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1658. Minimum Operations to Reduce X to Zero

Medium 2304 41 Add to List Share

You are given an integer array `nums` and an integer `x`. In one operation, you can either remove the leftmost or the rightmost element from the array `nums` and subtract its value from `x`. Note that this **modifies** the array for future operations.

Return *the **minimum number** of operations to reduce* `x` *to **exactly*** `0` *if it is possible, otherwise, return* `-1`.

Example 1:

```
Input: nums = [1,1,4,2,3], x = 5
Output: 2
Explanation: The optimal solution is to remove the last two elements to reduce x to zero.
```

Example 2:

```
Input: nums = [5,6,7,8,9], x = 4
Output: -1
```

Example 3:

```
Input: nums = [3,2,20,1,1,3], x = 10
Output: 5
Explanation: The optimal solution is to remove the last three elements and the first two
elements (5 operations in total) to reduce x to zero.
```

Constraints:

- `1 <= nums.length <= 10^5`
- `1 <= nums[i] <= 10^4`
- `1 <= x <= 10^9`

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Java | Autocomplete

```java
class Solution {

    public int minOperations(int[] nums, int x) {

        int sum = 0;
        for (int num: nums) sum += num;

        int maxLength = -1, currSum = 0;

        for (int l=0, r=0; r<nums.length; r++) {

            currSum += nums[r];

            while (l <= r && currSum > sum - x)
                currSum -= nums[l++];

            if (currSum == sum - x)
                maxLength = Math.max(maxLength, r-l+1);

        }

        return maxLength == -1 ? -1 : nums.length - maxLength;
    }
}
```

Your previous code was restored from your local storage. Reset to default