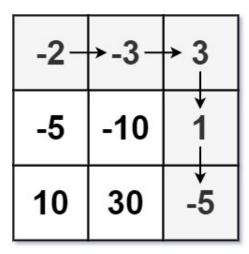# 174. Dungeon Game

- The demons had captured the princess and imprisoned her in the bottom-right corner of a dungeon. The dungeon consists of m x n rooms laid out in a 2D grid. Our valiant knight was initially positioned in the top-left room and must fight his way through dungeon to rescue the princess.

- The knight has an initial health point represented by a positive integer. If at any point his health point drops to 0 or below, he dies immediately.

- Some of the rooms are guarded by demons (represented by negative integers), so the knight loses health upon entering these rooms; other rooms are either empty (represented as 0) or contain magic orbs that increase the knight's health (represented by positive integers).

- To reach the princess as quickly as possible, the knight decides to move only rightward or downward in each step.

- Return the knight's minimum initial health so that he can rescue the princess.

- Note that any room can contain threats or power-ups, even the first room the knight enters and the bottom-right room where the princess is imprisoned.

Example 1:

Input: dungeon = [[-2,-3,3],[-5,-10,1],[10,30,-5]]

Output: 7

Explanation: The initial health of the knight must be at least 7 if he follows the optimal path:

RIGHT-> RIGHT -> DOWN -> DOWN.

Example 2:

Input: dungeon = [[0]]

Output: 1

Constraints:

- m == dungeon.length

- n == dungeon[i].length

- 1 <= m, n <= 200

- -1000 <= dungeon[i][j] <= 1000