,8,--  
R25)  
0,0,0,0,0,0,0,2,-->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,--  
R26)  
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,--0,0,0,0,0,2,  
--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R27)

0,0,0,0,0,0,0,4,-->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,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R28)

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,--0,0,0,2,--0,0,0,3,--

R29)

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,--0,0,0,0,0,0,0,0,6,--0,0,--0,0,2,--

R30)

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,--

R31)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,0,0,--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,--

R32)

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,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

R33)

0,0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R34)

0,0,0,0,0,0,0,0,4,-->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,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--

R35)

0,0,0,0,0,0,0,0,5,-->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,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R36)

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,--0,0,2,1,--0,0,0,0,0,0,0,0,6,--0,0,0,--0,0,0,2,--0,0,0,3,--

R37)

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,--0,0,2,1,--0,0,0,0,0,0,0,0,7,--0,0,--0,0,2,--

R38)

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,--0,0,0,0,0,0,0,0,8,--0,--

R39)

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,--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,--0,0,0,0,0,0,0,0,0,0,10,--

R40)

0,0,0,0,0,0,0,0,0,2,-->0,0,2,1,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,--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,--

R41)

0,0,0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0

,0,6,--0,0,0,0,0,0,7,--  
R42)  
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,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,  
,6,--  
R43)  
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,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--  
R44)  
0,0,0,0,0,0,0,0,6,-->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,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
R45)  
0,0,0,0,0,0,0,0,7,-->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,--0,0,0,2,--0,0,0,3,--  
R46)  
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,--0,0,0,0,0,0,0,0,8,--0,0,--0,0,2,--  
R47)  
0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,0,9,--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, :  
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, :  
LEN=11) 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, :  
0,0,0,0,0,0,0,0,0,0,10, :

Number new nodes in level n is given by : 1,1,2,4,4,5,6,7,8,9,10,

-----Class

1505-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[010][101][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,--0,0,--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,--0,0,--0,--  
R8)  
0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,  
0,0,0,0,5,--  
R9) 0,0,0,0,2,-->0,0,0,0,0,--0,0,0,0,--0,0,0,--0,0,0,2,--0,0,0,3,--  
R10) 0,0,0,0,3,-->0,0,0,--0,0,0,--0,0,0,--0,0,--0,0,2,--  
R11) 0,0,0,0,4,-->0,0,--0,0,--0,0,--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,--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,--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,--0,0,2,--  
R16) 0,0,0,0,0,5,-->0,0,--0,0,--0,0,--0,0,--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,--0,0,0,0,0,0,0,0,2,--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,--  
R18)  
0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,--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,--0,0,0,0,0,2,--0,0,0,0,0,  
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,--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,--0,0,2,--  
R22) 0,0,0,0,0,0,6,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,--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,--0,0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,0,--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,--0,0,0,0,0,0,0,--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,--0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,--0,0,0,  
0,2,--0,0,0,0,3,--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,--0,0,0,0,--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, --0,0,2, --

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, --

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, --0,0,0,0,0,0,0,0,0,2, --  
--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, --  
0,0,6, --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, --0,0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0,2, --  
0,0,2, --0,0,0,0,0,0,0,0,3, --0,0,0,0,0,0,0,0,4, --0,0,0,0,0,0,0,0,5, --0,0,0,0,0,0,0,0,6, --0,0,0,0,0,0,0,0,7, --

R32)

0,0,0,0,0,0,0,0,3, -->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, --0,0,0,0,0,0,0,0,2, --  
0,0,0,0,0,0,0,0,3, --0,0,0,0,0,0,0,0,4, --0,0,0,0,0,0,0,0,5, --0,0,0,0,0,0,0,0,6, --

R33)

0,0,0,0,0,0,0,0,4, -->0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0,2, --  
0,0,2, --0,0,0,0,0,0,0,0,3, --0,0,0,0,0,0,0,0,4, --0,0,0,0,0,0,0,0,5, --

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, --0,0,0,0,0,2, --  
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, --0,0,0,0,0, --0,0,0,0,0, --0,0,0,0,0, --0,0,0,0,0, --0,0,0,0,0,2, --  
0,0,2, --0,0,0,0,0,3, --

R36)

0,0,0,0,0,0,0,0,7, -->0,0,0,0, --0,0,0,0, --0,0,0,0, --0,0,0,0, --0,0,0,0, --0,0,0,0, --0,0,0,0, --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, --

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, --0,0,0,0,0,0,0,0,0,0,2, --  
--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, --0,0,0,0,0,0,0,0,0,0,10, --

R39)

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, --0,0,0,0,0,0,0,0,0,0, --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, --

R40)

0,0,0,0,0,0,0,0,0,3, -->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, --0,0,0,0,0,0,0,0,2, --  
--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)

0,0,0,0,0,0,0,0,0,4, -->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, --0,0,0,0,0,0,0,0,2, --  
--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)

0,0,0,0,0,0,0,0,0,5, -->0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0,2, --  
--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)

0,0,0,0,0,0,0,0,0,6, -->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, --

0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--  
 R44)  
 0,0,0,0,0,0,0,0,0,7,-->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,--0,0,0,2,--0,0,0,3,--  
 R45)  
 0,0,0,0,0,0,0,0,0,8,-->0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,0,--0,0,  
 0,--0,0,--0,0,2,--  
 R46)  
 0,0,0,0,0,0,0,0,0,9,-->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, : 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, :  
 LEN=11) 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, :  
 0,0,0,0,0,0,0,0,0,0,10, :

Number new nodes in level n is given by : 1,1,2,3,4,5,6,7,8,9,10,

-----Class

1506-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[010][102][110][120][201][210]]$

-----

--

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,-->0,0,2,1,--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,--0,0,2,1,--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,-->0,0,2,1,--0,0,2,1,--0,0,0,--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,--  
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,--0,0,0,0,--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,--0,0,0,--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,--0,0,2,--  
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,--  
R19)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,  
3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--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,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,  
0,0,0,0,4,--0,0,0,0,0,5,--  
R21)  
0,0,0,0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--  
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,--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,--0,0,2,--  
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,--  
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,--0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,--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,--  
R27)  
0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,--0,0,0,0,0,2,--0,0,  
0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--  
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,--0,0,0,0,--0,0,0,0,2,--  
0,0,0,0,3,--0,0,0,0,0,4,--  
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,--0,0,0,  
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,--  
0,0,2,--  
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,--  
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,--0,0,0,0,0,0,0,0,2,

--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,--

R33)

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,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

R34)

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,--0,0,0,0,0,0,0,0,--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,--

R35)

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,--0,0,0,0,0,0,--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)

0,0,0,0,0,0,0,0,0,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--

R37)

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,--0,0,2,1,--0,0,0,0,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--

R38)

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,--0,0,2,1,--0,0,0,0,--0,0,0,0,2,--

R39)

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,--0,0,0,0,--0,0,0,0,2,1,--0,0,--0,0,--

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,--0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,0,0,0,9,--0,0,0,0,0,0,0,0,0,0,0,0,0,10,--

R41)

0,0,0,0,0,0,0,0,0,0,2,-->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,--0,0,0,0,0,0,0,0,0,0,0,2,--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,--

R42)

0,0,0,0,0,0,0,0,0,0,3,-->0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,0,0,--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,--

R43)

0,0,0,0,0,0,0,0,0,0,4,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,0,0,--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,--

R44)

0,0,0,0,0,0,0,0,0,0,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,--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,--

R45)

0,0,0,0,0,0,0,0,0,0,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--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,--

R46)

0,0,0,0,0,0,0,0,0,0,7,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,--0,0,0,0,2,--0,0,0,0,3,--

R47)

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,--0,0,0,--0,0,--0,0,2,--  
R48)

0,0,0,0,0,0,0,0,0,9,-->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,--

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,:

LEN=11) 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,:

0,0,0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,0,5,: 0,0,0,0,0,0,0,0,0,0,6,:

0,0,0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,0,8,: 0,0,0,0,0,0,0,0,0,0,9,:

0,0,0,0,0,0,0,0,0,0,0,10,:

Number new nodes in level n is given by : 1,1,2,4,5,5,6,7,8,9,10,

-----Class

1507-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][021][100][101][102]]$

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--

R2) 0,0,-->0,0,0,--0,1,--0,1,--

R3) 0,1,-->0,1,0,--

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,--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,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
--0,1,--0,1,--

R12)



LEN=10) 0,0,0,0,0,0,0,0,0,0,0,0,  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0,0,0,  
Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,1,

-----Class

1509-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][021][100][101][120]]$

-----  
--  
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,--  
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,--  
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,--  
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,--0,1,--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, :  
LEN=11) 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

1510-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][021][100][101][201]]$

-----  
--  
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,--  
 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,--  
 R8) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--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,--  
 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,--  
 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,--0,1,--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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,1,

-----Class

1511-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][021][100][101][210]]$

-----  
--

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,--  
 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,--  
 R8) 0,0,0,0,0,0,-->0,0,0,0,0,0,0,--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,--  
 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,--
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,--0,1,--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,:
LEN=11) 0,0,0,0,0,0,0,0,0,0,0,:
Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,1,

```

```

-----Class
1512-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[011][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,--
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,--0,1,--0,1,--0,1,--0,1,--
R7) 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,--0,1,--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,--0,1,--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,--0,1,--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,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
--0,1,--0,1,--
R12)
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,--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) 0,0,0,0,0,0,0,0,0, :  
 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, :  
 LEN=11) 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

1513-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][021][100][102][120]]$

--  
 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,--  
 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,--  
 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,  
 --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,--0,1,--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, :  
 LEN=11) 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

1514-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][021][100][102][201]]$

--  
 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, --
- 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, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --
- R12) 0,0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,0, --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, :
- LEN=11) 0,0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,1,

-----Class

1515-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][021][100][102][210]]$

-----

--  
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, --
- 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, --

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,--0,1,--0,1,--

R12)  
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,:
- LEN=11) 0,0,0,0,0,0,0,0,0,0,0,:

Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,1,

-----Class

1516-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][021][100][110][120]]$

--

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,--
- 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,-->0,0,0,0,0,0,0,0,0,0,0,--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,-->0,0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R12)  
0,0,0,0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,--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, :  
 LEN=11) 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

1517-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][021][100][110][201]]$

-----  
 --  
 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,--  
 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,--  
 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,--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,--0,1,--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, :  
 LEN=11) 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

1518-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][021][100][110][210]]$

--

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,--

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,--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,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--

R12)

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,--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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,:

Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,1,

-----Class

1519-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][021][100][120][201]]$

-----

--

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,--

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,-->0,0,0,0,0,0,0,0,0,0,--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,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,  
--0,1,--0,1,--  
R12)  
0,0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,--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, :  
LEN=11) 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

1520-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][021][100][120][210]]$

-----

--

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,--  
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,--  
R9) 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,--  
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,--  
R11)  
0,0,0,0,0,0,0,0,0,0,-->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,--  
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,--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, :  
 LEN=11) 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

1521-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][021][100][201][210]]$

-----

--

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,--
- 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,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R12) 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,--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, :  
 LEN=11) 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

1522-----



```

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,--0,1,--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,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,--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, :
LEN=11) 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

1524-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][021][101][102][201]]$

```

--
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,--
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,--
R11)
0,0,0,0,0,0,0,0,0,0,-->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, :
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=11) 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

1525-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][021][101][102][210]]$

-----

--  
 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,--
- 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,--
- 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,--

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=11) 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

1526-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][021][101][110][120]]$

-----

--

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,--

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,--

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,--

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=11) 0,0,0,0,0,0,0,0,0,0,0,:

Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,1,1,

-----Class

1527-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][021][101][110][201]]$

-----

--

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,--

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,--



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=11) 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

1529-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][021][101][120][201]]$

-----

--

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,--
- 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,--
- 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,--

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=11) 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

1530-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][021][101][120][210]]$

-----

--

Rules of T[L]:







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,--0,1,--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,--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, :  
 LEN=11) 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

1535-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][021][102][120][201]]$

-----

--

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,--  
 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,--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,--  
 R11)









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=11) 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

1540-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][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, --
- 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, --
- 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, --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=11) 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,



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,--0,0,0,0,0,0,0,7,--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,--0,0,0,0,0,6,--  
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,--0,1,--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  
,--  
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,  
0,0,0,5,--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,--0,0,0,0,0,5,0,--0,0,0,  
0,0,0,6,0,--  
R24)  
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,--0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,  
0,9,--0,0,0,0,0,0,0,0,0,10,--  
R25)  
0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,9,0,--0,1,--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,--  
R26)  
0,0,0,0,0,0,0,8,0,-->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,--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, :  
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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,0,9,0, :  
 Number new nodes in level n is given by : 1,2,3,2,3,3,3,3,3,3,3,

-----Class

1543-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][100][101][102][120]]$

-----

--

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, --
- 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, --0,0,0,0,0,0,0,7, --
- 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, --0,0,0,0,0,0,0,0,8, --
- 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, --0,0,0,0,0,0,0,0,0,9, --
- 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,--0,0,0,0,0,0,7,--  
 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,--  
 R24)  
 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,  
 ,0,9,--0,0,0,0,0,0,0,0,0,10,--  
 R25)  
 0,0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,0,9,0,--0,1,--0,0,2,--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)  
 0,0,0,0,0,0,0,0,8,0,-->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,--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, :  
 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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,0,9,0, :  
 Number new nodes in level n is given by : 1,2,3,2,3,3,3,3,3,3,3,3,

-----Class

1544-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][100][101][102][201]]$

-----

--

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,--  
 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,--0,1,--0,0,2,--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,
0,0,0,6,--
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,--0,0,0,0,0,0,0,0,8,--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,--0,0,0,0,0,0,7,--
R19)
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,0,10,--
R20)
0,0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,0,8,--

```

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, :
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :
Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,2,

```

-----Class

1545-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][100][101][102][210]]$

-----

--  
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,--
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,  
--0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,0,8,--  
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,--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,--  
R24)  
0,0,0,0,0,0,0,0,0,0,-->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,  
0,9,--0,0,0,0,0,0,0,0,0,0,10,--  
R25)  
0,0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,0,9,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,  
0,--0,1,0,--0,1,0,--0,1,0,--  
R26)  
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,--

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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,0,9,0, :  
Number new nodes in level n is given by : 1,2,3,2,3,3,3,3,3,3,3,3,

-----Class

1546-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][100][101][110][120]]$

-----

--

Rules of  $T[L]$ :

R1)  $0, -->0,0, --0,1, --$

R2)  $0,0, -->0,0,0, --0,1, --0,0,2, --$

R3)  $0,1, -->0,1,0, --$

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)

$0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --$

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)

$0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,0,8, --$

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)

$0,0,0,0,0,0,0,8, -->0,0,0,0,0,0,0,8,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --$

R23)

$0,0,0,0,0,0,0,7,0, -->0,1,0, --0,1, --0,0,0,3,0, --0,0,0,0,4,0, --0,0,0,0,0,5,0, --0,0,0,0,0,6,0, --$

R24)

$0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --0,0,0,3, --0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --0,0,0,0,0,0,0,0,8, --0,0,0,0,0,0,0,0,9$

,0,9,--0,0,0,0,0,0,0,0,0,0,10,--  
R25)  
0,0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,0,9,0,--0,1,--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,--  
R26)  
0,0,0,0,0,0,0,8,0,-->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,--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, :  
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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,0,9,0, :  
Number new nodes in level n is given by : 1,2,3,2,3,3,3,3,3,3,3,

-----Class

1547-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][100][101][110][201]]$

-----

--

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,--
- 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,--0,0,0,0,0,6,--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,--0,0,0,0,0,5,--0,0,0,



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) 0,0,0,0,0,0,5,0,-->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,--  
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,--0,1,--0,0,2,--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,-->0,0,0,0,0,0,0,0,8,0,--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,--  
R24)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--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,  
0,9,--0,0,0,0,0,0,0,0,0,10,--  
R25)  
0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,9,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,  
0,--0,1,0,--0,1,0,--0,1,0,--  
R26)  
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,--  
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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,0,9,0, :  
Number new nodes in level n is given by : 1,2,3,2,3,3,3,3,3,3,3,3,

-----Class  
1549-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][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, --
- 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, --0,0,0,0,0,6, --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, --
- 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, --0,0,2, --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, --0,0,0,0,0,0,0,0,10, --
- R20)
  - 0,0,0,0,0,0,0,0,0,9, -->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, --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, :
- LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :

Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,2,

-----Class

1550-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][100][101][120][210]]$

-----

--

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,--
- 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,--0,1,--0,0,2,--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,--
- 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,--0,0,0,0,0,0,0,8,--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,--
- R24)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,10,--
- R25)  
0,0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,0,9,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,



$0, --0, 1, 0, --0, 1, 0, --0, 1, 0, --$   
 R26)  
 $0, 0, 0, 0, 0, 0, 0, 0, 8, 0, --> 0, 1, 0, --0, 1, 0, --0, 1, 0, --0, 1, 0, --0, 1, 0, --0, 1, 0, --0, 1, 0, --$   
 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)  $0, 0, 0, 0, 0, 0, 0, 0, 0, 0, : 0, 0, 0, 0, 0, 0, 0, 0, 0, 9, : 0, 0, 0, 0, 0, 0, 0, 0, 8, 0, :$   
 LEN=11)  $0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, : 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 10, : 0, 0, 0, 0, 0, 0, 0, 0, 0, 9, 0, :$   
 Number new nodes in level n is given by : 1,2,3,2,3,3,3,3,3,3,3,3,

-----Class

1551-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][100][101][201][210]]$

-----

--

Rules of  $T[L]$ :

- R1)  $0, --> 0, 0, --0, 1, --$
- R2)  $0, 0, --> 0, 0, 0, --0, 1, --0, 0, 2, --$
- R3)  $0, 1, --> 0, 1, 0, --$
- 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)  $0, 0, 0, 0, 0, 0, --> 0, 0, 0, 0, 0, 0, 0, --0, 1, --0, 0, 2, --0, 0, 0, 3, --0, 0, 0, 0, 4, --0, 0, 0, 0, 0, 5, --0, 0, 0, 0, 0, 6, --$
- R12)  $0, 0, 0, 0, 0, 5, --> 0, 1, 0, --0, 1, 0, --0, 1, 0, --0, 1, 0, --0, 1, 0, --$
- R13)  $0, 0, 0, 0, 0, 0, 0, --> 0, 0, 0, 0, 0, 0, 0, 0, --0, 1, --0, 0, 2, --0, 0, 0, 3, --0, 0, 0, 0, 4, --0, 0, 0, 0, 0, 5, --0, 0, 0, 0, 0, 6, --0, 0, 0, 0, 0, 0, 7, --$
- R14)  $0, 0, 0, 0, 0, 0, 6, --> 0, 1, 0, --0, 1, 0, --0, 1, 0, --0, 1, 0, --0, 1, 0, --0, 1, 0, --$
- 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)  $0, 0, 0, 0, 0, 0, 0, 7, --> 0, 1, 0, --0, 1, 0, --0, 1, 0, --0, 1, 0, --0, 1, 0, --0, 1, 0, --$
- R17)  $0, 0, 0, 0, 0, 0, 0, 0, 0, --> 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, --0, 1, --0, 0, 2, --0, 0, 0, 3, --0, 0, 0, 0, 4, --0, 0, 0, 0, 5, --0, 0, 0, 0, 0, 6, --0, 0, 0, 0, 0, 0, 7, --0, 0, 0, 0, 0, 0, 0, 8, --0, 0, 0, 0, 0, 0, 0, 9, --$
- R18)  $, --$

0,0,0,0,0,0,0,0,8,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--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,--0,1,--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,--0,0,0,0,0,0,10,--

R20)  
 0,0,0,0,0,0,0,0,9,-->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,:
  - LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,10,:
- Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,2,

-----Class

1552-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][100][102][110][120]]$

