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
* -104 <= xi, yi <= 104