1924. Erect the Fence II

Description

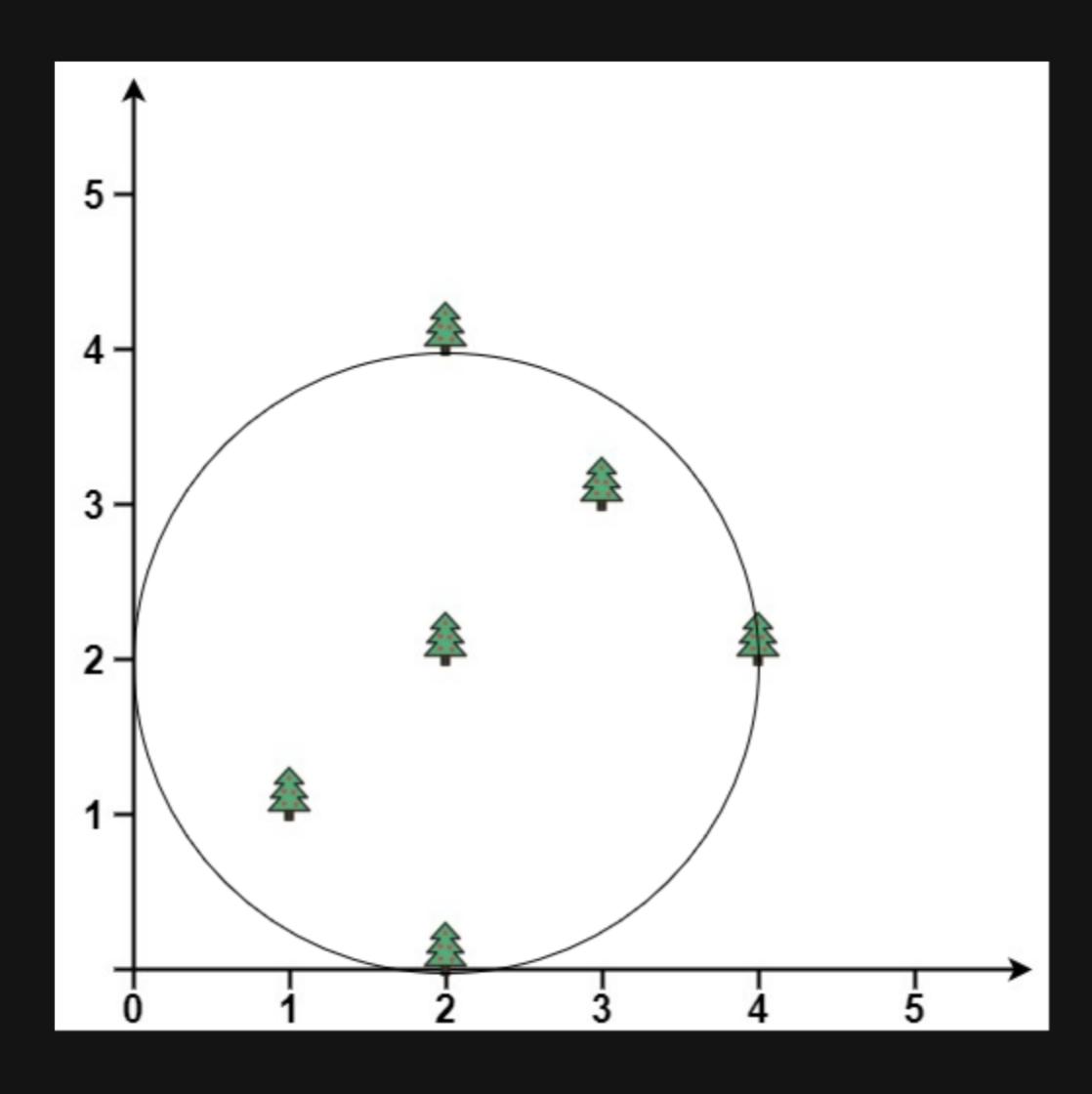
You are given a 2D integer array [trees] where $[trees[i] = [x_i, y_i]]$ represents the location of the [i] tree in the garden.

You are asked to fence the entire garden using the minimum length of rope possible. The garden is well-fenced only if all the trees are enclosed and the rope used forms a perfect circle. A tree is considered enclosed if it is inside or on the border of the circle.

More formally, you must form a circle using the rope with a center (x, y) and radius r where all trees lie inside or on the circle and r is minimum.

Return the center and radius of the circle as a length 3 array [x, y, r] . Answers within 10 -5 of the actual answer will be accepted.

