

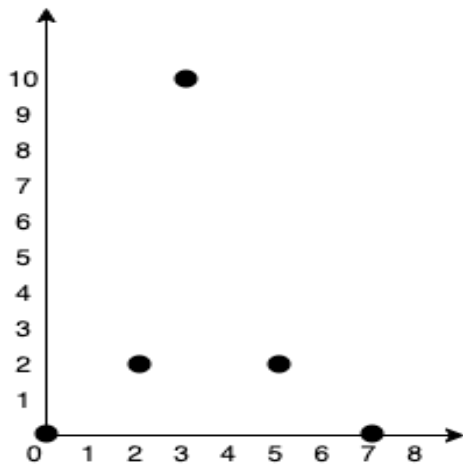
# Min Cost to Connect All Points

You are given an array points representing integer coordinates of some points on a 2D-plane, where  $\text{points}[i] = [x_i, y_i]$ .

The cost of connecting two points  $[x_i, y_i]$  and  $[x_j, y_j]$  is the **manhattan distance** between them:  $|x_i - x_j| + |y_i - y_j|$ , where  $|\text{val}|$  denotes 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.

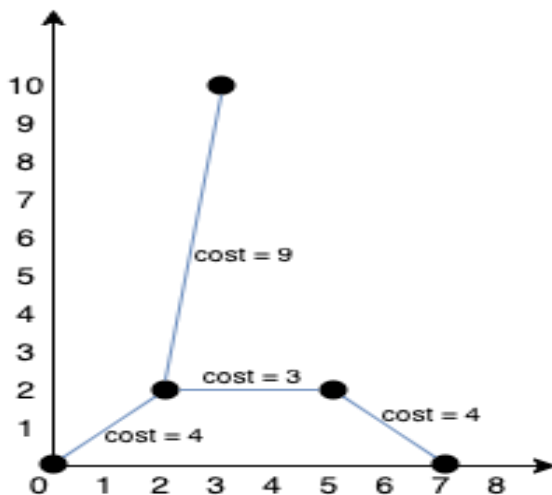
**Example 1:**



**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.