

# 469. Convex Polygon

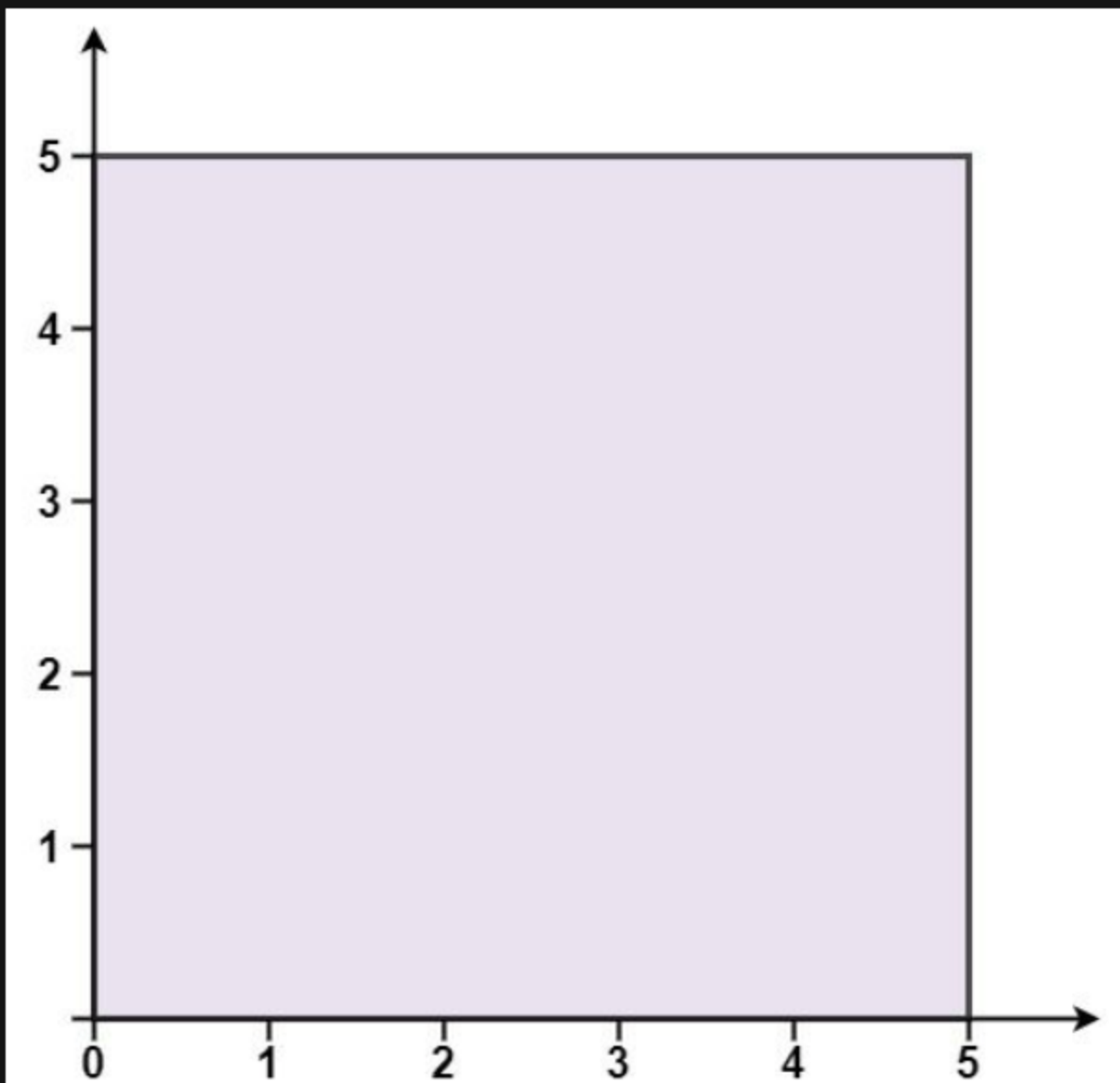
## Description

You are given an array of points on the **X-Y** plane `points` where `points[i] = [xi, yi]`. The points form a polygon when joined sequentially.

Return `true` if this polygon is **convex** and `false` otherwise.

