2033. Minimum Operations to Make a Uni-Value Grid

Solved

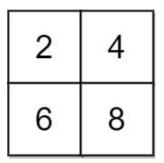
Medium Topics Companies Hint

You are given a 2D integer grid of size $m \times n$ and an integer x. In one operation, you can **add** x to or **subtract** x from any element in the grid.

A **uni-value grid** is a grid where all the elements of it are equal.

Return the **minimum** number of operations to make the grid **uni-value**. If it is not possible, return -1.

Example 1:



Input: grid = [[2,4],[6,8]], x = 2

Output: 4

Explanation: We can make every element equal to 4 by doing the following:

- Add x to 2 once.
- Subtract x from 6 once.
- Subtract x from 8 twice.

A total of 4 operations were used.

Example 2:

1	5
2	3

Input: grid = [[1,5],[2,3]], x = 1

Output: 5

Explanation: We can make every element equal to 3.

Example 3:

1	2
3	4

Input: grid = [[1,2],[3,4]], x = 2

Output: -1

Explanation: It is impossible to make every element equal.

Constraints:

- m == grid.length
- n == grid[i].length
- 1 <= m, n <= 10⁵
- 1 <= m * n <= 10⁵
- $1 \le x$, grid[i][j] $\le 10^4$

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Hint 1

Hint 2

Hint 3

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