

## 1924. Erect the Fence II Premium

Hard Topics Companies Hint

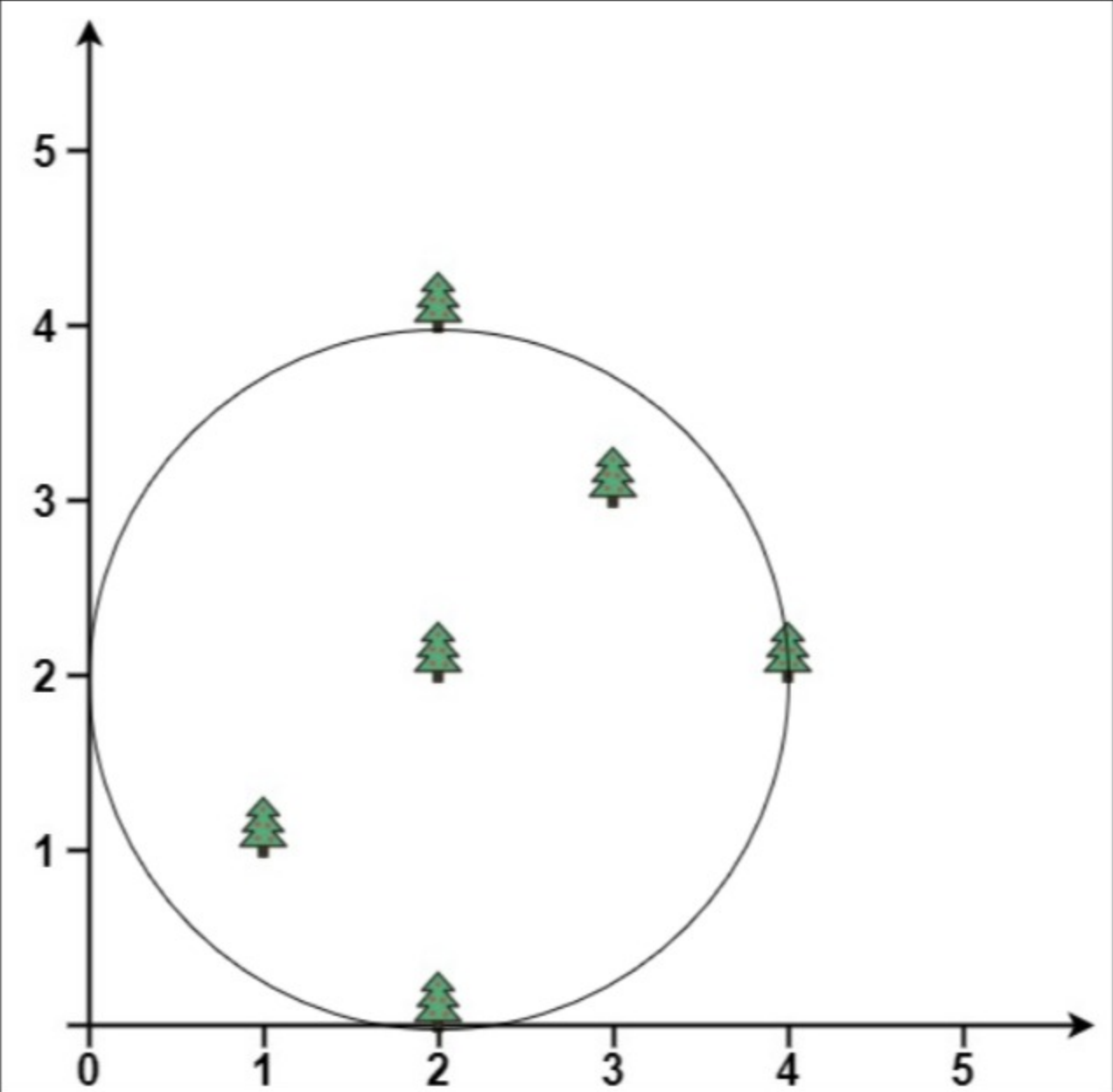
You are given a 2D integer array `trees` where `trees[i] = [xi, yi]` represents the location of the `ith` tree in the garden.

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**.

