

The contest is in progress. It ends about 3 hours from now.

Contests > IEEEExtreme Programming Competition 7.0 >

## Problem\_AG

Problem

Submissions

Leaderboard

Discussions

Dumpstein, a nice robot was trapped on one side of a square board of  $N \times N$  size ( $1 \leq N \leq 5,000$ ; rows and columns indexed from 1). To open the door on the other side, Dumpstein have to solve a puzzle. Each test case, mission starts with moving the tile from cell (1, 1) to cell (N, N) using only the directions “right” or “down”. Dumpstein is required to find the number of different ways for the tile to reach using exactly  $K$  turns (we term a “turn” as a “down” move followed immediately by a “right” move or a “right” followed immediately by a “down”;  $0 \leq K \leq 2N-2$ ). Dumpstein can pass through the door, if he answers all test cases and when the input is  $N = K = 0$ .

## Input

- There are many test cases ( $\leq 5,000$ )
- $N, K$ , positive integers
- The input seizes with  $N = K = 0$

## Output

For each test case, output on a line an integer which is the result calculated. The number of ways may be very large, so compute the solution modulo 1,000,000,007.

### Sample Input 1:

```
4 2
4 3
5 3
0 0
```

### Sample Output:

4  
8  
18

Explanation for the first test case 4 2: 4 ways are RRDDDR, RDDDRR, DRRRDD, DDRRRD (2 turns on each of them; 'R' or 'D' represents a right or down move respectively).

Problem Author: IEEE

Suggest Edits

Emacs

Normal

Vim

Select Language: 

C#

save code

```
1 using System;
2 using System.Collections.Generic;
3 using System.IO;
4 class Solution {
5     static void Main(String[] args) {
6         /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class
           should be named Solution */
7     }
8 }
```

Line: 1 Col: 1 Count: 246

☐ Use a custom test case

 Upload Code as File

Compile & Test

Submit Code

This is a beta version. Join us on IRC at [#hackerrank](#) on freenode for hugs or bugs.

[Contest Calendar](#) | [Blog](#) | [Scoring](#) | [Environment](#) | [FAQ](#) | [About Us](#) | [Careers](#) | [Privacy Policy](#) | [Request a Feature](#)