K Divisible Elements Subarrays

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Given an integer array nums and two integers k and p, return the number of distinct subarrays which have at most k elements divisible by p.

Two arrays nums1 and nums2 are said to be distinct if:

They are of different lengths, or

There exists at least one index i where nums1[i] != nums2[i].

A subarray is defined as a non-empty contiguous sequence of elements in an array.

Example 1:

Input: nums = [2,3,3,2,2], k = 2, p = 2

Output: 11

Explanation:

The elements at indices 0, 3, and 4 are divisible by p = 2.

The 11 distinct subarrays which have at most k = 2 elements divisible by 2 are:

[2], [2,3], [2,3,3], [2,3,3,2], [3], [3,3], [3,3,2], [3,3,2,2], [3,2], [3,2,2], and [2,2].

Note that the subarrays [2] and [3] occur more than once in nums, but they should each be counted only once.

The subarray [2,3,3,2,2] should not be counted because it has 3 elements that are divisible by 2.

Example 2:

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

Output: 10

Explanation:

All element of nums are divisible by p = 1.

Also, every subarray of nums will have at most 4 elements that are divisible by 1.

Since all subarrays are distinct, the total number of subarrays satisfying all the constraints is 10.

Constraints:

1 <= nums.length <= 200

1 <= nums[i], p <= 200

1 <= k <= nums.length