1819. Number of Different Subsequences GCDs

My Submissions (/contest/weekly-contest-235/problems/number-of-different-subsequences-gcds/submissions/)

Back to Contest (/contest/weekly-contest-235/)

User Accepted:	152
User Tried:	1516
Total Accepted:	182
Total Submissions:	3941
Difficulty:	Hard

You are given an array `nums` that consists of positive integers.

The **GCD** of a sequence of numbers is defined as the greatest integer that divides **all** the numbers in the sequence evenly.

- For example, the GCD of the sequence `[4,6,16]` is `2`.

A **subsequence** of an array is a sequence that can be formed by removing some elements (possibly none) of the array.

- For example, `[2,5,10]` is a subsequence of `[1,2,1,2,4,1,5,10]`.

Return *the **number** of **different** GCDs among all **non-empty** subsequences of* `nums`.

Example 1:

Subsequence	GCD
[6]	6
[10]	10
[3]	3
[6,10]	2
[6,3]	3
[10,3]	1
[6,10,3]	1

```
Input: nums = [6,10,3]
Output: 5
Explanation: The figure shows all the non-empty subsequences and their GCDs.
The different GCDs are 6, 10, 3, 2, and 1.
```

Example 2:

```
Input: nums = [5,15,40,5,6]
Output: 7
```

Constraints:

- `1 <= nums.length <= 10^5`
- `1 <= nums[i] <= 2 * 10^5`

Discuss (https://leetcode.com/problems/number-of-different-subsequences-gcds/discuss)

Java

```
class Solution {
    public int countDifferentSubsequenceGCDs(int[] nums) {

    }
}
```