--  
 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,--
- 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,--0,0,0,0,0,0,0,7,--
- 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,--0,1,--0,0,2,--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)
0,0,0,0,0,0,0,8,-->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,--0,0,0,0,0,0,0,7,--
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,--
R24)
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,0,10,--
R25)
0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,9,0,--0,1,--0,0,2,--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,--
R26)
0,0,0,0,0,0,0,8,0,-->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,--0,0,0,0,0,0,0,7,0,--
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,:
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,:
LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,10,: 0,0,0,0,0,0,0,0,0,9,0,:
Number new nodes in level n is given by : 1,2,3,2,3,3,3,3,3,3,3,3,

```

-----Class

1553-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][100][102][110][201]]$

-----

--

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,--
- 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,--0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,0,7,--
- 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,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,10,--
- R20) 0,0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,7,--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, : 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, :
  - LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :
- Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,2,2,

-----Class

1554-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][100][102][110][210]]$

-----

--

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,--
- 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,--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,--0,1,--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,--
- 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,--
- R24) 0,0,0,0,0,0,0,0,0,0,-->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,--0,0,0,0,0,0,0,10,--
- R25) 0,0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,9,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--

R26)

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,--

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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,10,: 0,0,0,0,0,0,0,0,0,9,0,:

Number new nodes in level n is given by : 1,2,3,2,3,3,3,3,3,3,3,3,

-----Class

1555-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][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,--

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,--0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,7,--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,--0,0,0,0,0,5,--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,--0,0,0,0,0,0,7,--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,--0,0,2,--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,--

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,--0,0,2,--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,  
0,9,--0,0,0,0,0,0,0,10,--

R20)  
0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,7,--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,: 0,0,0,0,0,0,7,:

LEN=9) 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,: 0,0,0,0,0,0,9,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,10,:

Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,2,

-----Class

1556-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][100][102][120][210]]$

-----

--

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,--

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,--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,-->0,0,0,0,5,0,--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,  
--0,0,0,0,6,--0,0,0,0,0,7,--

R16) 0,0,0,0,0,6,-->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,--0,0,0,0,0,0,0,8,--  
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,--0,1,--0,0,2,--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)  
0,0,0,0,0,0,0,8,-->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,--  
R24)  
0,0,0,0,0,0,0,0,0,0,-->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,  
0,9,--0,0,0,0,0,0,0,0,0,10,--  
R25)  
0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,9,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,  
0,--0,1,0,--0,1,0,--0,1,0,--  
R26)  
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,--  
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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,0,9,0, :  
Number new nodes in level n is given by : 1,2,3,2,3,3,3,3,3,3,3,

-----Class

1557-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][100][102][201][210]]$

-----

--

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,--
- 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,--0,1,--0,0,2,--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,--  
 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,--  
 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,--0,1,0,--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,--0,0,0,0,0,6,--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,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,  
 --  
 R19)  
 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--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,--0,0,0,0,0,0,0,0,0,10,--  
 R20)  
 0,0,0,0,0,0,0,0,0,9,-->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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :

Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,2,

-----Class

1558-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][100][110][120][201]]$

-----  
 --

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,--
- 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,--0,0,0,4,--
- 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,--0,0,0,0,0,0,8,--
- 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,--0,0,0,0,0,6,--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,--0,0,2,--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,--
- 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,--0,0,2,--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,--0,0,0,0,0,0,0,  
,0,9,--0,0,0,0,0,0,0,0,10,--
- R20)  
0,0,0,0,0,0,0,0,0,9,-->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,--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) 0,0,0,0,0,0,0,0,0,0,9,:



0,0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,0,9,0,--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,--0,1,0,--

R26)

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,--

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,:
  - LEN=11) 0,0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,10,: 0,0,0,0,0,0,0,0,0,9,0,:
- Number new nodes in level n is given by : 1,2,3,2,3,3,3,3,3,3,3,3,

-----Class

1560-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][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,--
- 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,--0,0,0,0,0,0,7,--
- 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,--
- 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,--0,1,0,--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,--0,0,0,0,5,--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,--



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,--  
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,--0,0,0,0,0,0,8,--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,  
--  
R19)  
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--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,--0,0,0,0,0,0,0,  
,0,9,--0,0,0,0,0,0,0,0,0,10,--  
R20)  
0,0,0,0,0,0,0,0,9,-->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, :
  - LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :
- Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,2,2,

-----Class

1562-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][101][102][110][120]]$

-----

--

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,--
- 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,  
--0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,6,--

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,--0,0,0,0,0,0,6,--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,-->0,0,0,0,0,0,0,0,8,--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,--

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,--0,1,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,0,10,--

R19)

0,0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,0,9,--0,1,--0,0,2,--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, :

LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :

Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,2,

-----Class

1563-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][101][102][110][201]]$

-----

--

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,--

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,  
 --0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
 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,--0,0,0,0,0,0,6,--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,--0,0,2,--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,--0,1,--0,0,2,--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,--  
 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,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,0,10,--  
 R19)  
 0,0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,7,--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, :
- LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :

Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,2,

-----Class

1564-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][012][101][102][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)  $0, 1, \rightarrow 0, 1, \rightarrow$   
R4)  $0, 0, 0, \rightarrow 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow$   
R5)  $0, 0, 2, \rightarrow 0, 0, 2, \rightarrow 0, 0, 2, 1, \rightarrow$   
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)  $0, 0, 0, 3, \rightarrow 0, 0, 0, 3, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow$   
R8)  $0, 0, 2, 1, \rightarrow$   
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)  $0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 4, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow$   
R11)  
 $0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 6, \rightarrow$   
R12)  $0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow$   
R13)  
 $0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 0, 6, \rightarrow 0, 0, 0, 0, 0, 0, 0, 7, \rightarrow$   
R14)  
 $0, 0, 0, 0, 0, 0, 6, \rightarrow 0, 0, 0, 0, 0, 0, 6, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow$   
R15)  
 $0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 0, 6, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 7, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 8, \rightarrow$   
R16)  
 $0, 0, 0, 0, 0, 0, 0, 7, \rightarrow 0, 0, 0, 0, 0, 0, 0, 7, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow$   
R17)  
 $0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 0, 6, \rightarrow 0, 0, 0, 0, 0, 0, 0, 7, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 8, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 9, \rightarrow$   
R18)  
 $0, 0, 0, 0, 0, 0, 0, 0, 8, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 8, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow$   
R19)  
 $0, 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 0, 6, \rightarrow 0, 0, 0, 0, 0, 0, 0, 7, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 8, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 9, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 10, \rightarrow$   
R20)  
 $0, 0, 0, 0, 0, 0, 0, 0, 0, 9, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 9, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow$

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)  $0, 0, 0, 0, : 0, 0, 0, 3, : 0, 0, 2, 1, :$   
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, : 0,0,0,0,0,0,0,0,0,0,9, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,0,10, :  
Number new nodes in level n is given by : 1,2,2,3,2,2,2,2,2,2,2,2,

-----Class

1565-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][101][102][120][201]]$

--

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, --
- 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, --0,1, --0,0,2, --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, --0,1, --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, --0,0,0,0,0,5, --
- 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, --0,0,0,0,0,7, --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,  
0,0,6, --
- 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)  
0,0,0,0,0,0,0,8, -->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, --0,0,0,0,0,7, --
- R18)  
0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,0,0, --0,1, --0,0,2, --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,  
0,9, --0,0,0,0,0,10, --
- R19)  
0,0,0,0,0,0,0,9, -->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, --0,0,0,0,0,7, --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,:  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,10,:  
 Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,2,

-----Class

1566-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][101][102][120][210]]$

--

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,--
- 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,--0,1,--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,--0,0,2,1,--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,--0,0,0,0,5,--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,-->0,0,0,0,0,0,0,0,8,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--
- 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,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,10,--  
R20)

0,0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,0,9,--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, :
- LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :

Number new nodes in level n is given by : 1,2,2,3,2,2,2,2,2,2,2,

-----Class

1567-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][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,--
- 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,--0,1,--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,--0,1,--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,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--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,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,  
1,--0,0,2,1,--

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,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,10,--

R20)

0,0,0,0,0,0,0,0,9,-->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, :

LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :

Number new nodes in level n is given by : 1,2,2,3,2,2,2,2,2,2,2,

-----Class

1568-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding L=[[011][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, --

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,  
--0,0,0,0,0,0,6, --0,0,0,0,0,0,0,7, --

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,--0,1,--0,0,2,--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,--0,0,2,--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,--0,0,0,0,0,0,0,9  
,--  
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,--0,0,0,0,0,0,0,7,--  
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,--0,1,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,0,10,--  
R19)  
0,0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,7,--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, :  
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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :  
Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,

-----Class

1569-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][101][110][120][210]]$

-----

--

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,--  
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,--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,--0,0,0,0,0,0,0,7,--  
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,--0,0,0,0,0,0,0,7,--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,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,  
0,2,1,--0,0,2,1,--0,0,2,1,--  
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,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,0,10,--  
R20)  
0,0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,0,9,--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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :  
Number new nodes in level n is given by : 1,2,2,3,2,2,2,2,2,2,2,

-----Class

1570-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][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, --
- 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, --0,1, --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, --0,0,0,0,0,0,6, --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, --0,1, --0,0,2, --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, --0,0,2,1, --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, --0,0,0,0,0,0,0,7, --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, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,2,1, --0,0,2,1, --
- 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, --0,0,2, --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, --0,0,0,0,0,0,0,0,0,10, --
- R20) 0,0,0,0,0,0,0,0,0,9, -->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, :
- LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :



Number new nodes in level n is given by : 1,2,2,3,2,2,2,2,2,2,2,

-----Class

1571-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][101][120][201][210]]$

-----

--

Rules of  $T[L]$ :

R1)  $0, \rightarrow 0,0, \rightarrow 0,1, \rightarrow$

R2)  $0,0, \rightarrow 0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow$

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)  $0,0,2, \rightarrow 0,1, \rightarrow 0,0,2,1, \rightarrow$

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)  $0,0,0,3, \rightarrow 0,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow$

R8)  $0,0,2,1, \rightarrow$

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)  $0,0,0,0,4, \rightarrow 0,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow$

R11)

$0,0,0,0,0,0, \rightarrow 0,0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,0,5, \rightarrow 0,0,0,0,0,6, \rightarrow$

R12)  $0,0,0,0,0,5, \rightarrow 0,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow$

R13)

$0,0,0,0,0,0,0, \rightarrow 0,0,0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,0,5, \rightarrow 0,0,0,0,0,6, \rightarrow 0,0,0,0,0,0,7, \rightarrow$

R14)  $0,0,0,0,0,0,6, \rightarrow 0,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow$

R15)

$0,0,0,0,0,0,0,0, \rightarrow 0,0,0,0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,0,5, \rightarrow 0,0,0,0,0,6, \rightarrow 0,0,0,0,0,0,7, \rightarrow 0,0,0,0,0,0,0,8, \rightarrow$

R16)

$0,0,0,0,0,0,0,7, \rightarrow 0,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow$

--

R17)

$0,0,0,0,0,0,0,0,0, \rightarrow 0,0,0,0,0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,5, \rightarrow 0,0,0,0,0,6, \rightarrow 0,0,0,0,0,0,7, \rightarrow 0,0,0,0,0,0,0,8, \rightarrow 0,0,0,0,0,0,0,9, \rightarrow$

R18)

$0,0,0,0,0,0,0,0,8, \rightarrow 0,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow$

R19)

$0,0,0,0,0,0,0,0,0, \rightarrow 0,0,0,0,0,0,0,0,0,0,0, \rightarrow 0,1, \rightarrow 0,0,2, \rightarrow 0,0,0,3, \rightarrow 0,0,0,0,4, \rightarrow 0,0,0,0,5, \rightarrow 0,0,0,0,0,6, \rightarrow 0,0,0,0,0,0,7, \rightarrow 0,0,0,0,0,0,0,8, \rightarrow 0,0,0,0,0,0,0,9, \rightarrow 0,0,0,0,0,0,0,0,10, \rightarrow$

R20)

$0,0,0,0,0,0,0,0,9, \rightarrow 0,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow 0,0,2,1, \rightarrow$

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,: 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,:  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,10,:  
 Number new nodes in level n is given by : 1,2,2,3,2,2,2,2,2,2,2,

-----Class

1572-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][102][110][120][201]]$

--

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,--
- 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,--0,1,--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,--0,1,--0,0,2,--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,--0,0,2,--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,--0,0,0,0,0,0,8,--
- 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,--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,--
- 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,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--
- R18) 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--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,--0,0,0,0,0,0,10,--

R19)  
0,0,0,0,0,0,0,0,0,9,-->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,--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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,10,:

Number new nodes in level n is given by : 1,2,2,2,2,2,2,2,2,2,2,2,

-----Class

1573-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][102][110][120][210]]$

-----

--

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,--

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,  
--0,0,0,0,0,6,--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,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--

R16)

0,0,0,0,0,0,7,-->0,0,0,0,0,0,7,--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,--0,1,--0,0,2,--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,--

R19)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,10,--

R20)

0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,9,--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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,10,:

Number new nodes in level n is given by : 1,2,2,3,2,2,2,2,2,2,2,

-----Class

1574-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][102][110][201][210]]$

-----

--

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,--

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,--0,1,--0,0,2,--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,--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,--0,0,0,0,0,0,7,--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,--  
 --  
 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,--0,0,0,0,0,0,8,--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,--  
 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,--0,0,2,--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,--0,0,0,0,0,8,--0,0,0,0,0,9,  
 0,10,--  
 R20)  
 0,0,0,0,0,0,0,0,9,-->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, : 0,0,0,0,5, :
  - LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,6, :
  - LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,7, :
  - LEN=9) 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, :
  - LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,10, :
- Number new nodes in level n is given by : 1,2,2,3,2,2,2,2,2,2,2,

-----Class

1575-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][012][102][120][201][210]]$

-----

--

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,--
- 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,--0,0,0,0,5,--
- 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,--0,1,--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,--0,0,0,0,0,0,8,--  
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,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--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)  
0,0,0,0,0,0,0,8,-->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,--  
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,--0,0,2,--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,  
0,9,--0,0,0,0,0,0,10,--  
R20)  
0,0,0,0,0,0,0,9,-->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, : 0,0,0,0,5, :  
LEN=7) 0,0,0,0,0,0,0, : 0,0,0,0,0,6, :  
LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,7, :  
LEN=9) 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, : 0,0,0,0,0,0,9, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,10, :  
Number new nodes in level n is given by : 1,2,2,3,2,2,2,2,2,2,

-----Class

1576-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][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,--  
 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,--0,1,--0,0,2,--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,--0,1,--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,  
 --  
 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)  
 0,0,0,0,0,0,0,8,-->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,--  
 R19)  
 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--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,  
 0,9,--0,0,0,0,0,0,0,0,0,10,--  
 R20)  
 0,0,0,0,0,0,0,0,0,9,-->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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :  
 Number new nodes in level n is given by : 1,2,2,3,2,2,2,2,2,2,2,

-----Class

1577-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][100][101][102][110]]$

-----  
--

Rules of  $T[L]$ :

R1)  $0, -->0,0, --0,1, --$

R2)  $0,0, -->0,0,0, --0,0,1, --0,1, --$

R3)  $0,1, -->0,1,0, --0,1, --$

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)

$0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,1, --0,0,0,0,1, --0,0,0,1, --0,1, --$

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)

$0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,1, --0,0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,1, --0,0,0,1, --0,1, --$

R14)

$0,0,0,0,0,0,1, -->0,1,0, --0,0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,1, --0,0,0,0,1, --0,0,0,1, --0,0,1, --$

R15)

$0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0,1, --0,0,0,0,0,0,0,1, --0,0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,1, --0,0,0,0,1, --0,0,0,1, --0,1, --$

R16)

$0,0,0,0,0,0,0,1, -->0,1,0, --0,0,0,0,0,0,0,1, --0,0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,1, --0,0,0,0,1, --0,0,0,1, --0,0,1, --0,1, --$

R17)

$0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0,0,1, --0,0,0,0,0,0,0,0,1, --0,0,0,0,0,0,0,1, --0,0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,1, --0,0,1, --0,1, --$

R18)

$0,0,0,0,0,0,0,0,1, -->0,1,0, --0,0,0,0,0,0,0,0,1, --0,0,0,0,0,0,0,1, --0,0,0,0,0,0,1, --0,0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,1, --0,0,0,1, --0,0,1, --0,1, --$

R19)

$0,0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,0,0,0,1, --0,0,0,0,0,0,0,1, --0,0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,1, --0,0,0,0,1, --0,0,0,1, --0,0,1, --0,1, --$

R20)

$0,0,0,0,0,0,0,0,0,1, -->0,1,0, --0,0,0,0,0,0,0,0,0,1, --0,0,0,0,0,0,0,0,1, --0,0,0,0,0,0,1, --0,0,0,0,0,1, --0,0,0,0,1, --0,0,0,1, --0,0,1, --0,1, --$

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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,1, :  
 Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,2,

-----Class

1578-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][100][101][102][120]]$

--

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, --0,1,2, --
- 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, --
- 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, --
- R12) 0,0,0,0,1, -->0,1,0, --0,0,0,0,1,2, --0,0,0,1,2, --0,0,1,2, --
- 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, --0,0,0,0,0,0,1, --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, --
- 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, --
- 0,0,0,1, --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, --0,0,0,1,2, --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,



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,--  
 R19)  
 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--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,--0,1,--  
 R20)  
 0,0,0,0,0,0,0,0,0,1,-->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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,1, :

Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,2,

-----Class

1580-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011]][021][100][101][102][210]]$

-----

--

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,--0,1,--

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,--0,1,--

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,--0,1,--

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,--

0,0,0,0,1,--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,--0,0,0,0,0,0,1,--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,--0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--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,--0,0,0,1,--0,1,--

R19)

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,1,--0,1,--

0,0,1,--0,0,0,1,--0,0,1,--0,1,--

R20)

0,0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--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,: 0,0,0,0,0,0,1,:

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, : 0,0,0,0,0,0,0,0,1, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 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

1581-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][100][101][110][120]]$

--  
 Rules of T[L]:  
 R1) 0,-->0,0,--0,1,--  
 R2) 0,0,-->0,0,0,--0,0,1,--0,1,--  
 R3) 0,1,-->0,1,--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,--0,0,1,--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,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--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,-->0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--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,--0,0,0,0,0,1,--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,-->0,0,0,0,0,0,0,0,0,1,--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,--  
 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,--0,0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,  
 ,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R20)

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,--  
0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,1,:

Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,2,

-----Class

1582-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][100][101][110][201]]$

-----

--

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,--

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,--0,1,--

R12) 0,0,0,0,1,-->0,0,0,0,1,0,--0,0,0,0,1,--0,0,0,1,--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,--0,1,--

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,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--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,--

3,--



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,--  
0,0,1,--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,--0,0,1,0,--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,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--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,--0,0,0,0,0,0,0,0,0,1,--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,-->0,0,0,0,0,0,0,0,0,1,0,--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,--  
R26)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--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,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0



```

,0,1,--0,0,0,1,--0,0,1,--0,1,--
R27)
0,0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,0,1,--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,--
R28)
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,--0,1,0,3,--
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,:
LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,1,0,:
Number new nodes in level n is given by : 1,2,3,4,3,3,3,3,3,3,3,

```

-----Class

1584-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][100][101][120][201]]$

--

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,--0,0,1,--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,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--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,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,  
 ,--  
 R18)  
 0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,1,--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,--0,0,1,--0,1,--0,1,2,--  
 R19)  
 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,  
 0,0,0,1,--0,0,0,0,0,0,0,0,0,1,--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)  
 0,0,0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,--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,--0,1,2,--

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,:
- LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,1,:

Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,2,

-----Class

1585-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011]][021][100][101][120][210]$

-----

--

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,--0,1,2,--
- 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,--



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,--0,0,1,--  
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,--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,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--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,--0,1,0,--0,1,0,3,--  
R26)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--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,--0,0,1,--0,1,--  
R27)



```

--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,--0,0,1,2,--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)
0,0,0,0,0,0,1,-->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,
1,2,--0,1,2,--
R23)
0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--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,-->0,1,0,--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,--0,0,0,0,1,2,--0,0,1,2,--0,1,2,--
R26)
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,
,0,1,--0,0,0,1,--0,0,1,--0,1,--
R27)
0,0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,1,2,--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,--
R28)
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,--0,0,0,0,0,0,1,2,--
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,:
LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,1,2,:
Number new nodes in level n is given by : 1,2,4,3,3,3,3,3,3,3,3,

```

```

-----Class
1588-----
Inversion Sequences (I_n=(n+1)!) avoiding L=[[011][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,--

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,--0,1,--

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,--0,1,--

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,--

0,0,0,0,1,--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,--0,1,--

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,--0,0,0,1,--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,--0,1,--

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,--0,0,0,1,--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,--0,0,0,0,0,0,1,--0,0,0,1,--0,1,--

R19)

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,1,--0,1,--

R20)

0,0,0,0,0,0,0,0,0,1,-->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,--0,0,0,1,--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, : 0,0,0,0,0,0,0,0,1, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 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

1589-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][100][102][110][210]]$

--  
 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,--  
 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,--0,0,1,--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,--0,0,0,1,--0,0,1,--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,--0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,1,--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,--  
 R19)  
 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--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,--0,1,--  
 R20)



0,0,0,0,0,0,0,0,0,1,-->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,--0,0,1,--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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,1,:

Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,2,

-----Class

1590-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][100][102][120][201]]$

-----

--

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,--0,1,2,--

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,--0,0,0,0,1,--0,0,0,1,--0,1,--

R15)

0,0,0,0,0,1,-->0,1,0,--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,--

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,--0,0,0,0,1,2,--0,0,0,1,2,--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,--0,0,0,0,0,0,0,0,1,--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,--  
 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,  
 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,  
 --0,0,0,0,0,0,0,1,--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)  
 0,0,0,0,0,0,0,1,-->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,--0,1,2,--  
 R25)  
 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,  
 1,2,--0,0,0,1,2,--0,0,1,2,--0,1,2,--  
 R26)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--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,--0,1,--  
 R27)  
 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,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,0,1,2,--0,0,0,1,2,--  
 -0,1,2,--  
 R28)  
 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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,1,2, :  
 Number new nodes in level n is given by : 1,2,4,3,3,3,3,3,3,3,3,

-----Class

1591-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][100][102][120][210]]$

--

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,--0,1,2,--  
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,--0,0,0,0,0,0,1,--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,  
0,0,0,1,--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,--0,0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,1,2,--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,--  
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,--  
R26)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,--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,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,  
0,1,--0,0,0,1,--0,0,1,--0,1,--  
R27)  
0,0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,1,2,--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,--  
R28)  
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,--0,0,0,0,0,0,1,2,--  
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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,1,2, :  
Number new nodes in level n is given by : 1,2,4,3,3,3,3,3,3,3,3,

-----Class  
1592-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][100][102][201][210]]$   
-----

--  
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,--0,1,--  
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,--0,0,0,0,1,--  
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,--0,0,0,0,0,0,0,0,1,--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,--



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,--0,0,1,--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,  
 0,1,--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,--0,0,0,0,0,0,0,0,0,1,--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,-->0,0,0,0,0,0,0,0,1,--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,--  
 R19)  
 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--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,--0,1,--  
 R20)  
 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,--  
 0,0,0,0,0,0,1,--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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,1, :  
 Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,2,

-----Class

1594-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][100][110][120][210]]$   
 -----

--  
 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,--0,1,2,--
- 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,--0,1,--  
 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,--0,1,--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,--0,0,0,0,1,--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,--  
 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,--0,0,0,0,0,0,0,0,0,1,--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,--0,1,--  
 R20)  
 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,--  
 0,0,0,0,0,0,1,--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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,1, :  
 Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,2,

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][100][110][201][210]]$

- --  
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,--  
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,-->0,0,0,0,0,0,0,1,0,--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,--0,1,--  
R21)  
0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--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,-->0,0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--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,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,  
,--  
R24)  
0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,1,0,--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,--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,--0,0,0,0,0,1,0,--0,0,0,0,



1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--0,1,0,3,--  
R26)

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--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,  
,0,1,--0,0,0,1,--0,0,1,--0,1,--

R27)  
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,--0,0,0,1,--0,0,1,--  
-0,1,--

R28)  
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,:
  - LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,1,0,:
- Number new nodes in level n is given by : 1,2,3,4,3,3,3,3,3,3,3,

-----Class

1596-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][100][120][201][210]]$

-----

--

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,--0,1,2,--
- 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,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--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,--0,0,0,0,1,--0,0,0,1,--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,--0,0,0,0,0,0,0,0,1,--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,--0,1,2,--

R18)

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,--0,1,--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,--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,--0,1,2,--

R20)

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,--0,1,--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, : 0,0,0,0,0,0,0,0,1, :

LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, :

Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,2,

-----Class

1597-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][101][102][110][120]]$

-----

--

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,--0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--  
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,--  
--0,0,1,2,--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,  
0,0,0,1,--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,--0,0,0,0,0,0,0,0,0,1,--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,--  
R25)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--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,  
,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R26)  
0,0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,1,2,--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,--  
R27)  
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,--0,0,0,0,0,0,1,2,--  
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:  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0: 0,0,0,0,0,0,0,0,0,0,1: 0,0,0,0,0,0,0,0,0,1,2:  
 Number new nodes in level n is given by : 1,2,3,3,3,3,3,3,3,3,3,

-----Class

1598-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][101][102][110][201]]$

--

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,--
- 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,--
- 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,--
  - 0,0,0,0,1,--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,--0,0,0,0,0,0,1,--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,--0,0,0,0,1,--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,--0,0,1,--
- 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,--0,0,1,--







LEN=8) 0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,1,2, :  
 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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,1,2, :  
 Number new nodes in level n is given by : 1,2,3,3,3,3,3,3,3,3,3,

-----Class

1601-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][101][102][120][210]]$

--

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,--0,1,0,--
- 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,--0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,0,1,--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,--





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,--0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,0,1,--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,--  
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,--0,0,0,0,0,0,0,0,0,1,--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,--0,1,--  
R20) 0,0,0,0,0,0,0,0,0,1,-->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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,1, :  
Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,2,

-----Class

1603-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][021][101][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,--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,--0,0,0,0,0,0,1,--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,-->0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,1,--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,-->0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,0,1,--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,-->0,0,0,0,0,0,0,0,0,1,--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,--  
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,--0,0,0,0,0,0,0,0,0,1,--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,--0,1,--  
R26)  
0,0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,2,--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,--

R27)

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,--0,0,0,0,0,0,1,2,--  
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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,1,2,:

Number new nodes in level n is given by : 1,2,3,3,3,3,3,3,3,3,3,3,

-----Class

1604-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][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,-->0,0,1,--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,--0,0,0,0,0,0,1,--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,-->0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,1,--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,-->0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--  
R21)

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,--  
R22)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,1,2,--0,1,2,--  
R24)

0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,0,1,2,--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)

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,--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,--0,0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R26)

0,0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,2,--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,--  
R27)

0,0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,2,--0,0,0,1,2,--0,0,1,2,--  
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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,1,2, :  
Number new nodes in level n is given by : 1,2,3,3,3,3,3,3,3,3,3,3,

-----Class  
1605-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][101][110][201][210]]$   
-----

--  
Rules of T[L]:  
R1) 0,-->0,0,--0,--



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,--0,0,0,1,--  
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,--0,0,1,--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,-->0,0,0,0,0,0,0,1,2,--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,--0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,1,2,--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,--  
R25)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--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,--0,1,--  
R26)  
0,0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,2,--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,--  
R27)  
0,0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,2,--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, 0,1,2,

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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,1,2, :  
 Number new nodes in level n is given by : 1,2,3,3,3,3,3,3,3,3,3,

-----Class

1607-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][102][110][120][201]]$

--

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, --0,1,0, --
- 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, --0,0,1, --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, --0,0,0,0,0,0,0,0,1, --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, --0,0,1, --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, --0,0,1,2, --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, --





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,--  
--0,0,1,2,--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,  
0,0,0,1,--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,--0,0,0,0,0,0,0,0,0,1,--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,--  
,--  
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,--  
R25)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--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,--0,1,--  
R26)  
0,0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,1,2,--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,--  
R27)  
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,--0,0,0,0,0,0,1,2,--  
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,:  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,1,2,:  
 Number new nodes in level n is given by : 1,2,3,3,3,3,3,3,3,3,3,

-----Class

1609-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][021][102][110][201][210]]$

--

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,--
- 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,--
- 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,--0,1,--
- 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,--0,0,0,1,--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,--0,1,--
- 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,--0,1,--
- 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,--0,1,--
- R19) 0,0,0,0,0,0,0,0,0,1,-->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,--0,0,0,0,1,--0,0,0,1,--0,1,--









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,--0,0,0,0,0,0,0,1,--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,



0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--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)

0,0,0,0,0,0,1,-->0,1,0,--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)

0,0,0,0,0,0,2,-->0,0,2,0,--0,0,2,0,--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,--

R48)

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,--0,0,0,0,3,--0,0,0,0,4,--

R49)

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,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--

R50)

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,--0,0,0,0,1,--0,0,0,0,2,--

R51)

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,--0,0,0,0,1,2,--0,0,0,0,1,--

R52)

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,--0,0,0,0,1,2,--

R53)

0,0,0,0,0,0,1,2,-->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,--

R54)

0,0,0,0,0,0,6,0,-->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,--

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,--0,0,0,0,1,0,--

R59)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--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,--

R60)

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,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

R61)

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,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--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,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--

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,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--

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,--0,0,0,0,1,2,--0,0,0,0,1,--0,0,0,0,2,--

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,--0,0,0,0,1,2,--0,0,1,--

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,--0,0,1,2,--

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,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--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,-->0,0,0,0,0,0,0,6,0,--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,--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,--0,0,1,0,--

R75)

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,0,0,3,--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,--0,0,0,0,0,0,0,0,0,0,0,0,10,--

R76)

0,0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,0,1,--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,--

R77)

0,0,0,0,0,0,0,0,0,2,-->0,0,2,0,--0,0,2,0,--0,0,0,0,0,0,0,0,0,1,2,--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

,0,6,--0,0,0,0,0,0,7,--

R78)

0,0,0,0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,0,0,0,0,1,2,--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,  
,0,0,6,--

R79)

0,0,0,0,0,0,0,0,0,4,-->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,  
0,0,0,0,1,2,--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,-

R80)

0,0,0,0,0,0,0,0,0,5,-->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,--0,0,0,0,0,1,2,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,-

R81)

0,0,0,0,0,0,0,0,0,6,-->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,--0,0,0,0,1,2,--0,0,0,1,--0,0,0,2,--0,  
,0,0,3,--

R82)

0,0,0,0,0,0,0,0,0,7,-->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,--  
0,0,0,0,0,0,0,0,7,3,--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,  
,0,1,2,--0,0,1,--0,0,2,--

R83)

0,0,0,0,0,0,0,0,0,8,-->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,--0,0,1,2,--0,1,--

R84)

0,0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,0,9,0,--0,0,0,0,0,0,0,0,9,1,--0,0,0,0,0,0,  
0,0,0,9,2,--0,0,0,0,0,0,0,0,9,3,--0,0,0,0,0,0,0,0,9,4,--0,0,0,0,0,0,0,0,9,5,-  
-0,0,0,0,0,0,0,0,9,6,--0,0,0,0,0,0,0,0,9,7,--0,0,0,0,0,0,0,0,9,0,--0,1,2,--

R85)

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,--0,0,0,0,0,0,0,2,--0,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,  
,7,--

R86)

0,0,0,0,0,0,0,0,8,0,-->0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,0,7,1,--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,--

R87)

0,0,0,0,0,0,0,0,8,1,-->0,1,0,--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,--

R88)

0,0,0,0,0,0,0,0,8,2,-->0,0,2,0,--0,0,2,0,--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,--

R89)

0,0,0,0,0,0,0,0,8,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,0,3,0,--0,0,0,0,4,0,--0,0,0,0,4,  
1,--0,0,0,0,4,2,--0,0,0,0,4,0,--

R90)

0,0,0,0,0,0,0,0,8,4,-->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,  
0,3,0,--0,0,0,3,1,--0,0,0,3,0,--

R91)

0,0,0,0,0,0,0,0,8,5,-->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,--0,0,2,0,--0,0,2,0,--  
R92)  
0,0,0,0,0,0,0,0,8,6,-->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,--0,0,0,0,0,6,4,--0,0,0,0,0,6,0,--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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 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, : 0,0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,0,1,2, :  
0,0,0,0,0,0,0,0,0,9,0, : 0,0,0,0,0,0,0,0,0,9,1, : 0,0,0,0,0,0,0,0,0,9,2, :  
0,0,0,0,0,0,0,0,0,9,3, : 0,0,0,0,0,0,0,0,0,9,4, : 0,0,0,0,0,0,0,0,0,9,5, :  
0,0,0,0,0,0,0,0,0,9,6, : 0,0,0,0,0,0,0,0,0,9,7, :

Number new nodes in level n is given by : 1,2,5,6,8,10,12,14,16,18,20,

-----Class

1613-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][100][101][102][110][201]]$

-----  
--

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,--0,1,--
- 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,--0,0,0,3,2,--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,--0,0,0,0,0,0,0,1,--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,--0,0,0,3,2,--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,--0,0,0,0,0,5,--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,--0,0,0,0,0,6,5,--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,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,6,5,--0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,6,5,--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,--0,0,0,0,0,0,0,0,1,--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)

0,0,0,0,0,0,0,0,1,-->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,--

R45)

0,0,0,0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R46)

0,0,0,0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R47)

0,0,0,0,0,0,0,0,4,-->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,  
--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R48)

0,0,0,0,0,0,0,0,5,-->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,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R49)

0,0,0,0,0,0,0,0,6,-->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,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R50)

0,0,0,0,0,0,0,0,7,-->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,--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,--0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,0,8,7,--0,0,0,0,0,0,0,0,8,--

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,  
0,0,0,0,0,6,5,--

R53)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,  
0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,-  
-0,0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,  
0,0,0,0,9,--0,0,0,0,0,0,0,0,0,0,10,--

R54)

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,  
0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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,--

R55)

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,--0,0,0,0,0,0,0,0,9,--

R56)

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,  
0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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,--

R57)

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,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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,--

R58)

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,--  
0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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,--

R59)

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,--  
0,0,0,0,0,6,5,--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,-  
-0,0,0,0,0,0,0,0,9,--

R60)

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,--  
0,0,0,0,0,6,5,--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,--0

```

,0,0,0,0,0,0,0,0,9,--
R61)
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,--0,0,0,0,0,0,0,0,8,--0
,0,0,0,0,0,0,0,0,9,--
R62)
0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,0,9,8,-
-0,0,0,0,0,0,0,0,9,--
R63)
0,0,0,0,0,0,0,0,8,7,-->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,--
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,:
LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 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,: 0,0,0,0,0,0,0,0,0,0,10,: 0,0,0,0,0,0,0,0,0,9,8,:
Number new nodes in level n is given by : 1,2,4,5,6,7,8,9,10,11,12,

```

-----Class

1614-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][100][101][102][110][210]]$

-----

--

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,--0,1,--
- 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,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--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,--0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,5,7,--

R43)

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,--

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,--0,0,0,0,0,0,0,0,1,--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,--

R60)

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,--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,--0,0,0,0,0,0,2,5,--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)

0,0,0,0,0,0,3,-->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,--0,0,0,0,0,0,3,8,--

R63)

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,--0,0,0,0,0,0,4,8,--

R64)

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,--0,0,0,0,0,0,5,8,--

R65)

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)

0,0,0,0,0,0,7,-->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,--0,0,0,0,3,0,--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,--0,0,0,0,0,0,0,0,0,1,--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,--

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,-->0,0,0,0,0,0,0,7,0,--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,  
0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,8,--

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,--0,0,0,0,0,0,1,3,5,--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,

0,0,1,3,6,8,--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,--  
R150)

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,0,0,10,--

R151)

0,0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,3,--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,--0,0,0,0,0,0,0,0,0,1,10,--

R152)

0,0,0,0,0,0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,0,0,2,--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,--0,0,0,0,0,0,0,0,0,2,10,--

R153)

0,0,0,0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,0,0,3,--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,--0,0,0,0,0,0,0,0,0,3,10,--

R154)

0,0,0,0,0,0,0,0,0,4,-->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,  
0,4,--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,--0,0,0,0,0,0,0,0,0,4,10,--

R155)

0,0,0,0,0,0,0,0,0,5,-->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,--0,0,0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,0,0,5,8,--0,0,0,0,0,0,0,  
,0,0,5,9,--0,0,0,0,0,0,0,0,0,5,10,--

R156)

0,0,0,0,0,0,0,0,0,6,-->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,--0,0,0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,0,0,6,  
,9,--0,0,0,0,0,0,0,0,0,6,10,--

R157)

0,0,0,0,0,0,0,0,0,7,-->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,--0,0,0,0,0,0,0,0,0,7,9,-  
-0,0,0,0,0,0,0,0,7,10,--

R158)



0,0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,8,0,--0,0,0,0,0,0,0,0,7,0,--0,0,0,0,0,0,0,0,6,0,--  
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,--0,0,0,0,0,0,0,0,8,--0  
,0,0,0,0,0,0,0,0,8,10,--

R159)

0,0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,9,0,--0,0,0,0,0,0,0,0,8,0,--0,0,0,0,0,0,0,  
7,0,--0,0,0,0,0,0,6,0,--0,0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,0,3,0,--0,0,2,0,--0,1,0,--  
-0,0,0,0,0,0,0,0,9,--

R160)

0,0,0,0,0,0,0,0,1,3,-->0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,1,3,--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,--0,0,0,0,0,0,0,0,1,3,10,--

R161)

0,0,0,0,0,0,0,0,1,4,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,0,1,4,--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,--  
-0,0,0,0,0,0,0,0,1,4,10,--

R162)

0,0,0,0,0,0,0,0,1,5,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,0,1,5,--  
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,  
,0,0,1,5,10,--

R163)

0,0,0,0,0,0,0,0,1,6,-->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,  
0,0,0,0,1,6,--0,0,0,0,0,0,0,0,1,6,8,--0,0,0,0,0,0,0,0,1,6,9,--0,0,0,0,0,0,0,0,1,6,1  
0,--

R164)

0,0,0,0,0,0,0,0,1,7,-->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,--0,0,0,0,0,0,0,0,1,7,9,--0,0,0,0,0,0,0,0,1,7,10,--

R165)

0,0,0,0,0,0,0,0,1,8,-->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,--0,0,0,0,0,0,0,0,1,8,10,--

R166)

0,0,0,0,0,0,0,0,1,9,-->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,--0,0,0,0,0,0,0,1,9,--

R167)

0,0,0,0,0,0,0,0,2,4,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,2,4,--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,--  
-0,0,0,0,0,0,0,0,2,4,10,--

R168)

0,0,0,0,0,0,0,0,2,5,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,0,2,5,--0,  
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,  
,0,2,5,10,--

R169)

0,0,0,0,0,0,0,0,2,6,-->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,  
0,0,2,6,--0,0,0,0,0,0,0,0,2,6,8,--0,0,0,0,0,0,0,0,2,6,9,--0,0,0,0,0,0,0,0,2,6,10,--

R170)

0,0,0,0,0,0,0,0,2,7,-->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,  
--0,0,0,0,0,0,0,0,2,7,--0,0,0,0,0,0,0,0,2,7,9,--0,0,0,0,0,0,0,0,2,7,10,--

R171)

0,0,0,0,0,0,0,0,2,8,-->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,--0,0,0,0,0,0,0,0,2,8,--0,0,0,0,0,0,0,0,2,8,10,--

R172)

0,0,0,0,0,0,0,0,2,9,-->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,--0,0,0,0,0,0,0,2,9,--

R173)

0,0,0,0,0,0,0,0,3,5,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,3,5,--  
0,0,0,0,0,0,0,0,3,5,7,--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,  
0,0,3,5,10,--

R174)

0,0,0,0,0,0,0,0,3,6,-->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,  
0,0,3,6,--0,0,0,0,0,0,0,0,3,6,8,--0,0,0,0,0,0,0,0,3,6,9,--0,0,0,0,0,0,0,0,3,6,10,--

R175)

0,0,0,0,0,0,0,0,3,7,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--  
0,0,0,0,0,0,0,0,3,7,--0,0,0,0,0,0,0,0,3,7,9,--0,0,0,0,0,0,0,0,3,7,10,--

R176)

0,0,0,0,0,0,0,0,3,8,-->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,--0,0,0,0,0,0,0,0,3,8,10,--

R177)

0,0,0,0,0,0,0,0,3,9,-->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,--0,0,0,0,0,0,0,3,9,--

R178)

0,0,0,0,0,0,0,0,4,6,-->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,  
0,0,0,0,4,6,--0,0,0,0,0,0,0,0,4,6,8,--0,0,0,0,0,0,0,0,4,6,9,--0,0,0,0,0,0,0,0,4,6,1  
0,--

R179)

0,0,0,0,0,0,0,0,4,7,-->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,  
--0,0,0,0,0,0,0,0,4,7,--0,0,0,0,0,0,0,0,4,7,9,--0,0,0,0,0,0,0,0,4,7,10,--

R180)

0,0,0,0,0,0,0,0,4,8,-->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,--0,0,0,0,0,0,0,0,4,8,--0,0,0,0,0,0,0,0,4,8,10,--

R181)

0,0,0,0,0,0,0,0,4,9,-->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,--0,0,0,0,0,0,0,0,4,9,--

R182)

0,0,0,0,0,0,0,0,5,7,-->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,--0,0,0,0,0,0,0,0,5,7,--0,0,0,0,0,0,0,0,5,7,9,--0,0,0,0,0,0,0,0,5,7,10,--

R183)

0,0,0,0,0,0,0,0,5,8,-->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,--0,0,0,0,0,0,0,0,5,8,--0,0,0,0,0,0,0,0,5,8,10,--

R184)

0,0,0,0,0,0,0,0,5,9,-->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,--0,0,0,0,0,0,0,0,5,9,--

R185)

0,0,0,0,0,0,0,0,6,8,-->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,--0,0,0,0,0,0,0,0,6,8,--0,0,0,0,0,0,0,0,6,8,10,--

R186)

0,0,0,0,0,0,0,0,6,9,-->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,--0,0,0,0,0,0,0,0,6,9,--

R187)

0,0,0,0,0,0,0,0,7,9,-->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,--0,0,0,0,0,0,0,0,7,9,--

R188)

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,--

R189)

0,0,0,0,0,0,0,1,3,5,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,1,3,5,--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,--0,0,0,0,0,0,0,1,3,5,10,--

R190)

0,0,0,0,0,0,0,1,3,6,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,1,3,6,--0,0,  
0,0,0,0,0,1,3,6,8,--0,0,0,0,0,0,0,1,3,6,9,--0,0,0,0,0,0,0,1,3,6,10,--

R191)

0,0,0,0,0,0,0,1,3,7,-->0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,  
1,3,7,--0,0,0,0,0,0,0,1,3,7,9,--0,0,0,0,0,0,0,1,3,7,10,--

R192)

0,0,0,0,0,0,0,1,3,8,-->0,1,0,--0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--  
0,0,0,0,0,0,0,1,3,8,--0,0,0,0,0,0,0,1,3,8,10,--

R193)

0,0,0,0,0,0,0,1,3,9,-->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,--0,0,0,0,0,0,0,1,3,9,--

R194)

0,0,0,0,0,0,0,1,4,6,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,1,4,6,--0,0,  
0,0,0,0,0,1,4,6,8,--0,0,0,0,0,0,0,1,4,6,9,--0,0,0,0,0,0,0,1,4,6,10,--

R195)

0,0,0,0,0,0,0,1,4,7,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,1,  
4,7,--0,0,0,0,0,0,0,1,4,7,9,--0,0,0,0,0,0,0,1,4,7,10,--

R196)

0,0,0,0,0,0,0,1,4,8,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,  
0,0,0,0,0,1,4,8,--0,0,0,0,0,0,0,1,4,8,10,--

R197)

0,0,0,0,0,0,0,1,4,9,-->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,--0,0,0,0,0,0,0,1,4,9,--

R198)

0,0,0,0,0,0,0,1,5,7,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,  
1,5,7,--0,0,0,0,0,0,0,1,5,7,9,--0,0,0,0,0,0,0,1,5,7,10,--

R199)

0,0,0,0,0,0,0,1,5,8,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,  
0,0,0,0,0,1,5,8,--0,0,0,0,0,0,0,1,5,8,10,--

R200)

0,0,0,0,0,0,0,1,5,9,-->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,--0,0,0,0,0,0,0,1,5,9,--

R201)

0,0,0,0,0,0,0,1,6,8,-->0,1,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--  
0,0,0,0,0,0,0,1,6,8,--0,0,0,0,0,0,0,1,6,8,10,--

R202)

0,0,0,0,0,0,0,1,6,9,-->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,--0,0,0,0,0,0,0,1,6,9,--

R203)

0,0,0,0,0,0,0,1,7,9,-->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,--0,0,0,0,0,0,0,1,7,9,--

R204)

0,0,0,0,0,0,0,2,4,6,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,2,4,6,--0,0,  
0,0,0,0,0,2,4,6,8,--0,0,0,0,0,0,0,2,4,6,9,--0,0,0,0,0,0,0,2,4,6,10,--

R205)

0,0,0,0,0,0,0,2,4,7,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,2,  
4,7,--0,0,0,0,0,0,0,2,4,7,9,--0,0,0,0,0,0,0,2,4,7,10,--

R206)

0,0,0,0,0,0,0,2,4,8,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,  
0,0,0,0,0,2,4,8,--0,0,0,0,0,0,0,2,4,8,10,--

R207)

0,0,0,0,0,0,0,2,4,9,-->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,--0,0,0,0,0,0,0,2,4,9,--

R208)

0,0,0,0,0,0,0,2,5,7,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,2,  
5,7,--0,0,0,0,0,0,0,2,5,7,9,--0,0,0,0,0,0,0,2,5,7,10,--

R209)

0,0,0,0,0,0,0,2,5,8,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,  
0,0,0,0,2,5,8,--0,0,0,0,0,0,0,2,5,8,10,--

R210)

0,0,0,0,0,0,0,2,5,9,-->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,--0,0,0,0,0,0,0,2,5,9,--

R211)

0,0,0,0,0,0,0,2,6,8,-->0,0,2,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,  
0,0,0,0,0,2,6,8,--0,0,0,0,0,0,0,2,6,8,10,--

R212)

0,0,0,0,0,0,0,2,6,9,-->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,--0,0,0,0,0,0,0,2,6,9,--

R213)

0,0,0,0,0,0,0,2,7,9,-->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,--0,0,0,0,0,0,0,2,7,9,--

R214)

0,0,0,0,0,0,0,3,5,7,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,  
3,5,7,--0,0,0,0,0,0,0,3,5,7,9,--0,0,0,0,0,0,0,3,5,7,10,--

