Problem 1453: Maximum Number of Darts Inside of a Circular Dartboard

Problem Information

Difficulty: Hard
Acceptance Rate: 39.53%
Paid Only: No
Tags: Array, Math, Geometry

Problem Description

Alice is throwing `n` darts on a very large wall. You are given an array `darts` where `darts[i] = [xi, yi]` is the position of the `ith` dart that Alice threw on the wall.

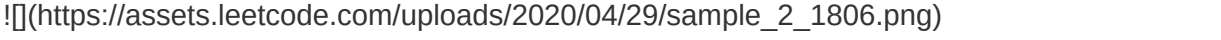
Bob knows the positions of the `n` darts on the wall. He wants to place a dartboard of radius `r` on the wall so that the maximum number of darts that Alice throws lie on the dartboard.

Given the integer `r`, return _the maximum number of darts that can lie on the dartboard_.

Example 1:

Input: darts = [[-2,0],[2,0],[0,2],[0,-2]], r = 2 **Output:** 4 **Explanation:** Circle dartboard with center in (0,0) and radius = 2 contain all points.

Example 2:



Input: darts = [[-3,0],[3,0],[2,6],[5,4],[0,9],[7,8]], r = 5 **Output:** 5 **Explanation:** Circle dartboard with center in (0,4) and radius = 5 contain all points except the point (7,8).

Constraints:

* `1 <= darts.length <= 100` * `darts[i].length == 2` * `-104 <= xi, yi <= 104` * All the `darts` are unique * `1 <= r <= 5000`

Code Snippets

C++:

```
class Solution {
public:
int numPoints(vector<vector<int>>& darts, int r) {

}
};
```

Java:

```
class Solution {
public int numPoints(int[][] darts, int r) {

}
}
```

Python3:

```
class Solution:
def numPoints(self, darts: List[List[int]], r: int) -> int:
```