Problem 611: Valid Triangle Number

Problem Information

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

Problem Description

Given an integer array

nums

, return

the number of triplets chosen from the array that can make triangles if we take them as side lengths of a triangle

.

Example 1:

Input:

nums = [2,2,3,4]

Output:

3

Explanation:

Valid combinations are: 2,3,4 (using the first 2) 2,3,4 (using the second 2) 2,2,3

Example 2:

Input:

nums = [4,2,3,4]

Output:

4

Constraints:

1 <= nums.length <= 1000

0 <= nums[i] <= 1000

Code Snippets

C++:

```
class Solution {
public:
int triangleNumber(vector<int>& nums) {

}
};
```

Java:

```
class Solution {
public int triangleNumber(int[] nums) {

}
}
```

Python3:

```
class Solution:
def triangleNumber(self, nums: List[int]) -> int:
```

Python:

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

JavaScript:

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

};
```

TypeScript:

```
function triangleNumber(nums: number[]): number {

};
```

C#:

```
public class Solution {
public int TriangleNumber(int[] nums) {

}
}
```

C:

```
int triangleNumber(int* nums, int numsSize) {

}
```

Go:

```
func triangleNumber(nums []int) int {

}
```

Kotlin:

```
class Solution {
fun triangleNumber(nums: IntArray): Int {

}
}
```

Swift:

```
class Solution {
func triangleNumber(_ nums: [Int]) -> Int {

}
}
```

Rust:

```
impl Solution {
pub fn triangle_number(nums: Vec<i32>) -> i32 {

}
}
```

Ruby:

```
# @param {Integer[]} nums
# @return {Integer}
def triangle_number(nums)

end
```

PHP:

```
class Solution {

/**
* @param Integer[] $nums
* @return Integer
*/
function triangleNumber($nums) {

}
```

```
}
```

Dart:

```
class Solution {
int triangleNumber(List<int> nums) {

}
}
```

Scala:

```
object Solution {
def triangleNumber(nums: Array[Int]): Int = {

}
}
```

Elixir:

```
defmodule Solution do
@spec triangle_number(nums :: [integer]) :: integer
def triangle_number(nums) do

end
end
```

Erlang:

```
-spec triangle_number(Nums :: [integer()]) -> integer().
triangle_number(Nums) ->
.
```

Racket:

```
(define/contract (triangle-number nums)
(-> (listof exact-integer?) exact-integer?)
)
```

Solutions

C++ Solution:

```
/*
* Problem: Valid Triangle Number
* Difficulty: Medium
* Tags: array, greedy, sort, search
*
* 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:
int triangleNumber(vector<int>& nums) {

}
};
```

Java Solution:

```
/**
* Problem: Valid Triangle Number
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* Approach: Use two pointers or sliding window technique
* Time Complexity: O(n) or O(n log n)
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*/

class Solution {
public int triangleNumber(int[] nums) {

}
}
```

Python3 Solution:

```
"""
Problem: Valid Triangle Number
Difficulty: Medium
Tags: array, greedy, sort, search
```

```
Approach: Use two pointers or sliding window technique
Time Complexity: O(n) or O(n log n)
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"""

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

Python Solution:

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

JavaScript Solution:

```
/**
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/**
* @param {number[]} nums
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var triangleNumber = function(nums) {

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```

TypeScript Solution:

```
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function triangleNumber(nums: number[]): number {

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C# Solution:

```
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* Approach: Use two pointers or sliding window technique
* Time Complexity: O(n) or O(n log n)
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*/

public class Solution {
public int TriangleNumber(int[] nums) {

}
}
```

C Solution:

```
/*
* Problem: Valid Triangle Number
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```

```
*/

int triangleNumber(int* nums, int numsSize) {

}
```

Go Solution:

```
// Problem: Valid Triangle Number
// Difficulty: Medium
// Tags: array, greedy, sort, search
//
// 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 triangleNumber(nums []int) int {

}
```

Kotlin Solution:

```
class Solution {
fun triangleNumber(nums: IntArray): Int {

}
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Swift Solution:

```
class Solution {
func triangleNumber(_ nums: [Int]) -> Int {

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Rust Solution:

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impl Solution {
pub fn triangle_number(nums: Vec<i32>) -> i32 {

}
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```
# @param {Integer[]} nums
# @return {Integer}
def triangle_number(nums)

end
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PHP Solution:

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class Solution {

/**
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