R215)

0,0,0,0,0,0,0,3,5,8,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,  
0,0,0,0,0,3,5,8,--0,0,0,0,0,0,0,3,5,8,10,--

R216)

0,0,0,0,0,0,0,3,5,9,-->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,--0,0,0,0,0,0,0,3,5,9,--

R217)

0,0,0,0,0,0,0,3,6,8,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,  
0,0,0,0,0,3,6,8,--0,0,0,0,0,0,0,3,6,8,10,--

R218)

0,0,0,0,0,0,0,3,6,9,-->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,--0,0,0,0,0,0,0,3,6,9,--

R219)

0,0,0,0,0,0,0,3,7,9,-->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,--0,0,0,0,0,0,0,3,7,9,--

R220)

0,0,0,0,0,0,0,4,6,8,-->0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--  
0,0,0,0,0,0,0,4,6,8,--0,0,0,0,0,0,0,4,6,8,10,--

R221)

0,0,0,0,0,0,0,4,6,9,-->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,--0,0,0,0,0,0,0,4,6,9,--  
R222)  
0,0,0,0,0,0,0,4,7,9,-->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,--0,0,0,0,0,0,0,4,7,9,--  
R223)  
0,0,0,0,0,0,0,5,7,9,-->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,--0,0,0,0,0,0,0,5,7,9,--  
R224)  
0,0,0,0,0,0,1,3,5,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,1,3,5,7,--0,0,0,  
0,0,0,1,3,5,7,9,--0,0,0,0,0,0,1,3,5,7,10,--  
R225)  
0,0,0,0,0,0,1,3,5,8,-->0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,1,3,5,  
8,--0,0,0,0,0,0,1,3,5,8,10,--  
R226)  
0,0,0,0,0,0,1,3,5,9,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,  
0,0,0,1,3,5,9,--  
R227)  
0,0,0,0,0,0,1,3,6,8,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,1,3,6,  
8,--0,0,0,0,0,0,1,3,6,8,10,--  
R228)  
0,0,0,0,0,0,1,3,6,9,-->0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,  
0,0,1,3,6,9,--  
R229)  
0,0,0,0,0,0,1,3,7,9,-->0,1,0,--0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,  
0,0,0,1,3,7,9,--  
R230)  
0,0,0,0,0,0,1,4,6,8,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,1,4,6,  
8,--0,0,0,0,0,0,1,4,6,8,10,--  
R231)  
0,0,0,0,0,0,1,4,6,9,-->0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,  
0,0,1,4,6,9,--  
R232)  
0,0,0,0,0,0,1,4,7,9,-->0,1,0,--0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,  
0,0,1,4,7,9,--  
R233)  
0,0,0,0,0,0,1,5,7,9,-->0,1,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,  
0,0,0,1,5,7,9,--  
R234)  
0,0,0,0,0,0,2,4,6,8,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,2,4,6,  
8,--0,0,0,0,0,0,2,4,6,8,10,--  
R235)  
0,0,0,0,0,0,2,4,6,9,-->0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,0,0,0,  
0,0,2,4,6,9,--  
R236)  
0,0,0,0,0,0,2,4,7,9,-->0,0,2,0,--0,1,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,0,0,0,  
0,0,2,4,7,9,--  
R237)  
0,0,0,0,0,0,2,5,7,9,-->0,0,2,0,--0,1,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,  
0,0,2,5,7,9,--  
R238)

0,0,0,0,0,0,3,5,7,9,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,  
0,0,0,3,5,7,9,--

R239)

0,0,0,0,0,1,3,5,7,9,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,1,3,5,7,9,  
--

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,: 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,:



0,0,0,0,0,0,0,0,2,6,8, : 0,0,0,0,0,0,0,0,2,6,9, : 0,0,0,0,0,0,0,0,2,6,10, :  
 0,0,0,0,0,0,0,0,2,7,9, : 0,0,0,0,0,0,0,0,2,7,10, : 0,0,0,0,0,0,0,0,2,8,10, :  
 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, :  
 0,0,0,0,0,0,0,0,3,5,10, : 0,0,0,0,0,0,0,0,3,6,8, : 0,0,0,0,0,0,0,0,3,6,9, :  
 0,0,0,0,0,0,0,0,3,6,10, : 0,0,0,0,0,0,0,0,3,7,9, : 0,0,0,0,0,0,0,0,3,7,10, :  
 0,0,0,0,0,0,0,0,3,8,10, : 0,0,0,0,0,0,0,0,4,6,8, : 0,0,0,0,0,0,0,0,4,6,9, :  
 0,0,0,0,0,0,0,0,4,6,10, : 0,0,0,0,0,0,0,0,4,7,9, : 0,0,0,0,0,0,0,0,4,7,10, :  
 0,0,0,0,0,0,0,0,4,8,10, : 0,0,0,0,0,0,0,0,5,7,9, : 0,0,0,0,0,0,0,0,5,7,10, :  
 0,0,0,0,0,0,0,0,5,8,10, : 0,0,0,0,0,0,0,0,6,8,10, : 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, : 0,0,0,0,0,0,0,1,3,5,10, :  
 0,0,0,0,0,0,0,1,3,6,8, : 0,0,0,0,0,0,0,1,3,6,9, : 0,0,0,0,0,0,0,1,3,6,10, :  
 0,0,0,0,0,0,0,1,3,7,9, : 0,0,0,0,0,0,0,1,3,7,10, : 0,0,0,0,0,0,0,1,3,8,10, :  
 0,0,0,0,0,0,0,1,4,6,8, : 0,0,0,0,0,0,0,1,4,6,9, : 0,0,0,0,0,0,0,1,4,6,10, :  
 0,0,0,0,0,0,0,1,4,7,9, : 0,0,0,0,0,0,0,1,4,7,10, : 0,0,0,0,0,0,0,1,4,8,10, :  
 0,0,0,0,0,0,0,1,5,7,9, : 0,0,0,0,0,0,0,1,5,7,10, : 0,0,0,0,0,0,0,1,5,8,10, :  
 0,0,0,0,0,0,0,1,6,8,10, : 0,0,0,0,0,0,0,2,4,6,8, : 0,0,0,0,0,0,0,2,4,6,9, :  
 0,0,0,0,0,0,0,2,4,6,10, : 0,0,0,0,0,0,0,2,4,7,9, : 0,0,0,0,0,0,0,2,4,7,10, :  
 0,0,0,0,0,0,0,2,4,8,10, : 0,0,0,0,0,0,0,2,5,7,9, : 0,0,0,0,0,0,0,2,5,7,10, :  
 0,0,0,0,0,0,0,2,5,8,10, : 0,0,0,0,0,0,0,2,6,8,10, : 0,0,0,0,0,0,0,3,5,7,9, :  
 0,0,0,0,0,0,0,3,5,7,10, : 0,0,0,0,0,0,0,3,5,8,10, : 0,0,0,0,0,0,0,3,6,8,10, :  
 0,0,0,0,0,0,0,4,6,8,10, : 0,0,0,0,0,0,0,1,3,5,7,9, : 0,0,0,0,0,0,0,1,3,5,7,10, :  
 0,0,0,0,0,0,0,1,3,5,8,10, : 0,0,0,0,0,0,0,1,3,6,8,10, : 0,0,0,0,0,0,0,1,4,6,8,10, :  
 0,0,0,0,0,0,0,2,4,6,8,10, :

Number new nodes in level n is given by : 1,2,4,6,9,14,22,35,56,90,145,

-----Class

1615-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][100][101][102][120][201]]$

-----

--

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, --0,1,2, --
- 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,  
2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--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,  
0,0,2,--0,0,0,0,0,0,0,3,--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,--0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,  
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,--  
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,--0,0,0,0,0,0,0,0,0,0,0,0,0,0,  
0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--  
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,--0,0,0,0,0,0,0,0,0,0,0,0,0,0,  
0,0,0,1,2,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--  
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,--0,0,0,0,0,0,0,0,0,0,0,0,0,0,  
0,0,0,0,0,6,5,--0,0,0,0,1,2,--0,0,0,1,--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,--0,0,0,0,0,0,0,0,0,0,0,0,0,0,  
0,0,0,0,0,6,5,--0,0,0,0,0,0,0,0,7,6,--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,--0,0,0,0,0,0,0,0,0,0,0,0,0,0,  
0,0,0,0,0,6,5,--0,0,0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,0,0,0,0,0,8,7,--0,1,2,--



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, : 0,0,0,0,0,0,0,0,8,7, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 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, : 0,0,0,0,0,0,0,0,0,5, :  
 0,0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :  
 0,0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,0,1,2, :  
 0,0,0,0,0,0,0,0,0,0,9,8, :  
 Number new nodes in level n is given by : 1,2,5,6,7,8,9,10,11,12,13,

-----Class

1616-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][100][101][102][120][210]]$

-----

--

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, --0,1,2, --
- 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,--0,0,0,0,0,0,0,1,--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,--  
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,--0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,5,--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,--0,0,0,0,4,--0,0,0,0,5,--

R42)

0,0,0,0,0,0,3,-->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)

0,0,0,0,0,0,4,-->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)

0,0,0,0,0,0,5,-->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,  
0,1,2,--0,0,1,--0,0,2,--

R45)

0,0,0,0,0,0,6,-->0,0,0,0,6,0,--0,0,0,5,0,--0,0,0,4,0,--0,0,0,3,0,--0,0,  
2,0,--0,1,0,--0,0,1,2,--0,1,--

R46)

0,0,0,0,0,0,7,-->0,0,0,0,7,0,--0,0,0,6,0,--0,0,0,5,0,--0,0,0,4,  
0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,1,2,--

R47)

0,0,0,0,0,1,2,-->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,--0,0,0,0,5,--

R48)

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,--

R49)

0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,  
2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,  
,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--0,0,0,0,0,0,9,--

R50)

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,--0,0,0,0,0,0,  
2,--0,0,0,0,0,0,3,--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,--

R51)

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,--0,0,0,0,  
0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R52)

0,0,0,0,0,0,3,-->0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,1,2,--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,--

R53)

0,0,0,0,0,0,4,-->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)

0,0,0,0,0,0,5,-->0,0,0,0,5,0,--0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,  
0,0,0,1,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R55)

0,0,0,0,0,0,6,-->0,0,0,0,6,0,--0,0,0,5,0,--0,0,0,4,0,--0,0,0,3,0,--0,  
0,2,0,--0,1,0,--0,0,0,1,2,--0,0,1,--0,0,2,--

R56)

0,0,0,0,0,0,7,-->0,0,0,0,7,0,--0,0,0,6,0,--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)



0,4,0,--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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,0,0,0,3,: 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,: 0,0,0,0,0,0,0,0,0,0,0,10,: 0,0,0,0,0,0,0,0,0,0,1,2,:

0,0,0,0,0,0,0,0,0,0,9,0,:

Number new nodes in level n is given by : 1,2,5,6,7,8,9,10,11,12,13,

-----Class

1617-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][100][101][102][201][210]]$

-----

--

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,--0,1,--

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,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--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,--0,0,0,0,0,0,4,--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,--  
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,--0,0,0,0,0,0,0,0,1,--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)



R49)

0,0,0,0,0,0,0,0,0,2,-->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,--

R50)

0,0,0,0,0,0,0,0,0,3,-->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,--

R51)

0,0,0,0,0,0,0,0,0,4,-->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  
,0,0,0,0,0,0,0,9,--

R52)

0,0,0,0,0,0,0,0,0,5,-->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,  
,0,9,--

R53)

0,0,0,0,0,0,0,0,0,6,-->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,--

R54)

0,0,0,0,0,0,0,0,0,7,-->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,--0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,9,--

R55)

0,0,0,0,0,0,0,0,0,8,-->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,--0,0,0,0,0,0,0,0,0,9,--

R56)

0,0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,9,--

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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 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, : 0,0,0,0,0,0,0,0,0,0,10, :  
Number new nodes in level n is given by : 1,2,4,4,5,6,7,8,9,10,11,

-----Class

1618-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][100][101][110][120][201]]$

-----  
--

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,-->0,1,0,--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)  
0,0,0,0,0,2,-->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,--0,0,0,0,0,0,0,1,--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,--
- 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,--0,0,0,0,0,  
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,--0,0,0,0,0,3,--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,--0,0,0,0,0,4,--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,--0,0,0,0,0,5,  
--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,--0,0,0,0,5,--

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,--0,0,0,0,0,0,1,0,--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,--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,--0,0,0,0,0,0,1,--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,--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,--0,0,0,0,0,0,3,--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,--0,0,0,0,0,0,0,0,0,1,--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,--

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,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--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,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,0,--0,0,  
0,0,0,0,0,1,--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,--

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,--0,0,0,0,0,0,0,0,2,--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,--

R48)  
0,0,0,0,0,0,0,0,4,-->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,  
0,0,3,--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,--0,0,0,0,0,0,2,--0,0,0,0,0,0,0,3,--  
0,0,0,0,0,0,0,0,4,--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,--0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,  
0,0,0,4,--0,0,0,0,0,0,0,5,--0,0,0,1,0,--0,0,0,1,--0,0,2,--

R51)  
0,0,0,0,0,0,0,0,7,-->0,0,0,1,0,--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,--0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,3,--0,0,0,0,0,0,0,4,--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)  
0,0,0,0,0,0,0,0,0,0,-->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,--0,0,0,0,0,0,0,0,0,0,10,--

R55)  
0,0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,0,1,0,--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,--

R56)  
0,0,0,0,0,0,0,0,0,2,-->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,--0,0,0,0,0,0,0,1,--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,--

R57)  
0,0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,2,  
--0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,6,--

R58)  
0,0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--0,0,  
0,0,0,0,0,0,0,3,--0,0,0,0,0,0,1,0,--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

```

,0,4,--0,0,0,0,0,5,--
R59)
0,0,0,0,0,0,0,0,0,5,-->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,--0,0,0,0,0,0,0,0,0,4,--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,--
R60)
0,0,0,0,0,0,0,0,0,6,-->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,
--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,5,--0,0,0,1,0,--0,0,0,1,--0,0,0,2,--0,0,0,3
,--
R61)
0,0,0,0,0,0,0,0,0,7,-->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,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,1,0,--0,0,1,--0,0,2,--
R62)
0,0,0,0,0,0,0,0,0,8,-->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,
--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,1,0,--0,1,--
R63)
0,0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--0,1,2,--
R64)
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,--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,: 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,:
LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 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,: 0,0,0,0,0,0,0,0,0,0,10,: 0,0,0,0,0,0,0,0,0,1,0,:
Number new nodes in level n is given by : 1,2,5,5,6,7,8,9,10,11,12,

```

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][100][101][110][120][210]]$

--

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)  
 $0, 0, 0, 0, 0, 0, 0, -- \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, -- 0, 0, 0, 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 0, 0, 0, 2, -- 0, 0, 0, 0, 0, 0,$   
 $0, 3, -- 0, 0, 0, 0, 0, 0, 4, -- 0, 0, 0, 0, 0, 0, 5, -- 0, 0, 0, 0, 0, 0, 6, -- 0, 0, 0, 0, 0, 0, 7, --$
- 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)  
 $0, 0, 0, 0, 0, 0, 3, -- \rightarrow 0, 0, 0, 0, 0, 0, 2, -- 0, 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 1, 0, -- 0, 0, 0, 1, 0, -- 0, 0, 0, 1, --$







R60)  
0,0,0,0,0,0,0,0,0,6,-->0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,3,--  
0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,1,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,0,1,--0,0,0,2,--0,0,0,3  
,--  
R61)  
0,0,0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,4,--  
0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,2,--0,0,0,0,0,1,--0,0,0,1,0,--0,0,1,0,--0,0,1,--0,0,2,--  
R62)  
0,0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,5,--  
0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,3,--0,0,0,0,0,2,--0,0,0,0,1,--0,0,1,0,--0,1,0,--0,1,--  
R63)  
0,0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,6,--  
0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,4,--0,0,0,0,0,3,--0,0,0,0,2,--0,0,1,--0,1,0,--0,1,2,--  
R64)  
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,--0,0,0,0,0,0,0,0,0,2,  
--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,--

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, : 0,0,0,0,0,0,0,0,0,1,0, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 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, : 0,0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,0,0,1,0, :  
Number new nodes in level n is given by : 1,2,5,5,6,7,8,9,10,11,12,

-----Class

1620-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][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,-->0,1,--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,--0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--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)





0,0,0,0,0,5, :  
 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, :  
 0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,8, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,1, : 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, :  
 0,0,0,0,0,0,0,0,0,0,0,6, : 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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,0,0,0,0,3, : 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, :  
 0,0,0,0,0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,0,0,0,8, :  
 0,0,0,0,0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,0,0,0,0,10, :  
 Number new nodes in level n is given by : 1,2,3,4,5,6,7,8,9,10,11,

-----Class

1621-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][100][101][120][201][210]]$

-----

--

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, -->0,1,0, --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,--0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,1,0,--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,





0,0,0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,0,--  
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,  
,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--

R57)

0,0,0,0,0,0,0,0,0,3,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,0,--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,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,  
,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--

R58)

0,0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,1,0,--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,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,-  
-0,0,0,0,0,5,--

R59)

0,0,0,0,0,0,0,0,0,5,-->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,--0,0,0,0,0,1,0,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--

R60)

0,0,0,0,0,0,0,0,0,6,-->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,--0,0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--

R61)

0,0,0,0,0,0,0,0,0,7,-->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,--  
0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,0,1,--0,0,0,0,2,--

R62)

0,0,0,0,0,0,0,0,0,8,-->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,--  
0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,0,1,--

R63)

0,0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,1,0,--0,0,0,0,1,2,--

R64)

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,--0,0,0,0,0,0,0,0,0,2,  
--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,--

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, : 0,0,0,0,0,0,0,0,0,1,0, :

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,0,0,0,0,2, :  
 0,0,0,0,0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,0,0,0,0,5, :  
 0,0,0,0,0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,0,0,0,0,8, :  
 0,0,0,0,0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,0,0,0,1,0, :  
 Number new nodes in level n is given by : 1,2,5,5,6,7,8,9,10,11,12,

-----Class

1622-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][100][102][110][120][201]]$

-----  
 --

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,--0,1,2,--
- 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,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--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,--0,0,0,0,0,0,0,1,--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,--  
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,--0,0,0,0,0,0,0,0,1,--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,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,0,0,6,--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,--

R50)

0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,1,--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,--

R51)

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,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--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,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--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,--

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,--0,0,0,0,0,1,--0,0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R54)

0,0,0,0,0,0,0,0,5,-->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,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--

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,--0,0,0,0,1,2,--0,0,0,0,1,--0,0,0,0,2,--

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,--0,0,0,0,0,0,7,6,--0,0,0,0,1,2,--0,0,0,0,1,--

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,--0,0,0,0,0,0,7,6,--0,0,0,0,0,0,8,7,--0,0,0,0,1,2,--

R58)

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,--

R59)

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,--

R60)

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,--0,0,0,0,0,0,0,0,0,0,10,--

R61)

0,0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,0,1,--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,--

R62)

0,0,0,0,0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,1,--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,--

R63)

0,0,0,0,0,0,0,0,0,3,-->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,  
0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6  
,--

R64)

0,0,0,0,0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--0,0,0,0,0,0,1,2,  
--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,--

R65)

0,0,0,0,0,0,0,0,0,5,-->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,--  
0,0,0,0,0,1,2,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R66)

0,0,0,0,0,0,0,0,0,6,-->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,--  
0,0,0,0,0,6,5,--0,0,0,0,1,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R67)

0,0,0,0,0,0,0,0,0,7,-->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,--  
0,0,0,0,0,6,5,--0,0,0,0,0,7,6,--0,0,0,1,2,--0,0,1,--0,0,2,--

R68)

0,0,0,0,0,0,0,0,0,8,-->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,--  
0,0,0,0,0,6,5,--0,0,0,0,0,7,6,--0,0,0,0,0,8,7,--0,0,1,2,--0,1,--

R69)

0,0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,7,6,--0,0,0,0,0,8,7,--0,0,0,0,0,9,8,-  
-0,1,2,--

R70)

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,--0,0,0,0,0,0,0,2,--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,--0,0,0,0,0,7,  
,7,--

R71)

0,0,0,0,0,0,0,0,8,7,-->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,--0,0,0,0,0,7,6,--

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,: 0,0,0,0,0,0,0,0,8,7,:  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 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,: 0,0,0,0,0,0,0,0,0,0,10,: 0,0,0,0,0,0,0,0,0,0,1,2,:  
 0,0,0,0,0,0,0,0,0,0,9,8,:

Number new nodes in level n is given by : 1,2,5,6,7,8,9,10,11,12,13,

-----Class

1623-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][100][102][110][120][210]]$

-----

--

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,--0,1,2,--
- 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,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--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,--0,0,0,0,0,0,0,0,1,--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)

0,0,0,0,0,0,0,1,-->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,--

R32)

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,--

R33)

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,--0,0,0,3,--

R34)

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,--0,0,0,1,2,--0,0,1,--0,0,2,--

R35)

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,--0,0,1,2,--0,1,--

R36)

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,--0,1,2,--

R37)

0,0,0,0,0,0,1,2,-->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) 0,0,0,0,0,0,5,0,-->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,--0,0,0,0,0,0,0,0,0,1,--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,-->0,0,2,0,--0,1,0,--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,--

R42)

0,0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R43)

0,0,0,0,0,0,0,4,-->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,--

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,--0,0,1,2,--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,--0,0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--

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,--0,0,0,0,1,2,--0,0,0,0,1,--0,0,0,0,2,--

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,--0,0,0,0,3,0,--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,--0,0,0,0,3,0,--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,--0,0,0,0,0,0,5,0,--0,0,0,0,0,0,4,0,--0,0,0,0,0,0,3,0,--0,0,2,0,--0,1,0,--

R60)

0,0,0,0,0,0,0,0,0,-->0,1,--0,0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,0,3,--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,--0,0,0,0,0,0,0,0,0,0,0,10,--

R61)

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,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R62)

0,0,0,0,0,0,0,0,0,2,-->0,0,2,0,--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,--0,0,0,0,0,0,3,--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,--

R63)

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,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R64)

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,--0,0,0,0,0,0,1,2,--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,--

R65)

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,--0,0,0,0,0,1,2,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R66)

0,0,0,0,0,0,0,0,6,-->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,--0,0,0,0,1,2,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--

