

Problem 3040: Maximum Number of Operations With the Same Score II

Problem Information

Difficulty: Medium

Acceptance Rate: 33.68%

Paid Only: No

Tags: Array, Dynamic Programming, Memoization

Problem Description

Given an array of integers called `nums`, you can perform **any** of the following operation while `nums` contains **at least** **2** elements:

- * Choose the first two elements of `nums` and delete them.
- * Choose the last two elements of `nums` and delete them.
- * Choose the first and the last elements of `nums` and delete them.

The **score** of the operation is the sum of the deleted elements.

Your task is to find the **maximum** number of operations that can be performed, such that **all operations have the same score**.

Return **_the maximum number of operations possible that satisfy the condition mentioned above_**.

Example 1:

Input: nums = [3,2,1,2,3,4] **Output:** 3 **Explanation:** We perform the following operations:
- Delete the first two elements, with score $3 + 2 = 5$, nums = [1,2,3,4].
- Delete the first and the last elements, with score $1 + 4 = 5$, nums = [2,3].
- Delete the first and the last elements, with score $2 + 3 = 5$, nums = []. We are unable to perform any more operations as nums is empty.

Example 2:

****Input:**** nums = [3,2,6,1,4] ****Output:**** 2 ****Explanation:**** We perform the following operations: - Delete the first two elements, with score $3 + 2 = 5$, nums = [6,1,4]. - Delete the last two elements, with score $1 + 4 = 5$, nums = [6]. It can be proven that we can perform at most 2 operations.

****Constraints:****

* `2 <= nums.length <= 2000` * `1 <= nums[i] <= 1000`

Code Snippets

C++:

```
class Solution {  
public:  
    int maxOperations(vector<int>& nums) {  
  
    }  
};
```

Java:

```
class Solution {  
public int maxOperations(int[] nums) {  
  
}  
}
```

Python3:

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