

973. K Closest Points to Origin

Medium

Topics

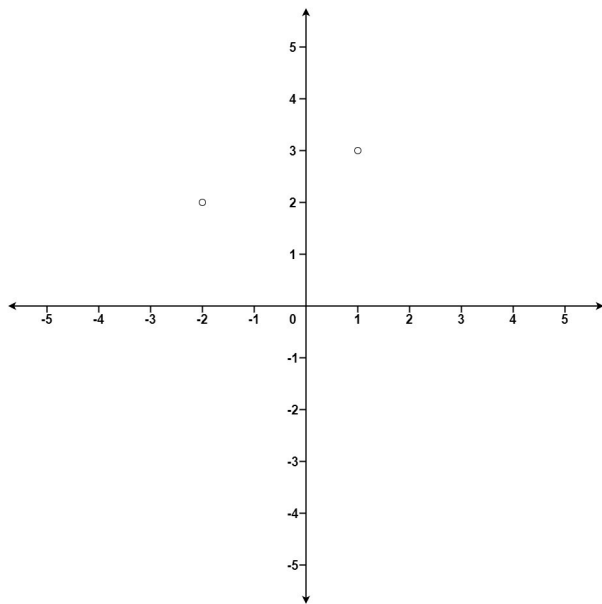
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Given an array of `points` where `points[i] = [xi, yi]` represents a point on the **X-Y** plane and an integer `k`, return the `k` closest points to the origin (0, 0).

The distance between two points on the **X-Y** plane is the Euclidean distance (i.e., $\sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$).

You may return the answer in **any order**. The answer is **guaranteed** to be **unique** (except for the order that it is in).

Example 1:



Input: `points = [[1,3],[−2,2]]`, `k = 1`

Output: `[−2,2]`

Explanation:

The distance between (1, 3) and the origin is `sqrt(10)`.

The distance between (−2, 2) and the origin is `sqrt(8)`.

Since `sqrt(8) < sqrt(10)`, (−2, 2) is closer to the origin.

We only want the closest `k = 1` points from the origin, so the answer is just `[−2,2]`.

Example 2:

Input: `points = [[3,3],[5,−1],[−2,4]]`, `k = 2`

Output: `[3,3],[−2,4]`

Explanation: The answer `[−2,4],[3,3]` would also be accepted.