R67)

0,0,0,0,0,0,0,0,7,-->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,--0,0,0,1,2,--0,0,1,--0,0,2,--

R68)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,8,0,--0,0,0,0,0,7,0,--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,--0,0,1,2,--0,1,--

R69)

0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,9,0,--0,0,0,0,0,8,0,--0,0,0,0,7,0,--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,--0,1,2,--

R70)

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,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--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,--

R71)

0,0,0,0,0,0,0,0,8,0,-->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,--

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,: 0,0,0,0,0,0,0,0,0,0,1,,: 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,: 0,0,0,0,0,0,0,0,1,2,: 0,0,0,0,0,0,0,0,8,0,:  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,0,2,:  
 0,0,0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,0,5,:  
 0,0,0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,0,8,:  
 0,0,0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,0,0,0,0,10,: 0,0,0,0,0,0,0,0,0,0,1,2,:  
 0,0,0,0,0,0,0,0,0,0,9,0,:  
 Number new nodes in level n is given by : 1,2,5,6,7,8,9,10,11,12,13,

-----Class

1624-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][100][102][110][201][210]]$

-----

--

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,--0,1,--
- 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,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--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,--0,0,0,0,0,0,7,--

R38)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,1,--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,--



R54)  
0,0,0,0,0,0,0,0,0,7,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,  
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,--

R55)  
0,0,0,0,0,0,0,0,0,8,-->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,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R56)  
0,0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,0,9,--

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, :

LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 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, : 0,0,0,0,0,0,0,0,0,0,10, :

Number new nodes in level n is given by : 1,2,4,4,5,6,7,8,9,10,11,

-----Class

1625-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][100][102][120][201][210]]$

-----

--

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,--0,1,2,--

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,--0,1,0,--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,-->0,1,0,--0,1,0,--0,0,1,2,--0,1,--  
R12) 0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,1,2,--  
R13) 0,0,1,2,-->0,0,1,2,--0,1,--  
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,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R16) 0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,1,2,--0,0,1,--0,0,2,--  
R17) 0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,1,2,--0,1,--  
R18) 0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,2,--  
R19) 0,0,0,1,2,-->0,0,0,1,2,--0,0,1,--0,0,2,--  
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,  
0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--  
R21)  
0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,2,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,  
4,--  
R22) 0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,1,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
R23) 0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,1,2,--0,0,1,--0,0,2,--  
R24) 0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,--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) 0,0,0,0,1,2,-->0,0,0,0,1,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
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,--0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,7,--  
R28)  
0,0,0,0,0,0,1,-->0,1,0,--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,--  
R29)  
0,0,0,0,0,0,2,-->0,1,0,--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,--  
R30)  
0,0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,1,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,  
--  
R31) 0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,1,2,--0,0,1,--0,0,2,--  
R32) 0,0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,1,2,--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)  
0,0,0,0,0,1,2,-->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,--  
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,-->0,1,0,--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,--  
R37)  
0,0,0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,1,2,--0,0,0,0,0,1,--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,-->0,1,0,--0,1,0,--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,--

R39)

0,0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,1,2,--0,0,0,1,--0,0,0,2,--  
--0,0,0,3,--

R40)

0,0,0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,1,2,--0,0,1,--0,0,  
2,--

R41)

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,--0,0,1,2,--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)

0,0,0,0,0,0,1,2,-->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,--

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,--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,-->0,1,0,--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,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,  
,0,0,0,7,--

R46)

0,0,0,0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,--0,0,0,0,0,  
0,2,--0,0,0,0,0,0,3,--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,-->0,1,0,--0,1,0,--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,--

R48)

0,0,0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,1,2,--0,0,0,0,1,--0,  
0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R49)

0,0,0,0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,1,2,--0,0,0,1,  
--0,0,0,2,--0,0,0,3,--

R50)

0,0,0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,1,2,--0,  
0,1,--0,0,2,--

R51)

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,--0,0,1,  
2,--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,--0,1,0,  
--0,1,2,--

R53)

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,--

R54)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--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,--



-0,0,0,0,0,0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,0,0,0,0,0,10,--

R55)

0,0,0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,0,1,--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,--

R56)

0,0,0,0,0,0,0,0,0,2,-->0,1,0,--0,1,0,--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,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--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,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,3,--0,0,0,0,0,4,--0,0,0,0,0,5,--0,0,0,0,0,6,--

R58)

0,0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,1,2,--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,--

R59)

0,0,0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,1,2,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R60)

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,--0,0,0,0,1,2,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R61)

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,--0,0,0,1,2,--0,0,1,--0,0,2,--

R62)

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,--0,0,1,2,--0,1,--

R63)

0,0,0,0,0,0,0,9,-->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,--0,1,2,--

R64)

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,--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,--

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,:

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,:

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,:

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,:

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,:

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,:  
 LEN=10) 0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,2,:  
 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,:  
 0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,8,:  
 0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,1,2,:  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 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,: 0,0,0,0,0,0,0,0,4,: 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,:  
 0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,0,10,: 0,0,0,0,0,0,0,1,2,:  
 Number new nodes in level n is given by : 1,2,5,5,6,7,8,9,10,11,12,

-----Class

1626-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][100][110][120][201][210]]$

-----

--

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,-->0,1,0,--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,--0,0,0,0,0,0,0,4,--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,--0,0,0,0,0,0,1,0,--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,--  
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,--0,0,0,0,0,0,0,0,0,1,--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,--  
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)



R58)

0,0,0,0,0,0,0,0,0,4,-->0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--0,0,0,0,0,0,1,0,--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,--

R59)

0,0,0,0,0,0,0,0,0,5,-->0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--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,--

R60)

0,0,0,0,0,0,0,0,0,6,-->0,0,0,0,1,0,--0,0,0,0,1,0,--0,0,0,0,1,0,--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,--

R61)

0,0,0,0,0,0,0,0,0,7,-->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,--0,0,0,1,0,--0,0,1,0,--0,0,1,--0,0,2,--

R62)

0,0,0,0,0,0,0,0,0,8,-->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,--0,1,0,--0,1,--

R63)

0,0,0,0,0,0,0,0,0,9,-->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,--

R64)

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  
,0,0,0,0,0,0,0,0,7,--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,: 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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,0,2,:

0,0,0,0,0,0,0,0,0,0,0,3,: 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,: 0,0,0,0,0,0,0,0,0,0,0,10,: 0,0,0,0,0,0,0,0,0,0,1,0,:

Number new nodes in level n is given by : 1,2,5,5,6,7,8,9,10,11,12,

-----Class

1627-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][101][102][110][120][201]]$

-----

--  
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)  $0, 1, -- \rightarrow 0, 1, 0, -- 0, 1, 0, --$
- R4)  $0, 0, 0, -- \rightarrow 0, 0, 0, 0, -- 0, 0, 0, 1, -- 0, 0, 0, 2, -- 0, 0, 0, 3, --$
- R5)  $0, 0, 1, -- \rightarrow 0, 1, 0, -- 0, 0, 1, 2, -- 0, 0, 1, 3, --$
- R6)  $0, 0, 2, -- \rightarrow 0, 1, 0, -- 0, 1, 0, -- 0, 1, 0, --$
- R7)  $0, 1, 0, -- \rightarrow 0, 1, 0, --$
- 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)  $0, 0, 0, 1, -- \rightarrow 0, 1, 0, -- 0, 0, 0, 1, 2, -- 0, 0, 0, 1, 3, -- 0, 0, 0, 1, 4, --$
- R10)  $0, 0, 0, 2, -- \rightarrow 0, 1, 0, -- 0, 1, 0, -- 0, 0, 1, 2, -- 0, 0, 1, 3, --$
- R11)  $0, 0, 0, 3, -- \rightarrow 0, 1, 0, -- 0, 1, 0, -- 0, 1, -- 0, 1, 0, --$
- R12)  $0, 0, 1, 2, -- \rightarrow 0, 0, 1, 2, -- 0, 0, 1, 3, --$
- R13)  $0, 0, 1, 3, -- \rightarrow 0, 0, 1, 3, 2, -- 0, 1, 0, --$
- 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)  $0, 0, 0, 0, 1, -- \rightarrow 0, 1, 0, -- 0, 0, 0, 0, 1, 2, -- 0, 0, 0, 0, 1, 3, -- 0, 0, 0, 0, 1, 4, -- 0, 0, 0, 0, 1, 5, --$
- R16)  $0, 0, 0, 0, 2, -- \rightarrow 0, 1, 0, -- 0, 1, 0, -- 0, 0, 0, 1, 2, -- 0, 0, 0, 1, 3, -- 0, 0, 0, 1, 4, --$
- R17)  $0, 0, 0, 0, 3, -- \rightarrow 0, 1, 0, -- 0, 1, 0, -- 0, 1, -- 0, 0, 1, 2, -- 0, 0, 1, 3, --$
- R18)  $0, 0, 0, 0, 4, -- \rightarrow 0, 1, 0, -- 0, 1, 0, -- 0, 1, -- 0, 0, 0, 0, 4, 3, -- 0, 1, 0, --$
- R19)  $0, 0, 0, 1, 2, -- \rightarrow 0, 0, 0, 1, 2, -- 0, 0, 0, 1, 3, -- 0, 0, 0, 1, 4, --$
- R20)  $0, 0, 0, 1, 3, -- \rightarrow 0, 0, 1, 3, 2, -- 0, 0, 1, 2, -- 0, 0, 1, 3, --$
- R21)  $0, 0, 0, 1, 4, -- \rightarrow 0, 0, 1, 3, 2, -- 0, 0, 0, 1, 4, 3, -- 0, 1, 0, --$
- R22)  $0, 0, 1, 3, 2, -- \rightarrow$
- R23)  $0, 0, 0, 0, 0, 0, -- \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, -- 0, 0, 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 0, 0, 2, -- 0, 0, 0, 0, 0, 0, 3, -- 0, 0, 0, 0, 0, 4, -- 0, 0, 0, 0, 0, 0, 5, -- 0, 0, 0, 0, 0, 0, 6, --$
- R24)  $0, 0, 0, 0, 0, 1, -- \rightarrow 0, 1, 0, -- 0, 0, 0, 0, 0, 1, 2, -- 0, 0, 0, 0, 0, 1, 3, -- 0, 0, 0, 0, 0, 1, 4, -- 0, 0, 0, 0, 0, 1, 5, -- 0, 0, 0, 0, 0, 1, 6, --$
- R25)  $0, 0, 0, 0, 0, 2, -- \rightarrow 0, 1, 0, -- 0, 1, 0, -- 0, 0, 0, 0, 1, 2, -- 0, 0, 0, 0, 1, 3, -- 0, 0, 0, 0, 1, 4, -- 0, 0, 0, 0, 1, 5, --$
- R26)  $0, 0, 0, 0, 0, 3, -- \rightarrow 0, 1, 0, -- 0, 1, 0, -- 0, 1, -- 0, 0, 0, 1, 2, -- 0, 0, 0, 1, 3, -- 0, 0, 0, 1, 4, --$
- R27)  $0, 0, 0, 0, 0, 4, -- \rightarrow 0, 1, 0, -- 0, 1, 0, -- 0, 1, -- 0, 0, 0, 0, 4, 3, -- 0, 0, 1, 2, -- 0, 0, 1, 3, --$
- R28)  $0, 0, 0, 0, 0, 5, -- \rightarrow 0, 1, 0, -- 0, 1, 0, -- 0, 1, -- 0, 0, 0, 0, 4, 3, -- 0, 0, 0, 0, 0, 5, 4, -- 0, 1, 0, --$
- R29)  $0, 0, 0, 0, 1, 2, -- \rightarrow 0, 0, 0, 0, 1, 2, -- 0, 0, 0, 0, 1, 3, -- 0, 0, 0, 0, 1, 4, -- 0, 0, 0, 0, 1, 5, --$
- R30)  $0, 0, 0, 0, 1, 3, -- \rightarrow 0, 0, 1, 3, 2, -- 0, 0, 0, 1, 2, -- 0, 0, 0, 1, 3, -- 0, 0, 0, 1, 4, --$
- R31)  $0, 0, 0, 0, 1, 4, -- \rightarrow 0, 0, 1, 3, 2, -- 0, 0, 0, 1, 4, 3, -- 0, 0, 1, 2, -- 0, 0, 1, 3, --$
- R32)  $0, 0, 0, 0, 1, 5, -- \rightarrow 0, 0, 1, 3, 2, -- 0, 0, 0, 1, 4, 3, -- 0, 0, 0, 0, 1, 5, 4, -- 0, 1, 0, --$
- R33)  $0, 0, 0, 0, 4, 3, -- \rightarrow 0, 1, 0, -- 0, 1, 0, -- 0, 1, --$
- R34)  $0, 0, 0, 1, 4, 3, -- \rightarrow 0, 0, 1, 3, 2, --$
- R35)  $0, 0, 0, 0, 0, 0, 0, -- \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, -- 0, 0, 0, 0, 0, 0, 0, 1, -- 0, 0, 0, 0, 0, 0, 0, 2, -- 0, 0, 0, 0, 0, 0, 3, -- 0, 0, 0, 0, 0, 0, 4, -- 0, 0, 0, 0, 0, 0, 0, 5, -- 0, 0, 0, 0, 0, 0, 0, 6, -- 0, 0, 0, 0, 0, 0, 0, 7, --$

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,--0,0,0,0,0,0,7,6,--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,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--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,--

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,--0,0,0,0,0,0,0,0,1,5,--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,--0,0,0,0,0,0,0,0,0,1,9,--

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,--0,0,0,0,0,0,0,0,1,3,--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,--





--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,--

R87)

0,0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,--0,0,0,0,4,3,--0,0,0,0,0,0,1,2,--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,--

R88)

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,--0,0,0,0,0,1,2,--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,--

R89)

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,--0,0,0,0,0,6,5,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R90)

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,--0,0,0,0,0,6,5,--0,0,0,0,0,7,6,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--

R91)

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,--0,0,0,0,0,6,5,--0,0,0,0,0,7,6,--0,0,0,0,0,8,7,--0,0,1,2,--0,0,1,3,--

R92)

0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,7,6,--0,0,0,0,0,8,7,--0,0,0,0,0,9,8,--0,1,0,--

R93)

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,--0,0,0,0,0,0,0,1,9,--

R94)

0,0,0,0,0,0,0,1,3,-->0,0,1,3,2,--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,--

R95)

0,0,0,0,0,0,0,1,4,-->0,0,1,3,2,--0,0,0,1,4,3,--0,0,0,0,0,0,1,2,--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,--

R96)

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,--0,0,0,0,0,1,2,--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,--

R97)

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,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R98)

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,--0,0,0,0,0,1,7,6,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--

R99)

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,--0,0,0,0,0,1,7,6,--0,0,0,0,0,0,1,8,7,--0,0,1,2,--0,0,1,3,--

R100)

0,0,0,0,0,0,0,1,9,-->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,--0,0,0,0,0,0,1,8,7,--0,0,0,0,0,0,0,1,9,8,--0,1,0,--

R101)

0,0,0,0,0,0,0,8,7,-->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,

0,0,6,5,--0,0,0,0,0,0,0,7,6,--  
R102)  
0,0,0,0,0,0,0,1,8,7,-->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,--  
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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 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, : 0,0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,0,1,2, :  
0,0,0,0,0,0,0,0,0,1,3, : 0,0,0,0,0,0,0,0,0,1,4, : 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, : 0,0,0,0,0,0,0,0,0,1,10, : 0,0,0,0,0,0,0,0,0,9,8, :  
0,0,0,0,0,0,0,0,1,9,8, :

Number new nodes in level n is given by : 1,2,4,6,9,12,14,16,18,20,22,

-----Class

1628-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[011][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,--0,1,0,--  
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,--0,0,0,0,0,0,0,4,--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,--0,0,0,0,0,0,1,2,--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,--

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,--0,0,0,0,0,0,0,0,1,--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,-->0,0,0,0,0,6,0,--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,--0,0,1,2,--0,0,1,3,--

R59)

0,0,0,0,0,0,0,7,-->0,0,0,0,0,0,7,0,--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,--0,1,0,--

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,-->0,0,0,0,0,6,1,--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,-->0,0,0,0,0,6,0,--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,--

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,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,0,1,4,--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,--0,0,0,0,0,0,0,1,9,--

R70)

0,0,0,0,0,0,0,2,-->0,0,2,0,--0,0,2,1,--0,0,0,0,0,0,1,2,--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,--

R71)

0,0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,1,2,--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)



,0,1,7,--0,0,0,0,0,0,0,0,1,8,--0,0,0,0,0,0,0,0,1,9,--  
R89)  
0,0,0,0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,0,0,1,2,--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,--0,0,0,0,0,0,0,1,8,--  
R90)  
0,0,0,0,0,0,0,0,0,4,-->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,--0,0,  
,0,0,0,0,1,7,--  
R91)  
0,0,0,0,0,0,0,0,0,5,-->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,--0,0,0,0,0,1,  
,6,--  
R92)  
0,0,0,0,0,0,0,0,0,6,-->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,--0,0,0,3,1,--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,-  
-  
R93)  
0,0,0,0,0,0,0,0,0,7,-->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,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,  
,--  
R94)  
0,0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,0,0,8,0,--0,0,0,0,0,0,0,0,8,1,--0,0,0,0,0,0,0,7,  
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,--  
R95)  
0,0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,0,9,0,--0,0,0,0,0,0,0,0,9,1,--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,--  
R96)  
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,--0,0,0,0,0,0,0,1,6,--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,--  
R97)  
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,--0,0,0,0,0,0,0,  
,1,8,--  
R98)  
0,0,0,0,0,0,0,0,1,4,-->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,--  
R99)  
0,0,0,0,0,0,0,0,1,5,-->0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,0,1,2,--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,--  
R100)  
0,0,0,0,0,0,0,0,1,6,-->0,0,0,0,0,5,1,--0,0,0,0,4,1,--0,0,0,3,1,--0,0,2,1,--0,0,0,0,  
1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--  
R101)  
0,0,0,0,0,0,0,0,1,7,-->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,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
R102)



0,0,0,0,0,0,0,0,1,8,-->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,--0,0,1,2,--0,0,1,3,--

R103)

0,0,0,0,0,0,0,0,1,9,-->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,--0,0,0,4,1,--0,0,3,1,--0,0,2,1,--0,1,0,--

R104)

0,0,0,0,0,0,0,8,0,-->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,--0,0,4,1,--0,0,3,1,--0,0,2,1,--

R105)

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,--0,0,4,1,--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,: 0,0,0,0,0,1,2,: 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,: 0,0,0,0,0,1,6,: 0,0,0,0,0,1,7,: 0,0,0,0,0,6,0,: 0,0,0,0,0,6,1,:

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,: 0,0,0,0,0,6,1,:

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,: 0,0,0,0,0,0,1,2,: 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,: 0,0,0,0,0,0,1,9,:

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,: 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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 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,: 0,0,0,0,0,0,0,0,0,10,: 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,: 0,0,0,0,0,0,0,0,1,10,: 0,0,0,0,0,0,0,0,9,0,: 0,0,0,0,0,0,0,0,9,1,:

Number new nodes in level n is given by : 1,2,4,8,10,12,14,16,18,20,22,

-----Class

1629-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][101][102][110][201][210]]$

-----

--

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)  $0, 1, \rightarrow 0, 1, 0, \rightarrow 0, 1, \rightarrow$
- 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)  $0, 0, 1, \rightarrow 0, 1, 0, \rightarrow 0, 0, 1, \rightarrow 0, 0, 2, \rightarrow$
- R6)  $0, 0, 2, \rightarrow 0, 1, 0, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, \rightarrow$
- R7)  $0, 1, 0, \rightarrow 0, 1, 0, \rightarrow$
- R8)  $0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow$
- R9)  $0, 0, 0, 1, \rightarrow 0, 1, 0, \rightarrow 0, 0, 0, 1, \rightarrow 0, 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow$
- R10)  $0, 0, 0, 2, \rightarrow 0, 1, 0, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow$
- R11)  $0, 0, 0, 3, \rightarrow 0, 1, 0, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 0, 3, \rightarrow$
- R12)  $0, 0, 2, 1, \rightarrow$
- R13)  
 $0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 0, 4, \rightarrow$   
 $0, 0, 0, 0, 0, 5, \rightarrow$
- R14)  $0, 0, 0, 0, 1, \rightarrow 0, 1, 0, \rightarrow 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow$
- R15)  $0, 0, 0, 0, 2, \rightarrow 0, 1, 0, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow$
- R16)  $0, 0, 0, 0, 3, \rightarrow 0, 1, 0, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow$
- R17)  $0, 0, 0, 0, 4, \rightarrow 0, 1, 0, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 0, 0, 4, \rightarrow$
- R18)  
 $0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, 0, 0, 3, \rightarrow 0, 0,$   
 $0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 0, 6, \rightarrow$
- R19)  
 $0, 0, 0, 0, 0, 1, \rightarrow 0, 1, 0, \rightarrow 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 0, 4, \rightarrow 0, 0,$   
 $0, 0, 0, 5, \rightarrow$
- R20)  
 $0, 0, 0, 0, 0, 2, \rightarrow 0, 1, 0, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0,$   
 $0, 5, \rightarrow$
- R21)  
 $0, 0, 0, 0, 0, 3, \rightarrow 0, 1, 0, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 5,$   
 $\rightarrow$
- R22)  
 $0, 0, 0, 0, 0, 4, \rightarrow 0, 1, 0, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 5, \rightarrow$
- R23)  $0, 0, 0, 0, 0, 5, \rightarrow 0, 1, 0, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 0, 0, 0, 5, \rightarrow$
- R24)  
 $0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, 0, 0,$   
 $0, 3, \rightarrow 0, 0, 0, 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 0, 0, 6, \rightarrow 0, 0, 0, 0, 0, 0, 0, 7, \rightarrow$
- R25)  
 $0, 0, 0, 0, 0, 0, 1, \rightarrow 0, 1, 0, \rightarrow 0, 0, 0, 0, 0, 0, 1, \rightarrow 0, 0, 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 0,$   
 $0, 4, \rightarrow 0, 0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 0, 6, \rightarrow$
- R26)  
 $0, 0, 0, 0, 0, 0, 2, \rightarrow 0, 1, 0, \rightarrow 0, 0, 2, 1, \rightarrow 0, 0, 0, 0, 0, 0, 2, \rightarrow 0, 0, 0, 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 0, 0, 4, \rightarrow$   
 $0, 0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 0, 6, \rightarrow$

