

# Problem 1037: Valid Boomerang

## Problem Information

Difficulty: [Easy](#)

Acceptance Rate: 0.00%

Paid Only: No

## Problem Description

Given an array

points

where

$\text{points}[i] = [x$

$i$

, y

$i$

]

represents a point on the

X-Y

plane, return

true

if these points are a

boomerang

A

boomerang

is a set of three points that are

all distinct

and

not in a straight line

Example 1:

Input:

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

Output:

true

Example 2:

Input:

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

Output:

false

Constraints:

```
points.length == 3
```

```
points[i].length == 2
```

```
0 <= x
```

```
i
```

```
, y
```

```
i
```

```
<= 100
```

## Code Snippets

### C++:

```
class Solution {
public:
    bool isBoomerang(vector<vector<int>>& points) {
        }
};
```

### Java:

```
class Solution {
    public boolean isBoomerang(int[][] points) {
        }
}
```

### Python3:

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

### Python:

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

### JavaScript:

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

### TypeScript:

```
function isBoomerang(points: number[][]): boolean {
}
```

### C#:

```
public class Solution {
    public bool IsBoomerang(int[][] points) {
}
```

### C:

```
bool isBoomerang(int** points, int pointsSize, int* pointsColSize) {
}
```

### Go:

```
func isBoomerang(points [][]int) bool {
}
```

**Kotlin:**

```
class Solution {  
    fun isBoomerang(points: Array<IntArray>): Boolean {  
  
    }  
}
```

**Swift:**

```
class Solution {  
    func isBoomerang(_ points: [[Int]]) -> Bool {  
  
    }  
}
```

**Rust:**

```
impl Solution {  
    pub fn is_boomerang(points: Vec<Vec<i32>>) -> bool {  
  
    }  
}
```

**Ruby:**

```
# @param {Integer[][]} points  
# @return {Boolean}  
def is_boomerang(points)  
  
end
```

**PHP:**

```
class Solution {  
  
    /**  
     * @param Integer[][] $points  
     * @return Boolean  
     */  
    function isBoomerang($points) {  
  
    }
```

```
}
```

### Dart:

```
class Solution {  
  bool isBoomerang(List<List<int>> points) {  
    }  
}
```

### Scala:

```
object Solution {  
  def isBoomerang(points: Array[Array[Int]]): Boolean = {  
    }  
}
```

### Elixir:

```
defmodule Solution do  
  @spec is_boomerang(points :: [[integer]]) :: boolean  
  def is_boomerang(points) do  
  
  end  
end
```

### Erlang:

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

### Racket:

```
(define/contract (is-boomerang points)  
  (-> (listof (listof exact-integer?)) boolean?)  
)
```

## Solutions

### C++ Solution:

```
/*
 * Problem: Valid Boomerang
 * Difficulty: Easy
 * Tags: array, math
 *
 * Approach: Use two pointers or sliding window technique
 * Time Complexity: O(n) or O(n log n)
 * Space Complexity: O(1) to O(n) depending on approach
 */

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

    }
};
```

### Java Solution:

```
/**
 * Problem: Valid Boomerang
 * Difficulty: Easy
 * Tags: array, math
 *
 * Approach: Use two pointers or sliding window technique
 * Time Complexity: O(n) or O(n log n)
 * Space Complexity: O(1) to O(n) depending on approach
 */

class Solution {
    public boolean isBoomerang(int[][] points) {

    }
}
```

### Python3 Solution:

```
"""
Problem: Valid Boomerang
Difficulty: Easy
Tags: array, math
```

```
Approach: Use two pointers or sliding window technique
Time Complexity: O(n) or O(n log n)
Space Complexity: O(1) to O(n) depending on approach
"""

```

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

### Python Solution:

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

```

### JavaScript Solution:

```
/**
 * Problem: Valid Boomerang
 * Difficulty: Easy
 * Tags: array, math
 *
 * Approach: Use two pointers or sliding window technique
 * Time Complexity: O(n) or O(n log n)
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/**
 * @param {number[][]} points
 * @return {boolean}
 */
var isBoomerang = function(points) {

};
```

### TypeScript Solution:

```

/**
 * Problem: Valid Boomerang
 * Difficulty: Easy
 * Tags: array, math
 *
 * Approach: Use two pointers or sliding window technique
 * Time Complexity: O(n) or O(n log n)
 * Space Complexity: O(1) to O(n) depending on approach
 */

function isBoomerang(points: number[][]): boolean {
}

```

### C# Solution:

```

/*
 * Problem: Valid Boomerang
 * Difficulty: Easy
 * Tags: array, math
 *
 * Approach: Use two pointers or sliding window technique
 * Time Complexity: O(n) or O(n log n)
 * Space Complexity: O(1) to O(n) depending on approach
 */

public class Solution {
    public bool IsBoomerang(int[][] points) {
        }
    }

```

### C Solution:

```

/*
 * Problem: Valid Boomerang
 * Difficulty: Easy
 * Tags: array, math
 *
 * Approach: Use two pointers or sliding window technique
 * Time Complexity: O(n) or O(n log n)
 * Space Complexity: O(1) to O(n) depending on approach

```

```
*/  
  
bool isBoomerang(int** points, int pointsSize, int* pointsColSize) {  
  
}  

```

### Go Solution:

```
// Problem: Valid Boomerang  
// Difficulty: Easy  
// Tags: array, math  
//  
// Approach: Use two pointers or sliding window technique  
// Time Complexity: O(n) or O(n log n)  
// Space Complexity: O(1) to O(n) depending on approach  
  
func isBoomerang(points [][]int) bool {  
  
}
```

### Kotlin Solution:

```
class Solution {  
    fun isBoomerang(points: Array<IntArray>): Boolean {  
  
    }  
}
```

### Swift Solution:

```
class Solution {  
    func isBoomerang(_ points: [[Int]]) -> Bool {  
  
    }  
}
```

### Rust Solution:

```
// Problem: Valid Boomerang  
// Difficulty: Easy  
// Tags: array, math
```

```

// 
// Approach: Use two pointers or sliding window technique
// Time Complexity: O(n) or O(n log n)
// Space Complexity: O(1) to O(n) depending on approach

impl Solution {
pub fn is_boomerang(points: Vec<Vec<i32>>) -> bool {
    }

}

```

### Ruby Solution:

```

# @param {Integer[][]} points
# @return {Boolean}
def is_boomerang(points)

end

```

### PHP Solution:

```

class Solution {

/**
 * @param Integer[][] $points
 * @return Boolean
 */
function isBoomerang($points) {

}
}

```

### Dart Solution:

```

class Solution {
bool isBoomerang(List<List<int>> points) {
    }

}

```

### Scala Solution:

```
object Solution {  
    def isBoomerang(points: Array[Array[Int]]): Boolean = {  
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}
```

### Elixir Solution:

```
defmodule Solution do  
  @spec is_boomerang(points :: [[integer]]) :: boolean  
  def is_boomerang(points) do  
  
  end  
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### Erlang Solution:

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