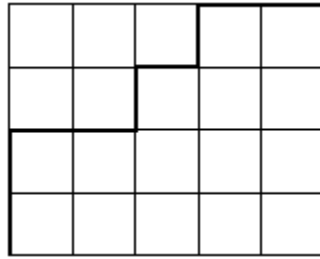
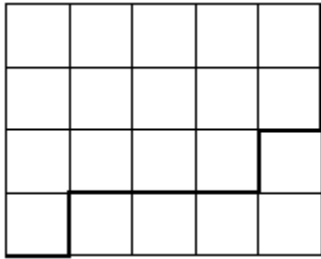


Counting Paths

The Problem

We have a piece of grid paper and we choose a rectangle of size $n \times m$ on the paper, where n is the horizontal dimension. Starting at the lower left corner of the grid, we draw a path to the upper right corner, taking care that it stays on the lines and moves only to the right or up. Two such paths are shown below for a 5×4 grid.



We want to know how many different paths there are of this type from the lower-left co-ordinate $0, 0$ to the upper-right co-ordinate n, m .

The Input

The input contains several test cases. Each is specified by non-negative integers n and m , such that n and $m \leq 16$. Input is terminated when both n and m are 0.

The Output

For each test case output the number of paths to n, m on a line by itself. Output for the input cases is guaranteed to be able to be stored in a 32 bit signed integer.

Sample Input

```
5 4
1 1
0 1
0 0
```

Sample Output

```
126
2
1
```