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,--0,0,2,1,--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,--0,0,2,1,--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,--0,0,2,1,--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,--0,0,0,0,0,0,0,0,0,1,--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,  
0,0,0,0,0,0,6,--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,  
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,  
2,1,--0,0,0,2,1,--0,0,0,0,0,0,0,0,8,--

R48)

0,0,0,0,0,0,0,0,0,0,-->0,  
0,0,0,0,2,--0,0,0,0,0,0,0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,0,0,5,--  
-0,0,0,0,0,0,0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,  
0,0,0,0,0,9,--0,0,0,0,0,0,0,0,0,0,0,0,10,--

R49)

0,0,0,0,0,0,0,0,0,1,-->0,1,0,--0,  
0,0,0,0,0,3,--0,0,0,0,0,0,0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,0,0,0,0,0,0,6,--0,0,  
,0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,0,9,--

R50)

0,0,0,0,0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,0,0,0,0,0,0,0,2,--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,  
,0,7,--0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,9,--

R51)

0,0,0,0,0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,0,0,0,0,3,--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,  
,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,9,--

R52)

0,0,0,0,0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,0,0,0,0,4,--  
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,--

R53)

0,0,0,0,0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--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,--

R54)

0,0,0,0,0,0,0,0,0,6,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--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  
,--

R55)

0,0,0,0,0,0,0,0,0,7,-->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,  
0,2,1,--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,--

R56)

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,--0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,9,--

R57)

0,0,0,0,0,0,0,0,9,-->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,--0,0,2,1,--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,: 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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 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,: 0,0,0,0,0,0,0,0,0,0,10,:

Number new nodes in level n is given by : 1,2,4,5,5,6,7,8,9,10,11,

-----Class

1630-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][101][102][120][201][210]]$

-----

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,--0,1,0,--

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,--0,0,2,1,--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,-->0,1,0,--0,0,2,1,--0,0,1,2,--0,0,1,3,--

R11) 0,0,0,3,-->0,1,0,--0,0,2,1,--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) 0,0,2,1,-->  
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,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--  
R17) 0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
R18) 0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,1,2,--0,0,1,3,--  
R19) 0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--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,-->0,0,2,1,--0,0,1,2,--0,0,1,3,--  
R22) 0,0,0,1,4,-->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,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--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,--0,0,2,1,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,  
1,5,--  
R26)  
0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,2,1,--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,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,2,--0,0,1,3,--  
R28) 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,--  
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,-->0,0,2,1,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
R31) 0,0,0,0,1,4,-->0,0,2,1,--0,0,2,1,--0,0,1,2,--0,0,1,3,--  
R32) 0,0,0,0,1,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--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,--0,0,0,0,0,0,1,3,--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,--  
R35)  
0,0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--  
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,--0,0,2,1,--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,--0,0,2,1,--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)

0,0,0,0,0,0,1,2,-->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,--0,0,0,0,0,0,0,0,1,--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





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,-  
-0,0,0,0,0,0,0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,0,0,0,0,10,--

R76)

0,0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,0,1,3,--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,--0,0,0,0,0,0,0,0,0,0,1,8,--0,0,0,0,0,0,0,0,0,0,1,9,--0,0,0,0,0,0,0,0,0,0,1,10,--

R77)

0,0,0,0,0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,0,1,3,  
--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,--

R78)

0,0,0,0,0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,  
0,1,3,--0,0,0,0,0,0,0,0,1,4,--0,0,0,0,0,0,0,0,1,5,--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,--

R79)

0,0,0,0,0,0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,1,2,--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  
,--

R80)

0,0,0,0,0,0,0,0,0,5,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,1,  
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,--

R81)

0,0,0,0,0,0,0,0,0,6,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,  
0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--0,0,0,0,0,1,5,--

R82)

0,0,0,0,0,0,0,0,0,7,-->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,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--

R83)

0,0,0,0,0,0,0,0,0,8,-->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,--0,0,0,2,1,--0,0,1,2,--0,0,1,3,--

R84)

0,0,0,0,0,0,0,0,0,9,-->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,--0,0,2,1,--0,1,0,--

R85)

0,0,0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,0,1,3,--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,  
,0,0,1,8,--0,0,0,0,0,0,0,0,0,1,9,--

R86)

0,0,0,0,0,0,0,0,0,1,3,-->0,0,2,1,--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,  
0,0,1,4,--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,  
,1,8,--

R87)

0,0,0,0,0,0,0,0,0,1,4,-->0,0,2,1,--0,0,2,1,--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,--0,0,0,0,0,0,0,0,1,5,--0,0,0,0,0,0,0,0,1,6,--0,0,0,0,0,0,0,0,1,7,--

R88)

0,0,0,0,0,0,0,0,0,1,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,0,0,1,2,--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,--

R89)

0,0,0,0,0,0,0,0,0,1,6,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,0,0,0,1,2,--0,0,0,

0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--

R90)

0,0,0,0,0,0,0,0,1,7,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,0,1,2,  
--0,0,0,1,3,--0,0,0,1,4,--

R91)

0,0,0,0,0,0,0,0,1,8,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,2,1,--  
0,0,1,2,--0,0,1,3,--

R92)

0,0,0,0,0,0,0,0,1,9,-->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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 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,: 0,0,0,0,0,0,0,0,0,10,: 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,: 0,0,0,0,0,0,0,0,1,10,:

Number new nodes in level n is given by : 1,2,4,7,8,10,12,14,16,18,20,

-----Class

1631-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][101][110][120][201][210]]$

-----



1,4,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--0,0,0,0,0,1,7,--  
R34)  
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,--0,0,0,0,0,1,5,--0,0,0,0,0,1,6,--  
R35)  
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)  
0,0,0,0,0,4,-->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)  
0,0,0,0,0,5,-->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)  
0,0,0,0,0,6,-->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,  
0,0,1,3,--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,--0,0,0,0,0,1,3,--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,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
R50)  
0,0,0,0,0,0,0,6,-->0,0,0,1,--0,0,0,1,2,--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,





R81)  
 0,0,0,0,0,0,0,0,0,7,-->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,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
 R82)  
 0,0,0,0,0,0,0,0,0,8,-->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,--0,0,0,1,2,--0,0,1,2,--0,0,1,3,--  
 R83)  
 0,0,0,0,0,0,0,0,0,9,-->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,--0,0,1,2,--0,1,2,--  
 R84)  
 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,  
 ,0,0,1,8,--0,0,0,0,0,0,0,0,1,9,--  
 R85)  
 0,0,0,0,0,0,0,0,1,3,-->0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,1,3,  
 --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,--  
 R86)  
 0,0,0,0,0,0,0,0,1,4,-->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,  
 0,0,0,0,0,1,3,--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,--  
 R87)  
 0,0,0,0,0,0,0,0,1,5,-->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,--0,0,0,0,0,0,1,3,--0,0,0,0,0,0,1,4,--0,0,0,0,0,0,1,5,--0,0,0,0,0,0,1,6,--  
 R88)  
 0,0,0,0,0,0,0,0,1,6,-->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,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--  
 R89)  
 0,0,0,0,0,0,0,0,1,7,-->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,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--  
 R90)  
 0,0,0,0,0,0,0,0,1,8,-->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,--0,0,0,1,2,--0,0,0,1,3,--  
 R91)  
 0,0,0,0,0,0,0,0,1,9,-->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,--  
 0,0,1,2,--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, : 0,0,0,0,1,2, :  
 0,0,0,0,1,3, : 0,0,0,0,1,4, :  
 LEN=6) 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, : 0,0,0,0,0,1,2, : 0,0,0,0,0,1,3, : 0,0,0,0,0,1,4, : 0,0,0,0,0,1,5, :  
 LEN=7) 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, : 0,0,0,0,0,0,1,2, : 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, :  
 LEN=8) 0,0,0,0,0,0,0,0, : 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, :

0,0,0,0,0,0,1,2,: 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,:  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 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,: 0,0,0,0,0,0,0,0,0,0,10,: 0,0,0,0,0,0,0,0,0,1,2,:  
 0,0,0,0,0,0,0,0,0,1,3,: 0,0,0,0,0,0,0,0,0,1,4,: 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,: 0,0,0,0,0,0,0,0,0,1,10,:

Number new nodes in level n is given by : 1,2,4,6,8,10,12,14,16,18,20,

-----Class

1632-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[011][102][110][120][201][210]]$

-----

--

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,--0,1,0,--
- 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,--0,0,2,1,--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,-->0,1,0,--0,0,2,1,--0,0,1,2,--0,0,1,3,--
- R11) 0,0,0,3,-->0,1,0,--0,0,2,1,--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) 0,0,2,1,-->
- 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,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,1,5,--
- R17) 0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--
- R18) 0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,1,2,--0,0,1,3,--
- R19) 0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,2,1,--0,0,2,1,--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,-->0,0,2,1,--0,0,1,2,--0,0,1,3,--  
R22) 0,0,0,1,4,-->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,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--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,--0,0,2,1,--0,0,0,0,1,2,--0,0,0,0,1,3,--0,0,0,0,1,4,--0,0,0,0,  
1,5,--  
R26)  
0,0,0,0,0,3,-->0,1,0,--0,0,2,1,--0,0,2,1,--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,--0,0,2,1,--0,0,2,1,--0,0,2,1,--0,0,1,2,--0,0,1,3,--  
R28) 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,--  
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,-->0,0,2,1,--0,0,0,1,2,--0,0,0,1,3,--0,0,0,1,4,--  
R31) 0,0,0,0,1,4,-->0,0,2,1,--0,0,2,1,--0,0,1,2,--0,0,1,3,--  
R32) 0,0,0,0,1,5,-->0,0,2,1,--0,0,2,1,--0,0,2,1,--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,--0,0,0,0,0,0,1,3,--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,--  
R35)  
0,0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,1,2,--0,0,0,0,0,1,3,--0,0,0,0,0,1,4,--  
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,--0,0,0,0,0,0,0,0,1,--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







0,0,2,1,--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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,0,: 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,: 0,0,0,0,0,0,0,0,0,0,10,: 0,0,0,0,0,0,0,0,0,1,2,:

0,0,0,0,0,0,0,0,0,1,3,: 0,0,0,0,0,0,0,0,0,1,4,: 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,: 0,0,0,0,0,0,0,0,0,1,10,:

Number new nodes in level n is given by : 1,2,4,7,8,10,12,14,16,18,20,

-----Class

1633-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][100][101][102][110]]$

-----

--

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,--0,1,1,--

R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--

R5) 0,1,0,-->

R6) 0,1,1,-->0,1,1,--

R7) 0,0,0,0,-->0,0,0,0,0,--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, :
- LEN=11) 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

1635-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][100][101][102][201]]$

-----  
--

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, -->
- 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, --
- 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, --0,1, --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, :
- LEN=11) 0,0,0,0,0,0,0,0,0,0,0, :





R5) 0,1,0,-->  
 R6) 0,1,1,-->0,1,1,--  
 R7) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--  
 R8) 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,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R10) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--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,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 1,--  
 R12)  
 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,--  
 R13)  
 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--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, : 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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,2,3,1,1,1,1,1,1,1,1,

-----Class

1638-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][100][101][110][201]]$

-----

--

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,--0,1,1,--  
 R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--  
 R5) 0,1,0,-->  
 R6) 0,1,1,-->0,1,1,--  
 R7) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--  
 R8) 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,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 R10) 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,1,--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,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
 1,--  
 R12)  
 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,--  
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,--0,1,--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, : 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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, :  
Number new nodes in level n is given by : 1,2,3,1,1,1,1,1,1,1,1,1,

-----Class

1639-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][100][101][110][210]]$

--  
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,--0,1,1,--  
R4) 0,0,0,-->0,0,0,0,--0,1,--0,1,--0,1,--  
R5) 0,1,0,-->  
R6) 0,1,1,-->0,1,1,--  
R7) 0,0,0,0,-->0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--  
R8) 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,--0,1,--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,--0,1,--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,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,  
1,--  
R12)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
--0,1,--0,1,--  
R13)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--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, : 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,:  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0,:  
 Number new nodes in level n is given by : 1,2,3,1,1,1,1,1,1,1,1,

-----Class

1640-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][100][101][120][201]]$

-----

--

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,-->
- 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,--
- R12) 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--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,:
  - LEN=11) 0,0,0,0,0,0,0,0,0,0,0,:
- Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,1,

-----Class

1641-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][100][101][120][210]]$

-----

--

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,-->
- 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,--
- 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,--0,1,--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, :
- LEN=11) 0,0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,1,

-----Class

1642-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[012][021][100][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,-->
- 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,--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,--
R12)
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--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, :
LEN=11) 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

1643-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][100][102][110][120]]$

-----

--  
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,--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,--0,1,--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,--
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,--0,1,--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, :  
LEN=11) 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

1644-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][100][102][110][201]]$

--  
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,--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,--
- 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,--
- 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,--0,1,--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, :  
LEN=11) 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

1645-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][100][102][110][210]]$

-----  
 --  
 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,--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,--  
 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,--  
 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,--0,1,--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, :  
 LEN=11) 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  
 1646-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][100][102][120][201]]$   
 -----

--  
 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,--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,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,  
 --0,1,--0,1,--  
 R12)  
 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--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, :  
 LEN=11) 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  
 1647-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][100][102][120][210]]$   
 -----

--  
 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,--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,--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,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,  
 --0,1,--0,1,--  
 R12)  
 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,--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,:  
 LEN=11) 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

1648-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][100][102][201][210]]$

--

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,--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,--
- R12) 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--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,:  
 LEN=11) 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

1649-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][100][110][120][201]]$

-----  
--  
Rules of  $T[L]$ :  
R1)  $0, -->0,0, --0,1, --$   
R2)  $0,0, -->0,0,0, --0,1, --0,1, --$   
R3)  $0,1, -->0,1,0, --0,1,0, --$   
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)  
 $0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --$   
 $1, --$   
R11)  
 $0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,0,0, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --$   
 $--0,1, --0,1, --$   
R12)  
 $0,0,0,0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --0,1, --$   
 $0,1, --0,1, --0,1, --0,1, --$   
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)  $0,0,0,0,0,0,0,0,0,0, :$   
LEN=11)  $0,0,0,0,0,0,0,0,0,0,0, :$   
Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,

-----Class  
1650-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][100][110][120][210]]$

-----  
--  
Rules of  $T[L]$ :  
R1)  $0, -->0,0, --0,1, --$   
R2)  $0,0, -->0,0,0, --0,1, --0,1, --$   
R3)  $0,1, -->0,1,0, --0,1,0, --$   
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,--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,--  
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,--  
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,--0,1,--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, :  
LEN=11) 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

1651-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][100][110][201][210]]$

-----  
--

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,--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,--0,1,--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,--  
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,--0,1,--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]





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,--  
 R12) 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--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, :  
 LEN=11) 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

1655-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[012][021][101][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,--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,--  
 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,--  
 R12) 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,1,--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, :

LEN=11) 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

1656-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[012][021][101][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,--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,--

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,--0,1,--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, :





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,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
--0,1,--0,1,--  
R12)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,1,

-----Class

1659-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[012][021][101][110][120][201]$

-----

--

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,--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,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--  
--0,1,--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,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--0,1,--
- R12) 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--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, :
- LEN=11) 0,0,0,0,0,0,0,0,0,0,0, :

Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,1,

-----Class

1663-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[012][021][102][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,--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,--



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=11) 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

1665-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][102][110][201][210]]$

-----

--

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,--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,--
- 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,--0,1,--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,:
  - LEN=11) 0,0,0,0,0,0,0,0,0,0,0,:
- Number new nodes in level n is given by : 1,2,2,1,1,1,1,1,1,1,1,1,

-----Class

1666-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][102][120][201][210]]$

-----

--

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,--
- 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,--
- 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,--

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,:
- LEN=11) 0,0,0,0,0,0,0,0,0,0,0,:

Number new nodes in level n is given by : 1,2,1,1,1,1,1,1,1,1,1,1,

-----Class

1667-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][021][110][120][201][210]]$

-----

--

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,--0,1,1,--
- 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,--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,--





--0,0,0,0,0,0,6,--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,--0,1,--0,0,2,--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,--0,0,0,0,0,0,7,6,--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,  
0,0,0,5,--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,  
,--  
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,--0,0,0,0,0,0,7,6,--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,--  
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,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,0,10,--  
R32)  
0,0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,9,0,--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,--0,0,0,0,0,0,7,6,--0,0,0,0,0,0,0,8,7,--0,0,0,0,  
,0,0,0,0,0,9,8,--0,1,1,--  
R33)  
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,--  
R34)  
0,0,0,0,0,0,0,0,8,7,-->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,--0,0,0,0,0,0,7,6,--  
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, : 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,: 0,0,0,0,0,0,0,7,0,:  
 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,: 0,0,0,0,0,0,0,0,8,0,:  
 0,0,0,0,0,0,0,0,8,7,:  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,10,: 0,0,0,0,0,0,0,0,0,9,0,:  
 0,0,0,0,0,0,0,0,0,9,8,:  
 Number new nodes in level n is given by : 1,2,4,3,4,4,4,4,4,4,4,

-----Class

1669-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][100][101][102][110][201]]$

-----

--

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,--0,1,1,--

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,--0,0,0,0,4,--

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,--0,0,0,0,4,--0,0,0,0,5,--

R12) 0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--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,--0,0,0,0,4,--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,--0,1,1,--

R16) 0,0,0,0,4,3,-->0,1,0,--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,--0,1,1,--

R19) 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,--

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,--0,1,1,--

R22)

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,--  
 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,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--0,0,0,0,0,0,9  
 ,--  
 R24)  
 0,0,0,0,0,0,0,0,8,-->0,1,0,--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,--0,1,1,--  
 R25)  
 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,--  
 R26)  
 0,0,0,0,0,0,0,0,0,0,-->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,  
 0,9,--0,0,0,0,0,0,0,10,--  
 R27)  
 0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,7,6,--0,0,0,0,0,8,7,--0,0,0,0,0,9,8,-  
 -0,1,1,--  
 R28)  
 0,0,0,0,0,0,0,8,7,-->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,--0,0,0,0,0,7,6,--  
 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, : 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, : 0,0,0,0,0,0,7, : 0,0,0,0,0,6,5, :  
 LEN=9) 0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,8, : 0,0,0,0,0,7,6, :  
 LEN=10) 0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,9, : 0,0,0,0,0,8,7, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,10, : 0,0,0,0,0,9,8, :  
 Number new nodes in level n is given by : 1,2,4,3,3,3,3,3,3,3,3,

-----Class

1670-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][100][101][102][110][210]]$

-----

--

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,--0,1,1,--
- 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,--0,1,1,--
- 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,--0,0,0,0,5,--  
 R12) 0,0,0,0,4,-->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,--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,--  
 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,--0,0,0,0,5,  
 --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,--0,1,--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,--  
 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,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--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  
 ,--  
 R24)  
 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,--0,1,1,--  
 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,--  
 R26)  
 0,0,0,0,0,0,0,0,0,0,-->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,  
 0,9,--0,0,0,0,0,0,0,10,--  
 R27)  
 0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,9,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,  
 0,--0,1,0,--0,1,0,--0,1,0,--0,1,1,--  
 R28)  
 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,--

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, : 0,0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,0,8,0, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,0,0,9,0, :  
 Number new nodes in level n is given by : 1,2,4,3,3,3,3,3,3,3,3,

-----Class

1671-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][100][101][102][120][201]]$

-----

--

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, --0,0,2,1, --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, --0,0,0,0,5, --
- 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, --0,0,0,0,0,6, --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, --0,0,0,0,0,6, --
- 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, --0,1, --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, --
- 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, --0,0,0,0,0,7,6, --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, --0,1, --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, --
- 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,

0,0,0,0,0,6,5,--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,--  
 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,  
 0,0,0,0,0,6,5,--  
 R25)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--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,  
 0,9,--0,0,0,0,0,0,0,0,0,0,10,--  
 R26)  
 0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,9,8,--  
 -0,0,0,0,0,0,0,9,--  
 R27)  
 0,0,0,0,0,0,0,8,7,-->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,--  
 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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,0,9,8, :  
 Number new nodes in level n is given by : 1,2,3,3,3,3,3,3,3,3,3,

-----Class

1672-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][100][101][102][120][210]]$

-----

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,-->
- 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,  
--0,0,0,0,0,0,6,--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,  
0,0,6,--  
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,--0,1,--0,0,2,--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,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,9  
,--  
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,--0,0,0,0,0,0,0,8,--  
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,--  
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,--0,1,--0,0,2,--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,  
0,9,--0,0,0,0,0,0,0,0,0,0,10,--  
R26)  
0,0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,0,9,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,  
0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,9,--  
R27)  
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,--

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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,0,0,0,9,0, :  
Number new nodes in level n is given by : 1,2,3,3,3,3,3,3,3,3,3,

-----Class  
1673-----  
Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[012][100][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,-->

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,--0,0,0,0,0,6,--

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,--0,0,0,0,0,6,--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,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--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,--0,0,0,0,5,--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,--0,1,0,--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,--

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,--0,0,2,--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,--0,0,0,0,0,0,0,10,--

,0,9,--0,0,0,0,0,0,0,0,0,0,10,--

R20)

0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,9,--

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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :  
 Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,

-----Class

1674-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][100][101][110][120][201]]$

-----

--

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,--0,1,1,--

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,--0,0,0,0,4,--

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,--0,0,0,0,4,--0,0,0,0,0,5,--

R12) 0,0,0,0,4,-->0,1,0,--0,0,2,1,--0,0,0,3,2,--0,0,0,0,4,3,--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,--0,1,--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,--0,1,1,--

R16) 0,0,0,0,4,3,-->0,1,0,--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,--0,1,1,--

R19) 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,--

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,--0,0,0,0,0,6,--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,--0,1,1,--

R22)

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,--

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,--0,0,0,0,5,--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,--

--

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,--0,0,0,0,0,0,7,6,--0,0,0,0,0,0,8,7,--0,1,1,--

R25)  
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,--

R26)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--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,--0,0,0,0,0,0,0,0,10,--

R27)  
0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,8,7,--0,0,0,0,0,0,0,9,8,-  
-0,1,1,--

