

576. Out of Boundary Paths

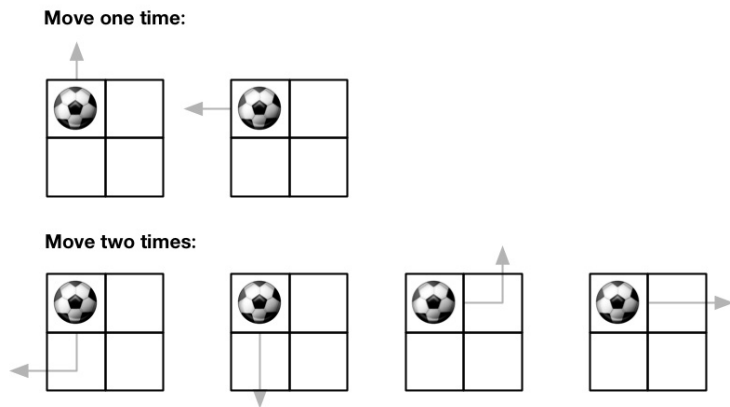
Difficulty : Medium

<https://leetcode.com/problems/out-of-boundary-paths>

There is an $m \times n$ grid with a ball. The ball is initially at the position $[startRow, startColumn]$. You are allowed to move the ball to one of the four adjacent cells in the grid (possibly out of the grid crossing the grid boundary). You can apply **at most** $maxMove$ moves to the ball.

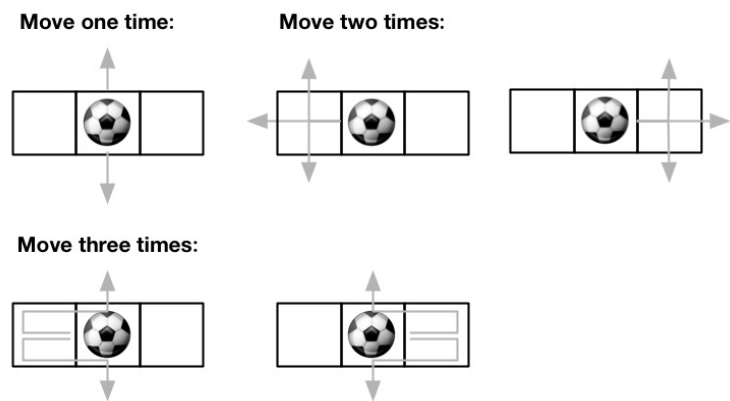
Given the five integers $m, n, maxMove, startRow, startColumn$, return the number of paths to move the ball out of the grid boundary. Since the answer can be very large, return it **modulo** $10^9 + 7$.

Example 1:



Input: $m = 2, n = 2, maxMove = 2, startRow = 0, startColumn = 0$
Output: 6

Example 2:



Input: $m = 1, n = 3, maxMove = 3, startRow = 0, startColumn = 1$
Output: 12

Constraints:

- $1 \leq m, n \leq 50$
- $0 \leq maxMove \leq 50$
- $0 \leq startRow < m$
- $0 \leq startColumn < n$