

Grid Traveler

Say that you are a traveler on a 2D grid. You begin in the top-left corner and your goal is to travel to the bottom-right corner. You may only move down or right. In how many ways can you travel to the goal on a grid with dimensions $M \times N$?

Input

The first line of the input contains two integers M and N , representing the dimensions of the grid.

Output

Your program should print an integer representing the number of ways in a single line.

Sample Input 1:

1 1

Sample Output 1:

1

Sample Input 2:

2 3

Sample Output 2:

3

Sample Input 3:

18 18

Sample Output 3:

2333606220