R28)  
0,0,0,0,0,0,0,8,7,-->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,--

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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,10,: 0,0,0,0,0,0,0,9,8,:

Number new nodes in level n is given by : 1,2,4,3,3,3,3,3,3,3,3,

-----Class

1675-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][100][101][110][120][210]]$

-----

--

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,--0,1,1,--

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,--0,1,1,--

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,--0,0,0,0,5,--

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,--0,1,--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,-->0,0,0,0,0,5,0,--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,--0,0,0,0,0,6,--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,--0,1,--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,--

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,--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,--

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,--0,1,1,--

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,--

R26) 0,0,0,0,0,0,0,0,0,0,-->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,--0,0,0,0,0,0,9,--0,0,0,0,0,0,10,--

R27) 0,0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,9,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,1,--

R28) 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,--

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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,10,: 0,0,0,0,0,0,0,0,0,9,0,:

Number new nodes in level n is given by : 1,2,4,3,3,3,3,3,3,3,3,

-----Class

1676-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][100][101][110][201][210]]$

-----

--

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)  $0, 1, \rightarrow 0, 1, 0, \rightarrow 0, 1, 1, \rightarrow$
- R4)  $0, 0, 0, \rightarrow 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow$
- R5)  $0, 0, 2, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 1, \rightarrow$
- R6)  $0, 1, 0, \rightarrow$
- R7)  $0, 1, 1, \rightarrow 0, 1, 1, \rightarrow$
- R8)  $0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow$
- R9)  $0, 0, 0, 3, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 1, \rightarrow$
- R10)  $0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 5, \rightarrow$
- R11)  $0, 0, 0, 0, 4, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 1, \rightarrow$
- R12)  $0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 6, \rightarrow$
- R13)  $0, 0, 0, 0, 0, 5, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 1, \rightarrow$
- R14)  $0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 0, 6, \rightarrow 0, 0, 0, 0, 0, 0, 0, 7, \rightarrow$
- R15)  $0, 0, 0, 0, 0, 0, 6, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 1, \rightarrow$
- R16)  $0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 0, 6, \rightarrow 0, 0, 0, 0, 0, 0, 0, 7, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 8, \rightarrow$
- R17)  $0, 0, 0, 0, 0, 0, 0, 7, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 1, \rightarrow$
- R18)  $0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 6, \rightarrow 0, 0, 0, 0, 0, 0, 7, \rightarrow 0, 0, 0, 0, 0, 0, 0, 8, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 9, \rightarrow$
- R19)  $0, 0, 0, 0, 0, 0, 0, 0, 8, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 1, \rightarrow$
- R20)  $0, 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, \rightarrow 0, 1, \rightarrow 0, 0, 2, \rightarrow 0, 0, 0, 3, \rightarrow 0, 0, 0, 0, 4, \rightarrow 0, 0, 0, 0, 0, 5, \rightarrow 0, 0, 0, 0, 0, 0, 6, \rightarrow 0, 0, 0, 0, 0, 0, 0, 7, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 8, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 9, \rightarrow 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 10, \rightarrow$
- R21)  $0, 0, 0, 0, 0, 0, 0, 0, 0, 9, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 0, \rightarrow 0, 1, 1, \rightarrow$

List of different nodes in  $T[L]$

- LEN=1)  $0, :$
- LEN=2)  $0, 0, : 0, 1, :$
- LEN=3)  $0, 0, 0, : 0, 0, 2, : 0, 1, 0, : 0, 1, 1, :$
- 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,:  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,10,:  
 Number new nodes in level n is given by : 1,2,4,2,2,2,2,2,2,2,2,

-----Class

1677-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][100][101][120][201][210]]$

-----

--

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,-->
- 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,--0,0,0,0,0,6,--
- 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,--0,0,0,0,0,0,0,7,--
- 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,--0,0,0,0,0,0,0,7,--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,--0,0,0,0,0,0,7,--
- 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,--0,0,0,0,5,--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,--0,0,0,0,0,0,8,--
- 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,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,10,--
- R20)



0,5,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--  
R21)  
0,0,0,0,0,0,7,-->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,--0,1,0,--  
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,--0,0,0,0,0,0,0,0,9  
,--  
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,  
0,0,0,0,0,6,5,--0,0,0,0,0,0,7,6,--0,0,0,0,0,0,8,7,--0,1,0,--  
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,--  
R26)  
0,0,0,0,0,0,0,0,0,0,0,-->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,--0,0,0,0,0,0,0,0,  
0,9,--0,0,0,0,0,0,0,0,0,10,--  
R27)  
0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,8,7,--0,0,0,0,0,0,0,9,8,--  
-0,1,0,--  
R28)  
0,0,0,0,0,0,0,8,7,-->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,--0,0,0,0,0,0,7,6,--  
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, : 0,0,2,1, :  
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, : 0,0,0,0,0,0,0,8, : 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, : 0,0,0,0,0,0,8,7, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,10, : 0,0,0,0,0,0,9,8, :  
Number new nodes in level n is given by : 1,2,3,3,4,3,3,3,3,3,3,

-----Class  
1679-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][100][102][110][120][210]]$   
-----  
--  
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,--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,--0,1,--0,0,2,--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,--0,1,--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,-->0,0,0,0,0,0,6,0,--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,--0,1,--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,-->0,0,0,0,0,0,0,7,0,--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,--0,1,--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)  
0,0,0,0,0,0,0,0,8,-->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,--0,1,0,--  
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,  
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,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,10,--  
R27)  
0,0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,0,9,0,--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,--  
R28)  
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,--0,1,0,--



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,: 0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,0,8,0,:
  - LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,10,: 0,0,0,0,0,0,0,0,0,9,0,:
- Number new nodes in level n is given by : 1,2,3,4,3,3,3,3,3,3,3,

-----Class

1680-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][100][102][110][201][210]]$

--

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,--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,--0,0,0,4,--
- 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,--0,0,0,4,--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,--0,0,0,4,--0,0,0,0,5,--0,  
0,0,0,0,6,--
- R13) 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,--0,0,0,4,--0,0,0,0,5,  
--0,0,0,0,6,--0,0,0,0,0,7,--
- R15)  
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,--0,0,0,4,--0,0,0,0,  
0,5,--0,0,0,0,6,--0,0,0,0,0,7,--0,0,0,0,0,8,--
- R17)  
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,--0,1,0,--
- 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,--0,0,0,4,--0,0,  
0,0,5,--0,0,0,0,6,--0,0,0,0,0,7,--0,0,0,0,0,8,--0,0,0,0,0,9,  
,--

R19)  
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,--

R20)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--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,  
,0,9,--0,0,0,0,0,0,0,0,0,10,--

R21)  
0,0,0,0,0,0,0,9,-->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,--0,0,2,1,--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, :
  - LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :
- Number new nodes in level n is given by : 1,2,3,3,2,2,2,2,2,2,2,

-----Class

1681-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][100][102][120][201][210]]$

-----

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,--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,  
0,0,0,0,0,0,6,--
- 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,--0,1,--0,0,2,--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,--  
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,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--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  
,--  
R19)  
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,--0,0,0,0,0,0,8,--  
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,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,10,--  
R21)  
0,0,0,0,0,0,0,0,9,-->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,--0,0,2,1,--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, : 0,0,2, : 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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :  
Number new nodes in level n is given by : 1,2,3,3,2,2,2,2,2,2,

-----Class

1682-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][100][110][120][201][210]]$

--

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,--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,--0,1,--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,  
0,0,0,0,0,6,--  
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,  
--0,0,0,0,0,6,--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,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--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,--0,1,0,--  
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,--0,0,0,0,0,6,--0,0,0,0,0,0,7,--0,0,0,0,0,0,8,--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,--  
R20)  
0,0,0,0,0,0,0,0,0,0,-->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,--0,0,0,0,0,0,0,  
,0,9,--0,0,0,0,0,0,0,0,0,10,--  
R21)  
0,0,0,0,0,0,0,0,0,9,-->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,--0,0,2,1,--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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :

Number new nodes in level n is given by : 1,2,3,3,2,2,2,2,2,2,2,

-----Class

1683-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[012][101][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,--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,--0,0,0,4,--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,--0,1,--0,0,2,--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,--0,1,--0,0,2,--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,--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,--0,1,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,10,--
- R20)  
0,0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,8,--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,:  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,10,:  
Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,2,

-----Class

1684-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][101][102][110][120][210]]$

- --  
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,--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,  
0,0,0,0,0,6,--  
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,--0,1,--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,--  
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,--0,1,--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)  
0,0,0,0,0,0,0,7,-->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,--0,0,0,0,0,6,--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,-->0,0,0,0,0,0,0,8,0,--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,--



0,5,--0,0,0,0,0,0,6,--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,--0,1,0,--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,--0,0,0,0,0,0,7,--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,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,  
--0,1,0,--  
R19)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,10,--  
R20)  
0,0,0,0,0,0,0,0,0,9,-->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,:
  - LEN=11) 0,0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,10,:
- Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,2,2,

-----Class

1686-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][101][102][120][201][210]]$

-----

--

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,--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,--0,0,0,4,--
- 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,  
--0,0,0,0,0,0,6,--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,--  
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)  
0,0,0,0,0,0,0,0,8,-->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,--  
R19)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--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  
,0,9,--0,0,0,0,0,0,0,0,0,10,--  
R20)  
0,0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,9,--  
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, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :  
Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,2,

-----Class

1687-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][101][110][120][201][210]]$

-----

--

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,--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,--0,1,--0,0,2,--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,--0,1,0,--  
 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,--0,1,0,--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,--0,0,0,0,0,0,0,8,--  
 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,--  
 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,--0,0,0,0,0,0,0,9  
 ,--  
 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,--  
 R19)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--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,--0,0,0,0,0,0,0,0,0,10,--  
 R20)  
 0,0,0,0,0,0,0,0,9,-->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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,10, :  
 Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,2,

-----Class  
 1688-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[012][102][110][120][201][210]]$

-----  
--  
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,--0,0,0,0,0,6,--

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,--0,0,0,0,0,6,--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,--0,0,0,0,0,6,--0,0,0,0,0,7,--0,0,0,0,0,8,--

R16)

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,--0,1,--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,--0,0,0,0,0,8,--0,0,0,0,0,9,--

R18)

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,--

R19)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,1,--0,0,2,--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,--0,0,0,0,0,8,--0,0,0,0,0,9,--0,0,0,0,0,10,--

R20)

0,0,0,0,0,0,0,0,9,-->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) 0,0,0,0,0,0,0,0,0,0,0,0,0,9, :  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0,0,0,0,10, :  
Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,2,

-----Class

1689-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021][100][101][102][110][120]]$

-----  
--  
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,-->  
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,--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,--0,0,0,0,1,--  
0,0,1,--0,1,--  
R16)  
0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,1,1,--0,0,0,0,1,1,--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,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--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,--0,0,0,0,0,1,1,--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,--0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,1,1,--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,--  
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,--



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,--0,0,0,1,--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,--0,1,--  
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,--0,0,0,0,0,0,1,--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,--0,0,1,--  
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,--0,0,0,1,--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,--  
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,--  
0,0,0,1,--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,--0,0,0,0,1,--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,--0,0,0,0,0,1,1,--  
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,--0,0,0,0,0,0,0,0,1,--  
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,--  
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,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,1,1,--0,1,1,3,--  
R27)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--  
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,--0,0,0,0,0,1,--  
,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R28)  
0,0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--  
0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--

-0,0,1,--0,1,--  
R29)  
0,0,0,0,0,0,0,0,1,1,-->0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,0,1,1,--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,: 0,0,0,0,0,0,0,0,1,: 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,:  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,1,1,:  
Number new nodes in level n is given by : 1,2,4,4,3,3,3,3,3,3,3,

-----Class

1691-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021][100][101][102][110][210]]$

-----  
--  
Rules of T[L]:  
R1) 0,-->0,0,--0,1,--  
R2) 0,0,-->0,0,0,--0,0,1,--0,1,--  
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,--  
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,--0,0,0,0,0,0,1,--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,--0,0,1,--  
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,--0,0,0,1,--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,--0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,0,1,1,--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,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R26)  
 0,0,0,0,0,0,0,1,1,-->0,0,0,0,0,0,0,0,0,1,1,--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,--0,1,1,3,--  
 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,--0,0,0,0,0,0,0,0,0,0,1,--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,--0,1,--  
 R28)  
 0,0,0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,0,1,1,--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,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--  
 -0,0,1,--0,1,--  
 R29)  
 0,0,0,0,0,0,0,0,0,1,1,-->0,0,0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,  
 1,1,--0,0,0,0,0,0,0,1,1,--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,--  
 -0,1,1,3,--

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, :
- LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,1,1, :



Number new nodes in level n is given by : 1,2,4,4,3,3,3,3,3,3,3,

-----Class

1692-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021][100][101][102][120][201]]$

-----

--

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,-->
- 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,--0,1,--
- 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,--0,1,--
- 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,--0,1,--
- 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,--0,0,0,0,1,2,--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,--0,0,0,0,1,--0,0,0,1,--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,--
- 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,--0,0,0,0,1,2,--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,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--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,--0,0,0,0,0,0,0,1,2,--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)
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--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,--0,0,0,0,0,0,1,--0,0,0,0,1,--0,0,0
,0,1,--0,0,0,1,--0,0,1,--0,1,--
R27)
0,0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,2,--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,--
R28)
0,0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,
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, :
LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,1,2, :
Number new nodes in level n is given by : 1,2,4,3,3,3,3,3,3,3,3,3,

```

-----Class

1693-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021][100][101][102][120][210]]$

-----

--

Rules of T[L]:

```

R1) 0,-->0,0,--0,1,--
R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
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,--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,--0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,1,2,--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)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--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,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,  
,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R27)  
0,0,0,0,0,0,0,0,0,1,-->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,--0,0,0,0,0,0,1,2,--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,--  
R28)  
0,0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,

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,--

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,:
  - LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,1,2,:
- Number new nodes in level n is given by : 1,2,4,3,3,3,3,3,3,3,3,

-----Class

1694-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[021][100][101][102][201][210]]

-----  
--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- 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,--0,0,1,--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,--0,0,0,0,1,--0,0,0,1,--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,--
- 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,--0,1,--
- 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,--0,1,--
- 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,--0,1,--
- 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,--0,1,--

R17)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,1,--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,  
0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--0,1,--

R19)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--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,  
,0,1,--0,0,1,--0,1,--0,1,--

R20)  
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,--  
-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, :

LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,1, :

Number new nodes in level n is given by : 1,2,3,2,2,2,2,2,2,2,2,

-----Class

1695-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021][100][101][110][120][201]]$

-----

--

Rules of T[L]:

R1) 0, -->0,0, --0,1, --

R2) 0,0, -->0,0,0, --0,0,1, --0,1, --

R3) 0,1, -->0,1,0, --0,1,1, --0,1,0, --

R4) 0,0,0, -->0,0,0,0, --0,0,0,1, --0,0,1, --0,1, --

R5) 0,0,1, -->0,1,1, --0,0,1,1, --0,1,1, --0,1,0, --

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, --0,0,1,1, --0,1,1, --0,1,0, --

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, --0,0,0,1, --0,0,1, --0,1, --

R12) 0,0,0,0,1, -->0,0,0,1,1, --0,0,0,1,1, --0,0,1,1, --0,1,1, --0,1,0, --

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, --0,0,0,0,1, --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,--0,0,0,0,1,1,--0,0,0,1,1,--0,0,1,1,--0,  
1,1,--0,1,0,--  
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,--0,0,0,0,0,1,1,--0,0,0,0,1,1,--0,  
0,0,1,1,--0,0,1,1,--0,1,1,--0,1,0,--  
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,--0,0,0,0,0,0,1,1,--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,--  
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,--0,0,0,0,0,0,0,0,0,1,--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,-->0,0,0,0,0,0,0,0,1,1,--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,  
,--  
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,--  
R26)  
0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--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,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,  
,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R27)  
0,0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,  
0,1,1,--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,--0,1,0,--  
R28)  
0,0,0,0,0,0,0,0,1,1,-->0,0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,0,1,1,--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,--  
-0,1,0,--  
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:  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0: 0,0,0,0,0,0,0,0,0,0,1: 0,0,0,0,0,0,0,0,0,1,1:  
 Number new nodes in level n is given by : 1,2,4,3,3,3,3,3,3,3,3,

-----Class

1696-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021][100][101][110][120][210]]$

--

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,--0,1,1,--0,1,0,--
- R4) 0,0,0,-->0,0,0,0,--0,0,0,1,--0,0,1,--0,1,--
- R5) 0,0,1,-->0,1,1,--0,0,1,1,--0,1,1,--0,1,0,--
- 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,--0,0,1,1,--0,1,1,--0,1,0,--
- 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,--0,0,1,--
- R12) 0,0,0,0,1,-->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,--
- 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,--
- R15) 0,0,0,0,0,1,-->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,--0,1,0,--
- 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,--0,0,0,0,1,--0,0,0,1,--0,0,1,--
- R18) 0,0,0,0,0,0,1,-->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,--0,1,0,--
- 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,--0,0,0,1,1,--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,--0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,1,--0,0,0,1,--0,0,1,--

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,--0,0,0,0,0,0,1,1,--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,--0,1,0,--  
 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,--0,0,0,0,0,0,0,0,0,1,--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,-->0,0,0,0,0,0,0,1,1,--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,  
 ,--  
 R25)  
 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,--  
 R26)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--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,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,  
 ,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R27)  
 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,  
 0,1,1,--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,--0,0,1,1,--0,1,1,--0,1,0,--  
 R28)  
 0,0,0,0,0,0,0,1,1,-->0,0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,0,1,1,--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,--  
 -0,1,0,--

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, :
  - LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,1,1, :
- Number new nodes in level n is given by : 1,2,4,3,3,3,3,3,3,3,3,

-----Class

1697-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021][100][101][110][201][210]]$

-----

--

Rules of T[L]:

R1) 0,-->0,0,--0,1,--



R2) 0,0,-->0,0,0,--0,0,1,--0,1,--  
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,--0,0,1,--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,-->0,0,0,0,0,0,1,1,--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,--0,0,1,--0,1,--0,1,  
--  
R24)  
0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,0,1,1,--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,--  
-  
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,--  
R26)



1,0,--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,--0,0,1,0,--0,1,0,--  
 R16)  
 0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,0,1,--  
 0,0,0,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R17)  
 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,--0,0,0,0,0,1,  
 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,--0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,0,1,--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,--0,0,0,1,0,--  
 -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,--  
 R25)  
 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--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,--0,1,--  
 R26)  
 0,0,0,0,0,0,0,0,0,1,-->0,0,0,0,0,0,0,0,0,1,0,--0,0,0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,1,0,--0,0,0,0,0,1,  
 ,0,--0,0,0,0,1,0,--0,0,0,1,0,--0,0,1,0,--0,1,0,--  
 R27)  
 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,--0,0,0,0,0,0,1,0,--0,0,0,0,0,1,0,--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,:  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,1,0,:  
 Number new nodes in level n is given by : 1,2,3,3,3,3,3,3,3,3,3,

-----Class

1699-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[021][100][102][110][120][201]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- 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,--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,--0,0,0,0,0,0,1,--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,--0,0,0,0,1,1,--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,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,0,1,--0,0,1,--0,1,--
- R19) 0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,1,1,--0,0,0,0,0,1,1,--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,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,1,--0,0,0,0,0,1,--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,--0,0,0,0,0,0,1,1,--0,0,0,0,0,1,1,--0,0,0,0,1,1,--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,--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,--0,0,0,0,0,0,1,--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,--0,0,0,0,1,1,--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,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--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,--0,0,0,0,0,1,1,--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,--0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,1,1,--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,--  
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,--0,0,0,0,0,0,0,0,0,1,--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,--  
,--  
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,--  
R27)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--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,--  
,0,1,--0,0,0,1,--0,0,1,--0,1,--  
R28)



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,--0,0,0,0,1,--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,-->0,1,2,0,--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,--

R35)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--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,--0,1,--

R36)



0,0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,0,0,1,2,--0,0,  
0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--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,--

R37)

0,0,0,0,0,0,0,0,1,1,-->0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,0,1,1,--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,--

R38)

0,0,0,0,0,0,0,0,1,2,-->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,  
0,0,0,0,1,2,--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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,1,1,:

0,0,0,0,0,0,0,0,1,2,:

Number new nodes in level n is given by : 1,2,5,6,4,4,4,4,4,4,4,

-----Class

1702-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021][100][102][120][201][210]]$

-----

--

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,-->0,1,0,--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,--0,0,1,  
 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,--0,0,0,0,0,0,0,0,1,  
 --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,--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,--  
 R26)  
 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--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,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,  
 ,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R27)  
 0,0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,2,--0,0,  
 0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--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,--  
 R28)  
 0,0,0,0,0,0,0,0,1,2,-->0,0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,0,1,2,--0,0,0,0,0,0,0,  
 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,:  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,1,2,:  
 Number new nodes in level n is given by : 1,2,4,3,3,3,3,3,3,3,3,

-----Class

1703-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021][100][110][120][201][210]]$

--

Rules of  $T[L]$ :

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- 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,--0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,1,0,--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,--0,0,0,1,0,--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,--0,0,0,0,0,0,1,--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,--



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,--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,--0,0,0,0,0,0,1,--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,--0,0,0,0,1,1,--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,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--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,--0,0,0,0,0,1,1,--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,--0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,1,1,--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,--  
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,--0,0,0,0,0,0,0,0,0,1,--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,--  
R27)



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,--0,0,0,0,0,0,0,1,--0,0,0,0,0,0,1,--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,--0,0,0,0,0,1,1,--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,  
 0,0,0,1,--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,--0,0,0,0,0,0,1,1,--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,--  
 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,--0,0,0,1,--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,--0,0,0,0,0,0,0,1,1,--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,--  
 R27)  
 0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--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,--0,1,--  
 R28)  
 0,0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,0,1,1,--0,0,0,  
 0,0,0,0,1,1,--0,0,0,0,0,0,1,1,--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,--  
 R29)  
 0,0,0,0,0,0,0,0,1,1,-->0,0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,0,1,1,--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,:  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,1,1,:  
 Number new nodes in level n is given by : 1,2,5,3,3,3,3,3,3,3,3,

-----Class

1706-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021][101][102][110][201][210]]$

