Grid Lines

In an NxM grid with each cell's dimension being 1x1, there will be (N+1) x (M+1) cross points. You task is to count the number of ways (*S*) of choosing *K* different points from these cross points such that all of them lie on a straight line and at least one of the cross points lies on the border.

Input Format

A single line containing 3 integers N, M & K separated by a single space.

Output Format

A single integer denoting the number of ways (S) modulo 1000000007

Constraints

0 < N, M <= 3000
2 <= K <= max(N, M) + 1

Sample Input

```
2 2 3
```

Sample Output

```
8
```

Explanation

If you imagine a grid of the first quadrant of the co-ordinate system. Then, we have, 8 such *3* points of which at least 1 point on the borders.

(0,0), (0,1), (0,2)
(1,0), (1,1), (1,2)
(2,0), (2,1), (2,2)
(0,0), (1,0), (2,0)
(0,1), (1,1), (2,1)
(0,2), (1,2), (2,2)
(0,0), (1,1), (2,2) and
(0,2), (1,1), (2,0)