

Problem 2470: Number of Subarrays With LCM Equal to K

Problem Information

Difficulty: Medium

Acceptance Rate: 42.25%

Paid Only: No

Tags: Array, Math, Number Theory

Problem Description

Given an integer array `nums` and an integer `k`, return the number of subarrays of `nums` where the least common multiple of the subarray's elements is `k`.

A subarray is a contiguous non-empty sequence of elements within an array.

The least common multiple of an array is the smallest positive integer that is divisible by all the array elements.

Example 1:

Input: `nums = [3,6,2,7,1], k = 6` **Output:** 4 **Explanation:** The subarrays of `nums` where 6 is the least common multiple of all the subarray's elements are: - `[3,6]`, `[6,2]`, `[2,7,1]` - `[3,6,2]`, `[6,2,7]` - `[3,6,2,7]` - `[3,6,2,7,1]`

Example 2:

Input: `nums = [3], k = 2` **Output:** 0 **Explanation:** There are no subarrays of `nums` where 2 is the least common multiple of all the subarray's elements.

Constraints:

`1 <= nums.length <= 1000`, `1 <= nums[i], k <= 1000`

Code Snippets

C++:

```
class Solution {  
public:  
    int subarrayLCM(vector<int>& nums, int k) {  
  
    }  
};
```

Java:

```
class Solution {  
    public int subarrayLCM(int[] nums, int k) {  
  
    }  
}
```

Python3:

```
class Solution:  
    def subarrayLCM(self, nums: List[int], k: int) -> int:
```