-----

--

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- 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,--0,0,0,1,--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,--0,1,1,3,--
- 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,--0,0,0,0,1,--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,--0,0,0,1,--0,0,1,--0,1,--



0,0,0,0,1,--0,0,0,0,1,--0,0,0,1,--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,--0,0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,0,1,1,--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,--  
 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,--  
 R27)  
 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,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,  
 ,0,1,--0,0,0,1,--0,0,1,--0,1,--  
 R28)  
 0,0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,0,1,1,--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,--0,1,--  
 R29)  
 0,0,0,0,0,0,0,0,1,1,-->0,0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,0,0,1,1,--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, : 0,0,0,0,0,0,0,0,1, : 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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,1,1, :  
 Number new nodes in level n is given by : 1,2,4,4,3,3,3,3,3,3,3,

-----Class

1707-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021][101][102][120][201][210]]$

-----

Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- 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,--0,0,1,--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,  
0,1,2,--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,--0,0,0,0,0,0,0,0,0,1,--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,-->0,1,0,--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,--  
R26)  
0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--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,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,  
0,1,--0,0,0,1,--0,0,1,--0,1,--

R27)  
0,0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,2,--0,0,  
0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--0,0,0,0,0,0,1,2,--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,--

R28)  
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,--0,0,0,0,0,0,0,  
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,: 0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,1,2,:
  - LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 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

1708-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[021][101][110][120][201][210]]$

-----

--  
Rules of T[L]:

- R1) 0,-->0,0,--0,1,--
- R2) 0,0,-->0,0,0,--0,0,1,--0,1,--
- 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,--0,0,0,0,0,0,0,0,1,--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)

0,0,0,0,0,0,1,-->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,--0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,0,1,--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,-->0,0,0,0,0,0,0,0,0,1,0,--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,--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,--

R26)

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,--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,--0,0,0,0,0,0,1,--0,0,0,0,0,1,--0,0,0,  
,0,1,--0,0,0,1,--0,0,1,--0,1,--

R27)

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,  
0,0,1,0,--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,--

R28)

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,--0,0,0,0,1,0,--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, :



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,--0,0,0,0,0,0,0,0,1,--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,--0,0,0,1,--0,0,1,--0,1,--0,1,  
,--

R26)

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,--

R28)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--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,  
,0,1,--0,0,0,1,--0,0,1,--0,1,--

R29)

0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,0,1,1,--0,0,0,  
0,0,0,0,1,1,--0,0,0,0,0,0,1,1,--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,--

R30)

0,0,0,0,0,0,0,0,1,1,-->0,0,0,0,0,0,0,0,0,1,1,--0,0,0,0,0,0,0,0,1,1,--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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,1,1,:

Number new nodes in level n is given by : 1,2,5,4,3,3,3,3,3,3,3,

-----Class

1710-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[100][101][102][110][120][201]]$

-----

--

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,-->  
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,--  
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,--  
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,--0,0,0,0,0,1,--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,--0,0,0,0,1,--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,--  
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,--

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,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,7,--

R36)

0,0,0,0,0,0,0,2,-->0,1,0,--0,0,2,1,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--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)

0,0,0,0,0,0,0,3,-->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,--0,0,0,0,0,2,--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,--0,0,0,0,1,--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,--

R43)

0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,0,0,0,1,--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,-->0,1,0,--0,0,2,1,--0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--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,-->0,1,0,--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,--

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,





0,0,0,0,0,0,6,5,--0,0,0,0,0,0,7,6,--0,0,0,0,0,0,8,7,--0,0,0,--0,0,1,--0,0,2,-  
-

R62)

0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,9,8,-  
-0,0,--0,1,--

R63)

0,0,0,0,0,0,0,8,7,-->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,--

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,:
  - LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,0,2,:  
0,0,0,0,0,0,0,0,0,0,0,3,: 0,0,0,0,0,0,0,0,0,0,4,: 0,0,0,0,0,0,0,0,0,0,5,:  
0,0,0,0,0,0,0,0,0,0,0,6,: 0,0,0,0,0,0,0,0,0,0,7,: 0,0,0,0,0,0,0,0,0,0,8,:  
0,0,0,0,0,0,0,0,0,0,0,9,: 0,0,0,0,0,0,0,0,0,0,10,: 0,0,0,0,0,0,0,0,9,8,:
- Number new nodes in level n is given by : 1,2,4,5,6,7,8,9,10,11,12,

-----Class

1711-----  
Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[100][101][102][110][120][210]]$   
-----

--

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,-->
- 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,--  
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,--  
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,--0,0,0,0,0,1,--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,--  
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,--

R34)

0,0,0,0,0,0,0,-->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,--0,0,0,0,0,0,0,8,--

R35)

0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,--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,--

R36)

0,0,0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--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,-->0,0,0,3,0,--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)

0,0,0,0,0,0,4,-->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)

0,0,0,0,0,0,5,-->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)

0,0,0,0,0,0,6,-->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,--0,0,1,--0,0,2,--

R41)

0,0,0,0,0,0,7,-->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,--

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,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,0,0,1,--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,--

R45)

0,0,0,0,0,0,0,2,-->0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--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,-->0,0,0,3,0,--0,0,2,0,--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)

0,0,0,0,0,0,0,4,-->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)

0,0,0,0,0,0,0,5,-->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,--0,0,0,0,1,--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,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R50)

0,0,0,0,0,0,0,0,7,-->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,--0,0,1,--0,0,2,--

R51)

0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,8,0,--0,0,0,0,0,7,0,--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)

0,0,0,0,0,0,0,0,7,0,-->0,0,0,0,0,0,6,0,--0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--

R53)

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--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,--0,0,0,0,0,0,0,0,0,10,--

R54)

0,0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,2,--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,--

R55)

0,0,0,0,0,0,0,0,0,2,-->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,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--

R56)

0,0,0,0,0,0,0,0,0,3,-->0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,1,--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,--

R57)

0,0,0,0,0,0,0,0,0,4,-->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,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,0,0,6,--

R58)

0,0,0,0,0,0,0,0,0,5,-->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,--0,0,0,0,0,1,--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)

0,0,0,0,0,0,0,0,0,6,-->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,--0,0,0,0,0,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R60)

0,0,0,0,0,0,0,0,0,7,-->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,--0,0,0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R61)

0,0,0,0,0,0,0,0,0,8,-->0,0,0,0,0,0,8,0,--0,0,0,0,0,7,0,--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,--0,0,1,--0,0,2,--

R62)

0,0,0,0,0,0,0,0,0,9,-->0,0,0,0,0,0,0,0,0,9,0,--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,--0,0,0,0,0,0,5,0,--0,0,0,0,4,0,--0,0,0,3,0,--0,0,2,0,--0,1,0,--0,0,--0,1,--

R63)

0,0,0,0,0,0,0,0,8,0,-->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,--0,0,3,0,--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,:

LEN=11) 0,0,0,0,0,0,0,0,0,0,0,: 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,: 0,0,0,0,0,0,0,0,0,0,10,: 0,0,0,0,0,0,0,0,0,0,9,0,:

Number new nodes in level n is given by : 1,2,4,5,6,7,8,9,10,11,12,

-----Class

1712-----

Inversion Sequences (I<sub>n</sub>=(n+1)!) avoiding L=[[100][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,-->

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,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--  
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,--0,0,0,0,0,0,0,4,--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,--0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,  
--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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,  
0,0,0,0,7,--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,  
0,0,0,0,0,0,0,8,--

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,  
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,--0,0,0,0,0,0,0,0,0,2,--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,--0,0,0,0,0,0,0,0,0,3,--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  
,0,0,0,0,0,0,0,8,--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,--0,0,0,0,0,0,0,0,0,4,--  
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,--0,0,0,0,0,0,0,0,  
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,--0,0,0,0,0,  
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,  
0,0,0,0,0,0,7,--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,--0,1,0,--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,--0,1,0,  
--0,0,--0,0,0,0,0,0,0,0,9,--

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,--0,0,0,0,0,0,0,0,0,0,3,--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,--0,0,0,0,0,0,0,0,0,0,10,--

R48)

0,0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,0,0,0,2,--0,0,0,  
0,0,0,0,0,0,0,3,--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,  
,0,6,--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,  
0,0,0,0,0,0,0,10,--

R49)

0,0,0,0,0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,0,0,0,0,3,--  
0,0,0,0,0,0,0,0,0,0,4,--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,  
,0,0,0,0,7,--0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,9,--0,0,0,0,0,0,0,0,0,0,10  
,--

R50)

0,0,0,0,0,0,0,0,0,3,-->0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,  
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,--0,0,0,0,0,0,0,0,0,0,10,--

R51)

0,0,0,0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,0,0,0,0,  
0,0,0,0,5,--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,--0,0,0,0,0,0,0,0,0,0,10,--

R52)

0,0,0,0,0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,0,  
0,0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,0,0,0,0,10,--

R53)

0,0,0,0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,--  
0,0,0,0,0,0,0,0,0,0,7,--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,  
,0,0,0,0,10,--

R54)

0,0,0,0,0,0,0,0,0,7,-->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,--0,0,0,0,0,0,0,0,0,0,8,--0,0,0,0,0,0,0,0,0,0,9,--0,0,0,0,0,0,0,0,0,0,10,--

R55)

0,0,0,0,0,0,0,0,0,8,-->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,--0,0,0,0,0,0,0,0,0,0,9,--0,0,0,0,0,0,0,0,0,0,10,--

R56)

0,0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,0,0,0,10,--

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, :  
 LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 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, : 0,0,0,0,0,0,0,0,0,0,10, :  
 Number new nodes in level n is given by : 1,2,4,4,5,6,7,8,9,10,11,

-----Class

1713-----  
 Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[100][101][102][120][201][210]]$

--

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, -->
- 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,--0,0,0,0,5,--

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,--0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,5,--

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,-->0,0,0,0,0,0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,2,--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,--0,0,0,0,0,0,0,0,3,--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,--0,0,0,0,0,0,0,0,4,--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,--0,0,0,0,0,0,0,0,5,--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,--0,0,0,0,0,0,0,0,  
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,--0,0,0,0,  
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,--0,0,0,0,0,0,0,0,0,0,1,--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,--

R39)

0,0,0,0,0,0,0,0,1,-->0,1,0,--0,0,0,0,0,0,0,0,0,1,--0,0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,1,--0,0,0,  
0,0,0,0,2,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,4,--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)

0,0,0,0,0,0,0,0,3,-->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,--0,0,0,0,0,6,--

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,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--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,--0,1,0,--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,--

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,--0,1,0,--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,  
--0,0,0,0,0,0,0,8,--0,1,--

R47)

0,0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,0,0,0,1,--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,  
0,0,0,0,0,9,--0,0,0,0,0,0,0,0,0,10,--

R48)

0,0,0,0,0,0,0,0,0,1,-->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,  
0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--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,--

R49)

0,0,0,0,0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,0,2,--0,0,0,0,0,0,0,0,1,--  
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,--0,0,0,0,0,0,0,0,7,--0,0,0,0,0,0,0,0,8,--  
R50)

0,0,0,0,0,0,0,0,0,3,-->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,  
0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--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,--

R51)  
0,0,0,0,0,0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,0,0,0,4,--0,0,  
0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--0,0,0,0,0,0,4,--0,0,0,0,0,0,5,--0,0,0,0,  
,0,0,6,--

R52)  
0,0,0,0,0,0,0,0,0,5,-->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,--0,0,0,0,0,1,--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)  
0,0,0,0,0,0,0,0,0,6,-->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,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R54)  
0,0,0,0,0,0,0,0,0,7,-->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,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R55)  
0,0,0,0,0,0,0,0,0,8,-->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,--0,0,1,--0,0,2,--

R56)  
0,0,0,0,0,0,0,0,0,9,-->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,--0,0,0,0,0,0,0,0,9,--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, :
- LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 0,0,0,0,0,0,0,0,0,0,1, : 0,0,0,0,0,0,0,0,0,0,2, :  
0,0,0,0,0,0,0,0,0,0,0,3, : 0,0,0,0,0,0,0,0,0,0,0,4, : 0,0,0,0,0,0,0,0,0,0,0,5, :  
0,0,0,0,0,0,0,0,0,0,0,0,6, : 0,0,0,0,0,0,0,0,0,0,0,0,7, : 0,0,0,0,0,0,0,0,0,0,0,8, :  
0,0,0,0,0,0,0,0,0,0,0,0,9, : 0,0,0,0,0,0,0,0,0,0,0,10, :

Number new nodes in level n is given by : 1,2,4,4,5,6,7,8,9,10,11,

-----Class

1714-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[100][101][110][120][201][210]]$

-----

--  
Rules of  $T[L]$ :

- R1)  $0, -->0,0, --0,1, --$
- R2)  $0,0, -->0,0,0, --0,0,1, --0,0,2, --$
- R3)  $0,1, -->0, --0,0, --0,1, --$
- 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)  $0,0,2, -->0, --0, --0,0, --0,1, --$
- 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)  $0,0,0,2, -->0,0, --0,0, --0,0,0, --0,0,1, --0,0,2, --$
- R10)  $0,0,0,3, -->0, --0, --0, --0,0, --0,1, --$
- 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)  
 $0,0,0,0,1, -->0,0,0,0, --0,0,0,0,0, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --0,0,0,0,4, --$
- R13)  $0,0,0,0,2, -->0,0,0, --0,0,0, --0,0,0,0, --0,0,0,1, --0,0,0,2, --0,0,0,3, --$
- R14)  $0,0,0,0,3, -->0,0, --0,0, --0,0, --0,0,0, --0,0,1, --0,0,2, --$
- R15)  $0,0,0,0,4, -->0, --0, --0, --0, --0,0, --0,1, --$
- R16)  
 $0,0,0,0,0,0, -->0,0,0,0,0,0,0, --0,0,0,0,0,0,1, --0,0,0,0,0,0,2, --0,0,0,0,0,0,3, --0,0,$   
 $0,0,0,0,4, --0,0,0,0,0,5, --0,0,0,0,0,6, --$
- R17)  
 $0,0,0,0,0,1, -->0,0,0,0,0, --0,0,0,0,0,0, --0,0,0,0,0,1, --0,0,0,0,0,2, --0,0,0,0,0,3, --$   
 $0,0,0,0,0,4, --0,0,0,0,0,5, --$
- R18)  
 $0,0,0,0,0,2, -->0,0,0,0, --0,0,0,0, --0,0,0,0,0, --0,0,0,0,1, --0,0,0,0,2, --0,0,0,0,3, --$   
 $0,0,0,0,4, --$
- R19)  
 $0,0,0,0,0,3, -->0,0,0, --0,0,0, --0,0,0, --0,0,0,0, --0,0,0,1, --0,0,0,2, --0,0,0,3, --$
- R20)  $0,0,0,0,0,4, -->0,0, --0,0, --0,0, --0,0, --0,0,0, --0,0,1, --0,0,2, --$
- R21)  $0,0,0,0,0,5, -->0, --0, --0, --0, --0, --0,0, --0,1, --$
- R22)  
 $0,0,0,0,0,0,0, -->0,0,0,0,0,0,0,0, --0,0,0,0,0,0,0,1, --0,0,0,0,0,0,0,2, --0,0,0,0,0,0,$   
 $0,3, --0,0,0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --0,0,0,0,0,0,7, --$
- R23)  
 $0,0,0,0,0,0,1, -->0,0,0,0,0,0, --0,0,0,0,0,0,0, --0,0,0,0,0,0,1, --0,0,0,0,0,0,2, --0,0,$   
 $0,0,0,0,3, --0,0,0,0,0,0,4, --0,0,0,0,0,0,5, --0,0,0,0,0,0,6, --$
- R24)  
 $0,0,0,0,0,0,2, -->0,0,0,0,0, --0,0,0,0,0, --0,0,0,0,0,0, --0,0,0,0,0,1, --0,0,0,0,0,2, --$   
 $0,0,0,0,0,3, --0,0,0,0,0,4, --0,0,0,0,0,5, --$
- R25)  
 $0,0,0,0,0,0,3, -->0,0,0,0, --0,0,0,0, --0,0,0,0, --0,0,0,0,0, --0,0,0,0,1, --0,0,0,0,2, --$   
 $0,0,0,0,3, --0,0,0,0,4, --$
- R26)  
 $0,0,0,0,0,0,4, -->0,0,0, --0,0,0, --0,0,0, --0,0,0, --0,0,0,0, --0,0,0,0,1, --0,0,0,2, --0,0,$

0,3,--

R27) 0,0,0,0,0,0,5,-->0,0,--0,0,--0,0,--0,0,--0,0,--0,0,0,--0,0,1,--0,0,2,--

R28) 0,0,0,0,0,0,6,-->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,--0,0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,0,0,0,--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)

0,0,0,0,0,0,0,2,-->0,0,0,0,0,0,--0,0,0,0,0,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--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,--0,0,0,0,0,1,--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,--0,0,0,0,1,--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,--0,0,0,1,--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,--0,0,1,--0,0,2,--

R36) 0,0,0,0,0,0,0,7,-->0,--0,--0,--0,--0,--0,--0,--0,0,--0,1,--

R37)

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,-->0,1,--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,--

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,--0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,0,3,--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,--0,0,0,0,0,0,1,--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,--0,0,

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,--0,0,1,--0,0,  
 2,--  
 R45) 0,0,0,0,0,0,0,0,8,-->0,--0,--0,--0,--0,--0,--0,--0,--0,0,--0,1,--  
 R46)  
 0,0,0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,0,0,10,--  
 R47)  
 0,0,0,0,0,0,0,0,0,1,-->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,--  
 R48)  
 0,0,0,0,0,0,0,0,0,2,-->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)  
 0,0,0,0,0,0,0,0,0,3,-->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)  
 0,0,0,0,0,0,0,0,0,4,-->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,  
 ,0,0,5,--0,0,0,0,0,6,--  
 R51)  
 0,0,0,0,0,0,0,0,0,5,-->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,-  
 -  
 R52)  
 0,0,0,0,0,0,0,0,0,6,-->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,--  
 R53)  
 0,0,0,0,0,0,0,0,0,7,-->0,  
 0,0,--0,0,0,1,--0,0,0,2,--0,0,0,3,--  
 R54)  
 0,0,0,0,0,0,0,0,0,8,-->0,  
 1,--0,0,2,--  
 R55) 0,0,0,0,0,0,0,0,0,9,-->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,: 0,0,0,0,0,0,0,0,1,: 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=11) 0,0,0,0,0,0,0,0,0,0,0,: 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,: 0,0,0,0,0,0,0,0,0,0,10,:  
 Number new nodes in level n is given by : 1,2,3,4,5,6,7,8,9,10,11,

-----Class

1715-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[100][102][110][120][201][210]]$

-----

--

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,-->0,1,0,--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,-->0,1,0,--
- 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,--0,1,0,--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) 0,0,0,0,0,-->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,--0,0,0,0,1,--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,--0,0,0,1,--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,--0,0,1,--0,0,2,--
- R16) 0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,--
- 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,--0,0,0,0,0,1,--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,--0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--





R52)  
0,0,0,0,0,0,0,0,0,5,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,0,--0,0,0,  
0,0,1,--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)  
0,0,0,0,0,0,0,0,0,6,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,0,0,0,1,--  
0,0,0,0,1,--0,0,0,0,2,--0,0,0,0,3,--0,0,0,0,4,--

R54)  
0,0,0,0,0,0,0,0,0,7,-->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,--0,0,0,1,--0,0,0,2,--0,0,0,3,--

R55)  
0,0,0,0,0,0,0,0,0,8,-->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,--0,0,1,--0,0,2,--

R56)  
0,0,0,0,0,0,0,0,0,9,-->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,--

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, :
  - LEN=11) 0,0,0,0,0,0,0,0,0,0,0, : 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, : 0,0,0,0,0,0,0,0,0,0,10, :
- Number new nodes in level n is given by : 1,2,4,4,5,6,7,8,9,10,11,

-----Class

1716-----

Inversion Sequences ( $I_n=(n+1)!$ ) avoiding  $L=[[101][102][110][120][201][210]]$

-----

--

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,-->0,1,0,--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,-->0,1,0,--  
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,--0,1,0,--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)  
0,0,0,0,0,-->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,--0,0,0,0,1,--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,--0,0,0,1,--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,--0,0,1,--0,0,2,--  
R16) 0,0,0,0,4,-->0,1,0,--0,1,0,--0,1,0,--0,1,0,--0,0,--0,1,--  
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,--0,0,0,0,0,1,--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,--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,--0,0,0,1,--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,--0,0,1,--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,--0,1,--  
R23)  
0,0,0,0,0,0,0,-->0,0,0,0,0,0,0,0,0,--0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--0,0,0,0,0,  
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,--0,0,0,0,0,1,--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,--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,--0,0,0,1,--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,--0,0,1,--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,--0,1,--  
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,  
0,0,0,0,0,0,3,--0,0,0,0,0,0,0,0,4,--0,0,0,0,0,0,0,0,5,--0,0,0,0,0,0,0,0,6,--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,--0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,  
7,--

R32)

0,0,0,0,0,0,0,2,-->0,1,0,--0,1,0,--0,0,0,0,0,0,0,--0,0,0,0,0,0,1,--0,0,0,0,0,0,2,--  
0,0,0,0,0,0,3,--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,--0,0,0,0,0,1,--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,--0,0,0,0,1,--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,--0,0,0,1,--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,--0,0,1,--  
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,--0,0,--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,  
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,--0,0,0,0,0,0,0,0,1,--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,--0,0,0,0,0,0,0,0,0,--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)

0,0,0,0,0,0,0,0,3,-->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,--

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,--0,0,0,0,0,1,--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,--0,0,0,0,1,  
--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,  
0,1,--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,  
--0,0,1,--0,0,2,--

R46)



0,0,0,0,0,0,0,4,: 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,:  
0,0,0,0,0,0,0,0,0,3,: 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,: 0,0,0,0,0,0,0,0,0,0,1,: 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,:  
LEN=11) 0,0,0,0,0,0,0,0,0,0,0,0,: 0,0,0,0,0,0,0,0,0,0,0,1,: 0,0,0,0,0,0,0,0,0,0,0,2,:  
0,0,0,0,0,0,0,0,0,0,0,0,3,: 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,: 0,0,0,0,0,0,0,0,0,0,0,0,10,:  
Number new nodes in level n is given by : 1,2,4,4,5,6,7,8,9,10,11,