

5521. Maximum Non Negative Product in a Matrix

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You are given a `rows x cols` matrix `grid`. Initially, you are located at the top-left corner $(0, 0)$, and in each step, you can only **move right or down** in the matrix.

Among all possible paths starting from the top-left corner $(0, 0)$ and ending in the bottom-right corner $(rows - 1, cols - 1)$, find the path with the **maximum non-negative product**. The product of a path is the product of all integers in the grid cells visited along the path.

Return the *maximum non-negative product modulo* $10^9 + 7$. If the *maximum product is negative* return -1 .

User Accepted: 0

User Tried: 0

Total Accepted: 0

Total Submissions: 0

Difficulty: Medium

Notice that the modulo is performed after getting the maximum product.

Example 1:

Input: `grid = [[-1,-2,-3],`
 `[-2,-3,-3],`
 `[-3,-3,-2]]`

Output: `-1`

Explanation: It's not possible to get non-negative product in the path from $(0, 0)$ to $(2, 2)$.

Example 2:

Input: `grid = [[1,-2,1],`
 `[1,-2,1],`
 `[3,-4,1]]`

Output: `8`

Explanation: Maximum non-negative product is in bold $(1 * 1 * -2 * -4 * 1 = 8)$.

Example 3:

Input: `grid = [[1, 3],`
 `[0,-4]]`

Output: `0`

Explanation: Maximum non-negative product is in bold $(1 * 0 * -4 = 0)$.

Example 4:

Input: grid = [[**1**, 4,4,0],
 [-2, 0,0,1],
 [**1**,-1,1,1]]

Output: 2

Explanation: Maximum non-negative product is in bold ($1 * -2 * 1 * -1 * 1 * 1 = 2$).

Constraints:

- $1 \leq \text{rows}, \text{cols} \leq 15$
- $-4 \leq \text{grid}[i][j] \leq 4$

JavaScript



```
1 ▾ /**
2   * @param {number[][]} grid
3   * @return {number}
4   */
5 ▾ var maxProductPath = function(grid) {
6
7   };
```

☐ Custom Testcase

Use Example Testcases

Run

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