

# 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:
```