

M2 Challenge

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On a 2D plane, there are n points with integer coordinates $\text{points}[i] = [x_i, y_i]$. Return the minimum time in seconds to visit all the points in the order given by points .

You can move according to these rules:

In 1 second, you can either:

- * move vertically by one unit,

- * move horizontally by one unit, or

- * move diagonally $\sqrt{2}$ units (in other words, move one unit vertically then one unit horizontally in 1 second).

You have to visit the points in the same order as they appear in the array.

You are allowed to pass through points that appear later in the order, but these do not count as visits.

Example 1:

Input: $\text{points} = [[1,1], [3,4], [-1,0]]$

Output: 7

Explanation: One optimal path is $[1,1] \rightarrow [2,2] \rightarrow [3,3] \rightarrow [3,4] \rightarrow [2,3] \rightarrow [1,2] \rightarrow [0,1] \rightarrow [-1,0]$

Time from $[1,1]$ to $[3,4]$ = 3 seconds

Time from $[3,4]$ to $[-1,0]$ = 4 seconds

Total time = 7 seconds

Example 2:

Input: $\text{points} = [[3,2], [-2,2]]$

Output: 5

Constrain:

$\text{points.length} == n$

$1 \leq n \leq 100$

$\text{points}[i].\text{length} == 2$

$-1000 \leq \text{points}[i][0], \text{points}[i][1] \leq 1000$

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Given an integer array nums of $2n$ integers, group these integers into n pairs $(a_1, b_1), (a_2, b_2), \dots, (a_n, b_n)$ such that the sum of $\min(a_i, b_i)$ for all i is maximized. Return the maximized sum.

Example 1:

Input: $\text{nums} = [1,4,3,2]$

Output: 4

Explanation: All possible pairings (ignoring the ordering of elements) are:

1. (1, 4), (2, 3) $\rightarrow \min(1, 4) + \min(2, 3) = 1 + 2 = 3$
2. (1, 3), (2, 4) $\rightarrow \min(1, 3) + \min(2, 4) = 1 + 2 = 3$
3. (1, 2), (3, 4) $\rightarrow \min(1, 2) + \min(3, 4) = 1 + 3 = 4$
So the maximum possible sum is 4.

Example 2:

Input: nums = [6,2,6,5,1,2]

Output: 9

Explanation: The optimal pairing is (2, 1), (2, 5), (6, 6).

$\min(2, 1) + \min(2, 5) + \min(6, 6) = 1 + 2 + 6 = 9$.

Constrains:

$1 \leq n \leq 104$

`nums.length == 2 * n`

$-104 \leq \text{nums}[i] \leq 104$