

Problem 3422: Minimum Operations to Make Subarray Elements Equal

Problem Information

Difficulty: **Medium**

Acceptance Rate: 46.30%

Paid Only: Yes

Tags: Array, Hash Table, Math, Sliding Window, Heap (Priority Queue)

Problem Description

You are given an integer array `nums` and an integer `k`. You can perform the following operation any number of times:

- * Increase or decrease any element of `nums` by 1.

Return the **minimum** number of operations required to ensure that **at least** one subarray of size `k` in `nums` has all elements equal.

Example 1:

Input: `nums = [4,-3,2,1,-4,6]`, `k = 3`

Output: 5

Explanation:

* Use 4 operations to add 4 to `nums[1]`. The resulting array is `[4, 1, 2, 1, -4, 6]`. * Use 1 operation to subtract 1 from `nums[2]`. The resulting array is `[4, 1, 1, 1, -4, 6]`. * The array now contains a subarray `[1, 1, 1]` of size `k = 3` with all elements equal. Hence, the answer is 5.

Example 2:

Input: `nums = [-2,-2,3,1,4]`, `k = 2`

****Output:**** 0

****Explanation:****

* The subarray `[-2, -2]` of size `k = 2` already contains all equal elements, so no operations are needed. Hence, the answer is 0.

****Constraints:****

* `2 <= nums.length <= 105` * `-106 <= nums[i] <= 106` * `2 <= k <= nums.length`

Code Snippets

C++:

```
class Solution {
public:
    long long minOperations(vector<int>& nums, int k) {

    }
};
```

Java:

```
class Solution {
    public long minOperations(int[] nums, int k) {

    }
}
```

Python3:

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