

# 1584. Min Cost to Connect All Points

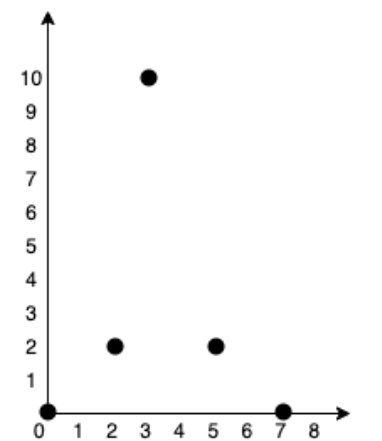
Medium🔒 Topics🏢 Companies💡 Hint

You are given an array `points` representing integer coordinates of some points on a 2D-plane, where `points[i] = [xi, yi]`.

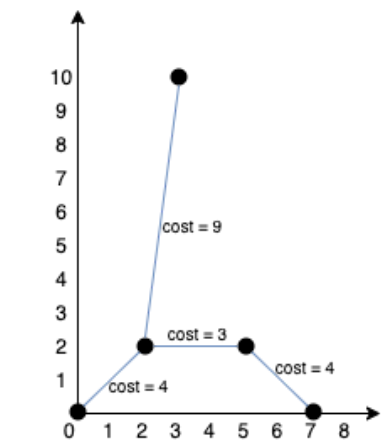
The cost of connecting two points `[xi, yi]` and `[xj, yj]` is the **manhattan distance** between them:  $|x_i - x_j| + |y_i - y_j|$ , where  $|val|$  represents the absolute value of `val`.

Return *the minimum cost to make all points connected*. All points are connected if there is **exactly one** simple path between any two points.

### Example 1:



Input: `points = [[0,0],[2,2],[3,10],[5,2],[7,0]]`  
Output: 20  
Explanation:



We can connect the points as shown above to get the minimum cost of 20. Notice that there is a unique path between every pair of points.

### Example 2:

Input: `points = [[3,12],[-2,5],[-4,1]]`  
Output: 18

### Constraints:

- $1 \leq \text{points.length} \leq 1000$
- $-10^6 \leq x_i, y_i \leq 10^6$
- All pairs  $(x_i, y_i)$  are distinct.

Seen this question in a real interview before? 1/4

Yes No