356. Line Reflection

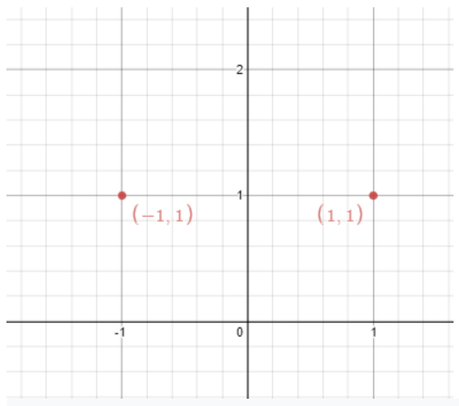
Medium 208 446 Add to List Share

Given `n` points on a 2D plane, find if there is such a line parallel to the y-axis that reflects the given points symmetrically.

In other words, answer whether or not if there exists a line that after reflecting all points over the given line, the original points' set is the same as the reflected ones.

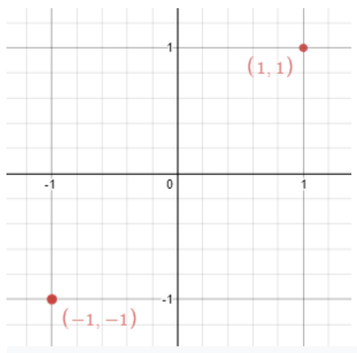
Note that there can be repeated points.

Example 1:




```
Input: points = [[1,1],[-1,1]]
Output: true
Explanation: We can choose the line x = 0.
```

Example 2:




```
Input: points = [[1,1],[-1,-1]]
Output: false
Explanation: We can't choose a line.
```

Constraints:

- `n == points.length`
- `1 <= n <= 10^4`
- `-10^8 <= points[i][j] <= 10^8`

Follow up: Could you do better than `O(n^2)` ?

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Find the smallest and largest x-value for all points.

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If there is a line then it should be at y = (minX + maxX) / 2.

Hide Hint 3

For each point, make sure that it has a reflected point in the opposite side.

Java | Autocomplete

```java
class Solution {
    public boolean isReflected(int[][] points) {

    }
}
```