Given a non-empty array of non-negative integers nums, the **degree** of this array is defined as the maximum frequency of any one of its elements.

Your task is to find the smallest possible length of a (contiguous) subarray of nums, that has the same degree as nums.

**Example 1:**

**Input:** [1, 2, 2, 3, 1]

**Output:** 2

**Explanation:**

The input array has a degree of 2 because both elements 1 and 2 appear twice.

Of the subarrays that have the same degree:

[1, 2, 2, 3, 1], [1, 2, 2, 3], [2, 2, 3, 1], [1, 2, 2], [2, 2, 3], [2, 2]

The shortest length is 2. So return 2.

**Example 2:**

**Input:** [1,2,2,3,1,4,2]

**Output:** 6

**Note:**

 nums.length will be between 1 and 50,000.

 nums[i] will be an integer between 0 and 49,999.