

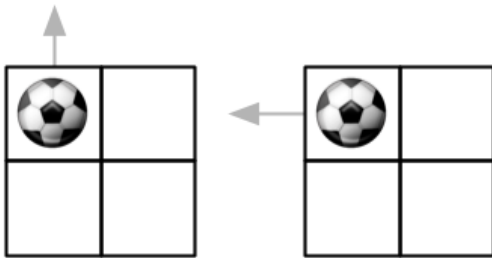
# Out of Boundary Paths

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.

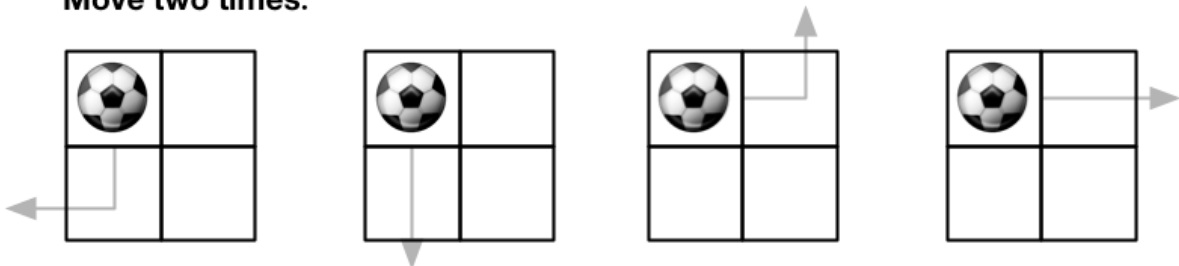
Given the five integers  $m$ ,  $n$ ,  $maxMove$ ,  $startRow$ ,  $startColumn$ , return the number of paths to move the ball out of the grid boundary. Since the answer can be very large, return it **modulo**  $10^9 + 7$ .

**Example 1:**

**Move one time:**



**Move two times:**

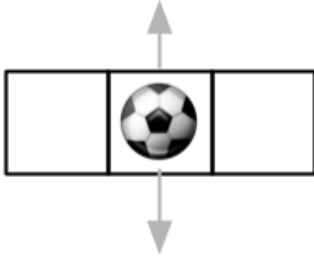


**Input:**  $m = 2$ ,  $n = 2$ ,  $maxMove = 2$ ,  $startRow = 0$ ,  $startColumn = 0$

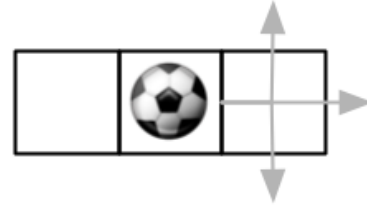
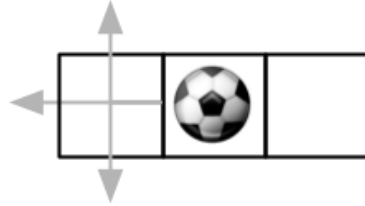
**Output:** 6

**Example 2:**

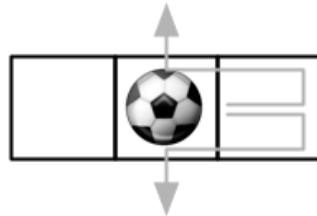
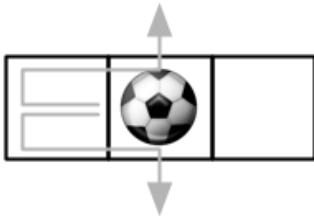
**Move one time:**



**Move two times:**



**Move three times:**



**Input:**  $m = 1$ ,  $n = 3$ ,  $\text{maxMove} = 3$ ,  $\text{startRow} = 0$ ,  $\text{startColumn} = 1$

**Output:** 12

**Constraints:**

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