593. Valid Square

Description

Given the coordinates of four points in 2D space `p1`, `p2`, `p3` and `p4`, return `true` *if the four points construct a square*.

The coordinate of a point `pi` is represented as `[xi, yi]`. The input is **not** given in any order.

A **valid square** has four equal sides with positive length and four equal angles (90-degree angles).

Example 1:

```
Input: p1 = [0,0], p2 = [1,1], p3 = [1,0], p4 = [0,1]
Output: true
```

Example 2:

```
Input: p1 = [0,0], p2 = [1,1], p3 = [1,0], p4 = [0,12]
Output: false
```

Example 3:

```
Input: p1 = [1,0], p2 = [-1,0], p3 = [0,1], p4 = [0,-1]
Output: true
```

Constraints:

- `p1.length == p2.length == p3.length == p4.length == 2`
- `-10^4 <= xi, yi <= 10^4`