

1779. Find Nearest Point That Has the Same X or Y Coordinate

Description

You are given two integers, `x` and `y`, which represent your current location on a Cartesian grid: `(x, y)`. You are also given an array `points` where each `points[i] = [ai, bi]` represents that a point exists at `(ai, bi)`. A point is **valid** if it shares the same x-coordinate or the same y-coordinate as your location.

Return *the index (0-indexed) of the valid point with the smallest Manhattan distance from your current location*. If there are multiple, return *the valid point with the smallest index*. If there are no valid points, return `-1`.

The **Manhattan distance** between two points `(x1, y1)` and `(x2, y2)` is `abs(x1 - x2) + abs(y1 - y2)`.

Example 1:

Input: `x = 3, y = 4, points = [[1,2],[3,1],[2,4],[2,3],[4,4]]`

Output: `2`

Explanation: Of all the points, only `[3,1]`, `[2,4]` and `[4,4]` are valid. Of the valid points, `[2,4]` and `[4,4]` have the smallest Manhattan distance from your current location, with a distance of 1. `[2,4]` has the smallest index, so return 2.

Example 2:

Input: `x = 3, y = 4, points = [[3,4]]`

Output: `0`

Explanation: The answer is allowed to be on the same location as your current location.

Example 3:

Input: `x = 3, y = 4, points = [[2,3]]`

Output: `-1`

Explanation: There are no valid points.

Constraints:

- `1 <= points.length <= 104`
- `points[i].length == 2`
- `1 <= x, y, ai, bi <= 104`

