

Problem 3375: Minimum Operations to Make Array Values Equal to K

Problem Information

Difficulty: Easy

Acceptance Rate: 73.31%

Paid Only: No

Tags: Array, Hash Table

Problem Description

You are given an integer array `nums` and an integer `k`.

An integer `h` is called **valid** if all values in the array that are **strictly greater** than `h` are `_identical_`.

For example, if `nums = [10, 8, 10, 8]`, a **valid** integer is `h = 9` because all `nums[i] > 9` are equal to 10, but 5 is not a **valid** integer.

You are allowed to perform the following operation on `nums`:

* Select an integer `h` that is `_valid_` for the **current** values in `nums`. * For each index `i` where `nums[i] > h`, set `nums[i]` to `h`.

Return the **minimum** number of operations required to make every element in `nums` **equal** to `k`. If it is impossible to make all elements equal to `k`, return -1.

Example 1:

Input: `nums = [5,2,5,4,5]`, `k = 2`

Output: 2

Explanation:

The operations can be performed in order using valid integers 4 and then 2.

****Example 2:****

****Input:**** nums = [2,1,2], k = 2

****Output:**** -1

****Explanation:****

It is impossible to make all the values equal to 2.

****Example 3:****

****Input:**** nums = [9,7,5,3], k = 1

****Output:**** 4

****Explanation:****

The operations can be performed using valid integers in the order 7, 5, 3, and 1.

****Constraints:****

$1 \leq \text{nums.length} \leq 100$ $1 \leq \text{nums}[i] \leq 100$ $1 \leq k \leq 100$

Code Snippets

C++:

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

    }
};
```

Java:

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

Python3:

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