Example 1:

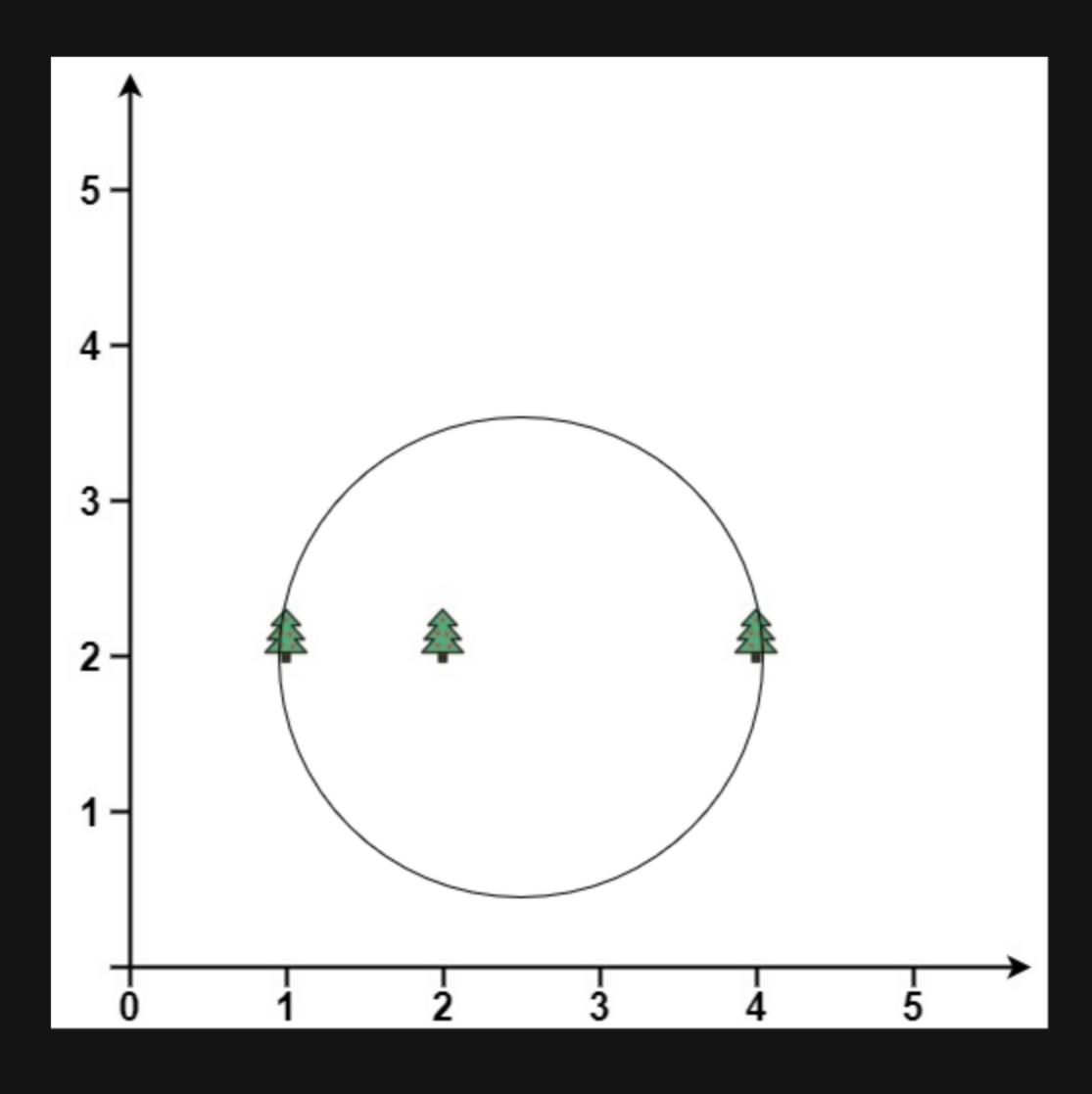


Input: trees = [[1,1],[2,2],[2,0],[2,4],[3,3],[4,2]]

Output: [2.00000,2.00000,2.00000]

Explanation: The fence will have center = (2, 2) and radius = 2

Example 2:



Input: trees = [[1,2],[2,2],[4,2]]
Output: [2.50000,2.00000,1.50000]

Explanation: The fence will have center = (2.5, 2) and radius = 1.5

Constraints:

- 1 <= trees.length <= 3000
- trees[i].length == 2
- $0 <= x_i, y_i <= 3000$