

Given a $m * n$ matrix `grid` which is sorted in non-increasing order both row-wise and column-wise.

Return the number of **negative** numbers in `grid`.

Example 1:

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

Output: 8

Explanation: There are 8 negatives number in the matrix.

Example 2:

Input: `grid = [[3,2],[1,0]]`

Output: 0

Example 3:

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

Output: 3

Example 4:

Input: `grid = [[-1]]`

Output: 1

Constraints:

- `m == grid.length`
- `n == grid[i].length`
- `1 <= m, n <= 100`
- `-100 <= grid[i][j] <= 100`