



D. JUSTCOUNT

You are given a grid with n rows and m columns. Each cell of the grid can be colored black or white.

A grid is beautiful if exactly k cells are colored black, and no two black cells share a corner or an edge.

Count the number of beautiful grids, modulo 123456789.

INPUT

The first and only line contains three positive integers n , m , and k . ($1 \leq k \leq n \times m \leq 256$)

OUTPUT

Print the answer, modulo 123456789.

Sample Input	Sample Output
2 2 1	4