Problem 2592: Maximize Greatness of an Array

Problem Information

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

Problem Description

You are given a 0-indexed integer array

nums

. You are allowed to permute

nums

into a new array

perm

of your choosing.

We define the

greatness

of

nums

be the number of indices

0 <= i < nums.length

for which

perm[i] > nums[i]

.

Return

the

maximum

possible greatness you can achieve after permuting

nums

.

Example 1:

Input:

nums = [1,3,5,2,1,3,1]

Output:

4

Explanation:

One of the optimal rearrangements is perm = [2,5,1,3,3,1,1]. At indices = 0, 1, 3, and 4, perm[i] > nums[i]. Hence, we return 4.

Example 2:

Input:

nums = [1,2,3,4]

Output:

3

Explanation:

We can prove the optimal perm is [2,3,4,1]. At indices = 0, 1, and 2, perm[i] > nums[i]. Hence, we return 3.

Constraints:

1 <= nums.length <= 10

5

0 <= nums[i] <= 10

9

Code Snippets

C++:

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

}
};
```

Java:

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

}
}
```

Python3:

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

Python:

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

JavaScript:

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

};
```

TypeScript:

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

};
```

C#:

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

}
}
```

C:

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

}
```

Go:

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

}
```

Kotlin:

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

}
}
```

Swift:

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

}
}
```

Rust:

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

}
}
```

Ruby:

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

end
```

PHP:

```
class Solution {

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

}
}
```

Dart:

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

}
}
```

Scala:

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

}
}
```

Elixir:

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

end
end
```

Erlang:

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

Racket:

```
(define/contract (maximize-greatness nums)
(-> (listof exact-integer?) exact-integer?)
)
```

Solutions

C++ Solution:

```
/*
* Problem: Maximize Greatness of an Array
* Difficulty: Medium
* Tags: array, greedy, sort
*
* 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 maximizeGreatness(vector<int>& nums) {

}
};
```

Java Solution:

```
/**
* Problem: Maximize Greatness of an Array
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* Time Complexity: O(n) or O(n log n)
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*/

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

}
}
```

Python3 Solution:

```
"""
Problem: Maximize Greatness of an Array
Difficulty: Medium
Tags: array, greedy, sort

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 maximizeGreatness(self, nums: List[int]) -> int:
# TODO: Implement optimized solution
pass
```

Python Solution:

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

JavaScript Solution:

```
/**
* Problem: Maximize Greatness of an Array
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/**
* @param {number[]} nums
* @return {number}
*/
var maximizeGreatness = function(nums) {
};
```

TypeScript Solution:

```
/**
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* Tags: array, greedy, sort
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function maximizeGreatness(nums: number[]): number {

};
```

C# Solution:

```
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*/

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

}
}
```

C Solution:

```
/*
* Problem: Maximize Greatness of an Array
* Difficulty: Medium
* Tags: array, greedy, sort
*
* Approach: Use two pointers or sliding window technique
* Time Complexity: O(n) or O(n log n)
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*/

int maximizeGreatness(int* nums, int numsSize) {

}
```

Go Solution:

```
// Problem: Maximize Greatness of an Array
// Difficulty: Medium
// Tags: array, greedy, sort
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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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func maximizeGreatness(nums []int) int {

}
```

Kotlin Solution:

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

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}
```

Swift Solution:

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

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Rust Solution:

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// Problem: Maximize Greatness of an Array
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impl Solution {
pub fn maximize_greatness(nums: Vec<i32>) -> i32 {

}
}
```

Ruby Solution:

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

end
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PHP Solution:

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class Solution {

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

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Dart Solution:

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class Solution {
int maximizeGreatness(List<int> nums) {
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object Solution {
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