3113. Find the Number of Subarrays Where Boundary Elements Are Maximum

Description

You are given an array of **positive** integers `nums`.

Return the number of subarrays of `nums`, where the **first** and the **last** elements of the subarray are *equal* to the **largest** element in the subarray.

Example 1:

Input: nums = [1,4,3,3,2]

Output: 6

Explanation:

There are 6 subarrays which have the first and the last elements equal to the largest element of the subarray:

- subarray `[1,4,3,3,2]`, with its largest element 1. The first element is 1 and the last element is also 1.
- subarray `[1,4,3,3,2]`, with its largest element 4. The first element is 4 and the last element is also 4.
- subarray `[1,4,3,3,2]`, with its largest element 3. The first element is 3 and the last element is also 3.
- subarray `[1,4,3,3,2]`, with its largest element 3. The first element is 3 and the last element is also 3.
- subarray `[1,4,3,3,2]`, with its largest element 2. The first element is 2 and the last element is also 2.
- subarray `[1,4,3,3,2]`, with its largest element 3. The first element is 3 and the last element is also 3.

Hence, we return 6.

Example 2:

Input: nums = [3,3,3]

Output: 6

Explanation:

There are 6 subarrays which have the first and the last elements equal to the largest element of the subarray:

- subarray `[3,3,3]`, with its largest element 3. The first element is 3 and the last element is also 3.
- subarray `[3,3,3]`, with its largest element 3. The first element is 3 and the last element is also 3.
- subarray `[3,3,3]`, with its largest element 3. The first element is 3 and the last element is also 3.
- subarray `[3,3,3]`, with its largest element 3. The first element is 3 and the last element is also 3.
- subarray `[3,3,3]`, with its largest element 3. The first element is 3 and the last element is also 3.
- subarray `[3,3,3]`, with its largest element 3. The first element is 3 and the last element is also 3.

Hence, we return 6.

Example 3:

Input: nums = [1]

Output: 1

Explanation:

There is a single subarray of `nums` which is `[1]`, with its largest element 1. The first element is 1 and the last element is also 1.

Hence, we return 1.

Constraints:

- $1 \leq nums.length \leq 10^5$
- $1 \leq nums[i] \leq 10^9$