2302. Count Subarrays With Score Less Than K

Solved

Hard Topics Companies Hint

The **score** of an array is defined as the **product** of its sum and its length.

- For example, the score of `[1, 2, 3, 4, 5]` is `(1 + 2 + 3 + 4 + 5) * 5 = 75`.

Given a positive integer array `nums` and an integer `k`, return *the **number of non-empty subarrays** of* `nums` *whose score is **strictly less** than* `k`.

A **subarray** is a contiguous sequence of elements within an array.

Example 1:

> **Input:** nums = [2,1,4,3,5], k = 10
> **Output:** 6
> **Explanation:**
> The 6 subarrays having scores less than 10 are:
> - [2] with score 2 * 1 = 2.
> - [1] with score 1 * 1 = 1.
> - [4] with score 4 * 1 = 4.
> - [3] with score 3 * 1 = 3.
> - [5] with score 5 * 1 = 5.
> - [2,1] with score (2 + 1) * 2 = 6.
> Note that subarrays such as [1,4] and [4,3,5] are not considered because their scores are 10 and 36 respectively, while we need scores strictly less than 10.

Example 2:

> **Input:** nums = [1,1,1], k = 5
> **Output:** 5
> **Explanation:**
> Every subarray except [1,1,1] has a score less than 5.
> [1,1,1] has a score (1 + 1 + 1) * 3 = 9, which is greater than 5.
> Thus, there are 5 subarrays having scores less than 5.

Constraints:

- $1 <= nums.length <= 10^5$
- $1 <= nums[i] <= 10^5$
- $1 <= k <= 10^{15}$

Seen this question in a real interview before? 1/5

Yes No

Accepted **121.4K** Submissions **194.4K** Acceptance Rate **62.4%**

Topics

Companies

Hint 1

Hint 2

Hint 3

Similar Questions

Discussion (237)