Problem 447: Number of Boomerangs

Problem Information

Difficulty: Medium
Acceptance Rate: 0.00%
Paid Only: No

Problem Description

You are given

n

points

in the plane that are all

distinct

, where

points[i] = [x

i

, y

i

]

. A

boomerang

is a tuple of points

(i, j, k)

such that the distance between

i

and

j

equals the distance between

i

and

k

(the order of the tuple matters)

.

Return

the number of boomerangs

.

Example 1:

Input:

points = [[0,0],[1,0],[2,0]]

Output:

2

Explanation:

The two boomerangs are [[1,0],[0,0],[2,0]] and [[1,0],[2,0],[0,0]].

Example 2:

Input:

points = [[1,1],[2,2],[3,3]]

Output:

2

Example 3:

Input:

points = [[1,1]]

Output:

0

Constraints:

n == points.length

1 <= n <= 500

points[i].length == 2

-10

4

<= x

i

, y

i

<= 10

4

All the points are

unique

.

Code Snippets

C++:

```
class Solution {
public:
int numberOfBoomerangs(vector<vector<int>>& points) {

}
};
```

Java:

```
class Solution {
public int numberOfBoomerangs(int[][] points) {

}
}
```

Python3:

```
class Solution:
def numberOfBoomerangs(self, points: List[List[int]]) -> int:
```

Python:

```
class Solution(object):
def numberOfBoomerangs(self, points):
"""
:type points: List[List[int]]
:rtype: int
"""
```

JavaScript:

```
/**
* @param {number[][]} points
* @return {number}
*/
var numberOfBoomerangs = function(points) {

};
```

TypeScript:

```
function numberOfBoomerangs(points: number[][]): number {

};
```

C#:

```
public class Solution {
public int NumberOfBoomerangs(int[][] points) {

}
}
```

C:

```
int numberOfBoomerangs(int** points, int pointsSize, int* pointsColSize) {

}
```

Go:

```
func numberOfBoomerangs(points [][]int) int {
```

```
}
```

Kotlin:

```
class Solution {
fun numberOfBoomerangs(points: Array<IntArray>): Int {

}
}
```

Swift:

```
class Solution {
func numberOfBoomerangs(_ points: [[Int]]) -> Int {

}
}
```

Rust:

```
impl Solution {
pub fn number_of_boomerangs(points: Vec<Vec<i32>>) -> i32 {

}
}
```

Ruby:

```
# @param {Integer[][]} points
# @return {Integer}
def number_of_boomerangs(points)

end
```

PHP:

```
class Solution {

/**
* @param Integer[][] $points
* @return Integer
*/
```

```
function numberOfBoomerangs($points) {

}
}
```

Dart:

```
class Solution {
int numberOfBoomerangs(List<List<int>> points) {

}
}
```

Scala:

```
object Solution {
def numberOfBoomerangs(points: Array[Array[Int]]): Int = {

}
}
```

Elixir:

```
defmodule Solution do
@spec number_of_boomerangs(points :: [[integer]]) :: integer
def number_of_boomerangs(points) do

end
end
```

Erlang:

```
-spec number_of_boomerangs(Points :: [[integer()]]) -> integer().
number_of_boomerangs(Points) ->
.
```

Racket:

```
(define/contract (number-of-boomerangs points)
(-> (listof (listof exact-integer?)) exact-integer?)
)
```

Solutions

C++ Solution:

```
/*
* Problem: Number of Boomerangs
* Difficulty: Medium
* Tags: array, math, hash
*
* Approach: Use two pointers or sliding window technique
* Time Complexity: O(n) or O(n log n)
* Space Complexity: O(n) for hash map
*/

class Solution {
public:
int numberOfBoomerangs(vector<vector<int>>& points) {

}
};
```

Java Solution:

```
/**
* Problem: Number of Boomerangs
* Difficulty: Medium
* Tags: array, math, hash
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* Approach: Use two pointers or sliding window technique
* Time Complexity: O(n) or O(n log n)
* Space Complexity: O(n) for hash map
*/

class Solution {
public int numberOfBoomerangs(int[][] points) {

}
}
```

Python3 Solution:

```
"""
Problem: Number of Boomerangs
Difficulty: Medium
Tags: array, math, hash

Approach: Use two pointers or sliding window technique
Time Complexity: O(n) or O(n log n)
Space Complexity: O(n) for hash map
"""

class Solution:
def numberOfBoomerangs(self, points: List[List[int]]) -> int:
# TODO: Implement optimized solution
pass
```

Python Solution:

```
class Solution(object):
def numberOfBoomerangs(self, points):
"""
:type points: List[List[int]]
:rtype: int
"""
```

JavaScript Solution:

```
/**
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```
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TypeScript Solution:

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*/

function numberOfBoomerangs(points: number[][]): number {

};
```

C# Solution:

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* Time Complexity: O(n) or O(n log n)
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*/

public class Solution {
public int NumberOfBoomerangs(int[][] points) {

}
}
```

C Solution:

```
/*
* Problem: Number of Boomerangs
* Difficulty: Medium
```

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int numberOfBoomerangs(int** points, int pointsSize, int* pointsColSize) {

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```

Go Solution:

```
// Problem: Number of Boomerangs
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// Tags: array, math, hash
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// Approach: Use two pointers or sliding window technique
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func numberOfBoomerangs(points [][]int) int {

}
```

Kotlin Solution:

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class Solution {
fun numberOfBoomerangs(points: Array<IntArray>): Int {

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class Solution {
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impl Solution {
pub fn number_of_boomerangs(points: Vec<Vec<i32>>) -> i32 {

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Ruby Solution:

```
# @param {Integer[][]} points
# @return {Integer}
def number_of_boomerangs(points)

end
```

PHP Solution:

```
class Solution {

/**
* @param Integer[][] $points
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function numberOfBoomerangs($points) {

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class Solution {
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