

K-Subarrays

Skills: Problem Solving (Intermediate) ⓘ

🕒 Recommended Time: 20 mins 🏆 Points: 75 ✅ 12 test cases (3 samples)

Coding 📁

MEDIUM

Math

Dynamic Programming

Algorithms

Problem Solving

A *k*-subarray of an array is:

- a subarray (contiguous elements)
- the sum of the elements is evenly divisible by *k* (sum modulo *k* = 0).

Given an array of integers, determine the number of *k*-subarrays it contains.

Example

k = 5

nums = [5, 10, 11, 9, 5]

The 10 *k*-subarrays are {5}, {5, 10}, {5, 10, 11, 9}, {5, 10, 11, 9, 5}, {10}, {10, 11, 9}, {10, 11, 9, 5}, {11, 9}, {11, 9, 5}, {5}.

Function Description

Complete the function *kSub* in the editor below. The function must return a long integer that represents the number of *k*-subarrays in the array.

kSub has the following parameter(s):

int k: the divisor of a *k*-subarray

int nums[n]: an array of integers

Return

long int: the number of *k*-subarrays in *nums*

Constraints

- $1 \leq n \leq 3 \times 10^5$
- $1 \leq k \leq 100$
- $1 \leq \text{nums}[i] \leq 10^4$

👁 View

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📊 Insights

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