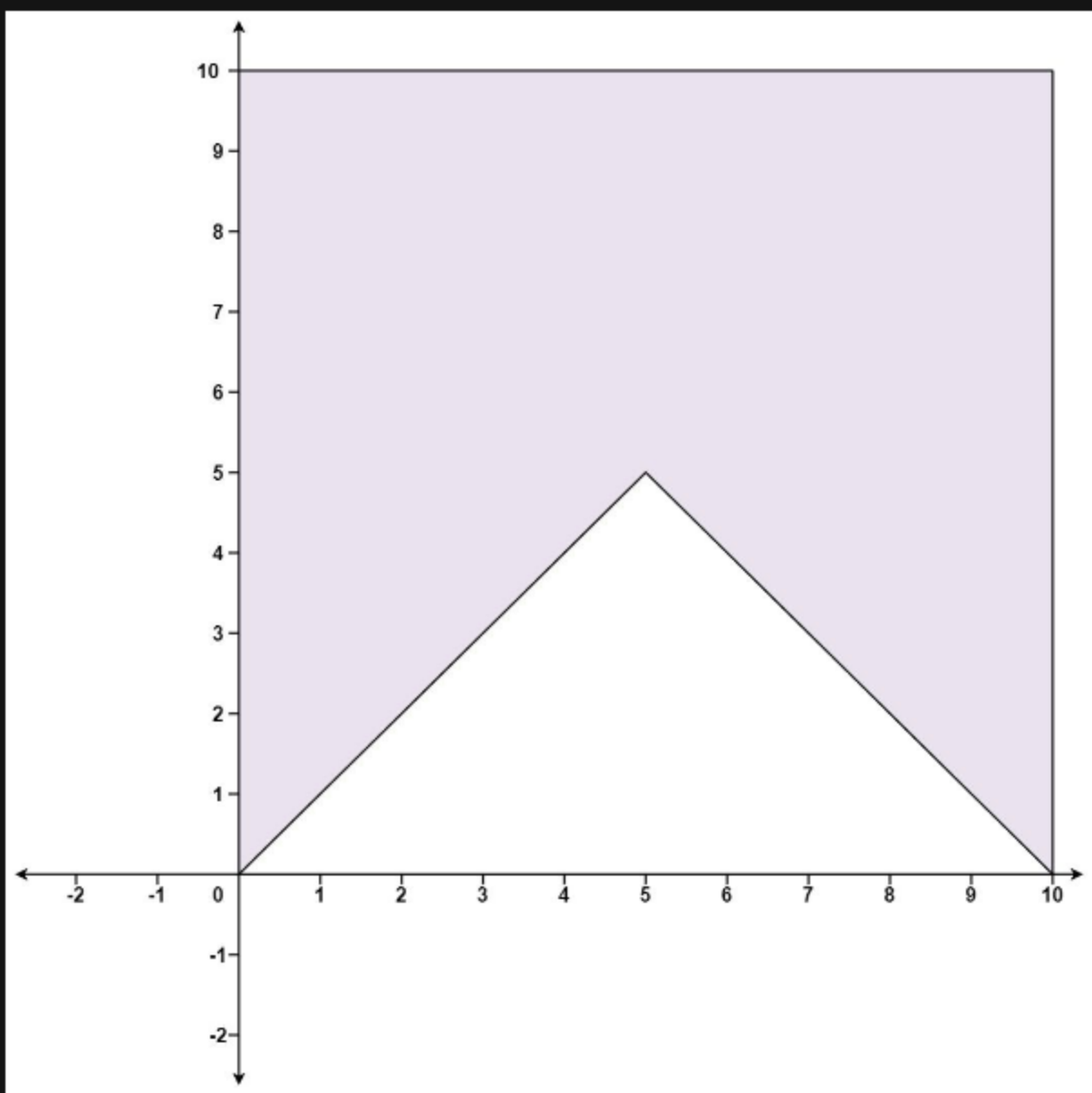
You may assume the polygon formed by given points is always a **simple polygon**. In other words, we ensure that exactly two edges intersect at each vertex and that edges otherwise don't intersect each other.

### Example 1:



**Input:** `points = [[0,0],[0,5],[5,5],[5,0]]`  
**Output:** `true`

### Example 2:



**Input:** `points = [[0,0],[0,10],[10,10],[10,0],[5,5]]`  
**Output:** `false`

### Constraints:

- `3 <= points.length <= 104`
- `points[i].length == 2`
- `-104 <= xi, yi <= 104`
- All the given points are **unique**.