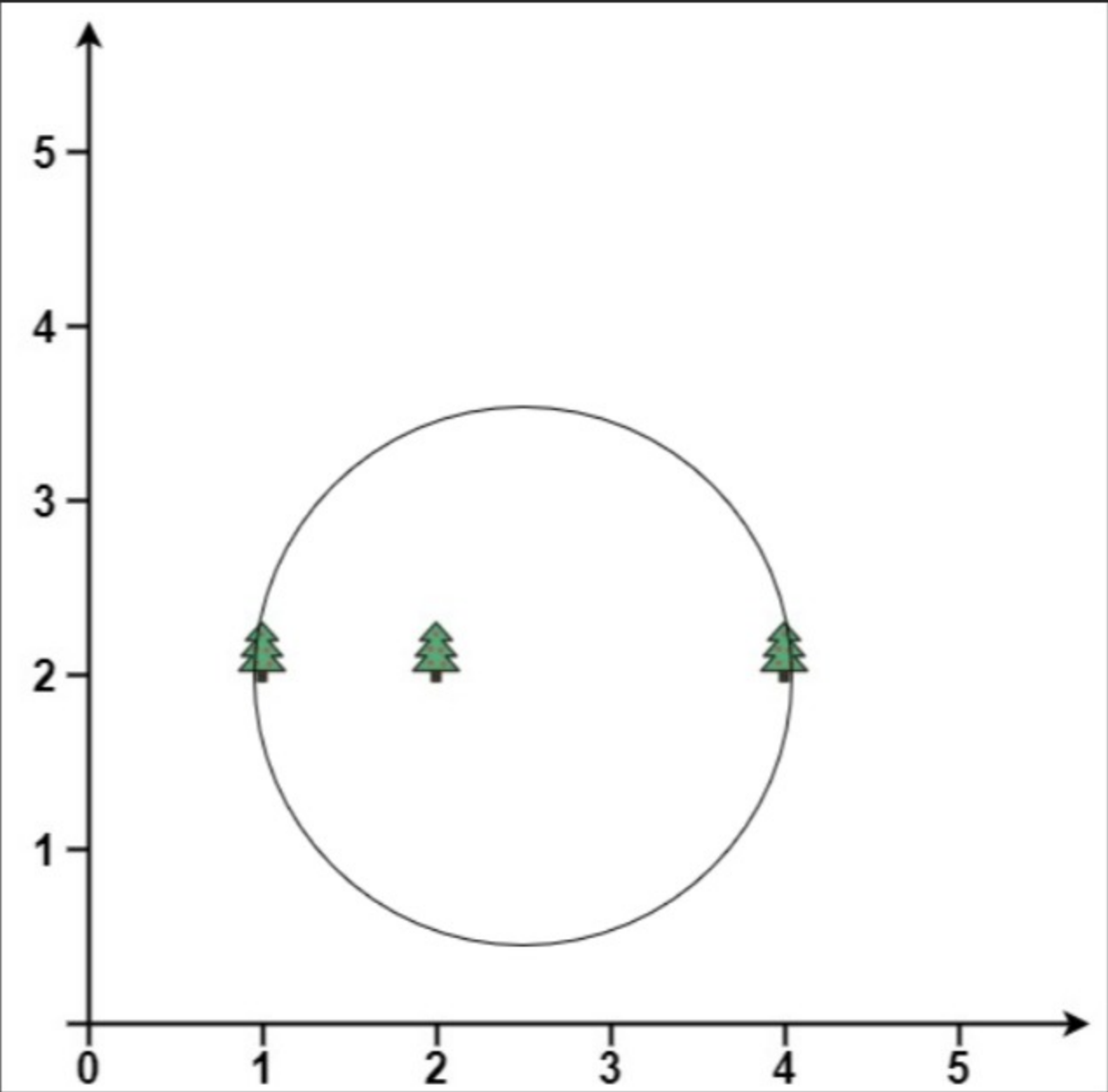
Return *the center and radius of the circle as a length 3 array* `[x, y, r]`. Answers within `10-5` of the actual answer will be accepted.

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 <= xi, yi <= 3000`

Seen this question in a real interview before? 1/5

Yes No

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Hint 1

First, we need to note that this is a classic problem given n points you need to find the minimum enclosing circle to bind them

Hint 2

Second, we need to apply a well known algorithm called welzls algorithm to help us find the minimum enclosing circle

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