

# Maximum Number of Points with Cost

You are given an  $m \times n$  integer matrix **points** (**0-indexed**). Starting with 0 points, you want to **maximize** the number of points you can get from the matrix.

To gain points, you must pick one cell in **each row**. Picking the cell at coordinates  $(r, c)$  will **add**  $\text{points}[r][c]$  to your score.

However, you will lose points if you pick a cell too far from the cell that you picked in the previous row. For every two adjacent rows  $r$  and  $r + 1$  (where  $0 \leq r < m - 1$ ), picking cells at coordinates  $(r, c_1)$  and  $(r + 1, c_2)$  will **subtract**  $\text{abs}(c_1 - c_2)$  from your score.

Return the **maximum** number of points you can achieve.

$\text{abs}(x)$  is defined as:

- $x$  for  $x \geq 0$ .
- $-x$  for  $x < 0$ .

**Example 1:**

1	2	3
1	5	1
3	1	1

**Input:**  $\text{points} = [[1,2,3],[1,5,1],[3,1,1]]$

**Output:** 9

**Explanation:**

The blue cells denote the optimal cells to pick, which have coordinates  $(0, 2)$ ,  $(1, 1)$ , and  $(2, 0)$ .

You add  $3 + 5 + 3 = 11$  to your score.

However, you must subtract  $\text{abs}(2 - 1) + \text{abs}(1 - 0) = 2$  from your score.

Your final score is  $11 - 2 = 9$ .

**Example 2:**

1	5
2	3
4	2

**Input:** points = [[1,5],[2,3],[4,2]]

**Output:** 11

**Explanation:**

The blue cells denote the optimal cells to pick, which have coordinates (0, 1), (1, 1), and (2, 0).

You add  $5 + 3 + 4 = 12$  to your score.

However, you must subtract  $\text{abs}(1 - 1) + \text{abs}(1 - 0) = 1$  from your score.

Your final score is  $12 - 1 = 11$ .

**Constraints:**

- $m == \text{points.length}$
- $n == \text{points}[r].\text{length}$
- $1 \leq m, n \leq 10^5$
- $1 \leq m * n \leq 10^5$
- $0 \leq \text{points}[r][c] \leq 10^5$