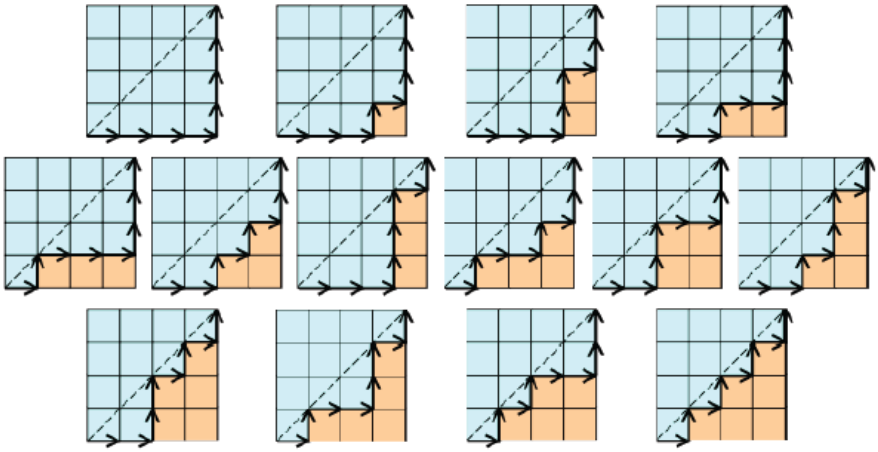
13062. SubDiagonal Paths

Total: 1471 Accepted: 561 Rating: 3.8/5.0(5 votes) 0

Time Limit: 1sec Memory Limit:256MB

Description

You are to find all of the paths on the bottom diagonal of a n x n grid. The path must only go from lefttoright or bottomtotop. Given a dimension of the grid (ex. n = 4), specify the number of such paths (ex. solution = 14).



Input

The input consists of a single integer n, the dimension of the square grid, 1 <= n <= 30, on each line. A zero will indicate the end of the input and should not be processed.

Output

For each input n, you should output the number of paths, as described above, that exist in an nxn grid, one per line.

Sample Input

Copy

```
1
2
3
4
0
```

Sample Output

Copy

```
1
2
5
14
```

Problem Source: 2014年每周一赛第十五场暨"指点传媒杯"第六届中山大学ICPC新手赛模拟赛