Problem 3618: Split Array by Prime Indices

Problem Information

Difficulty: Medium
Acceptance Rate: 49.16%
Paid Only: No
Tags: Array, Math, Number Theory

Problem Description

You are given an integer array `nums`.

Split `nums` into two arrays `A` and `B` using the following rule:

* Elements at **prime** indices in `nums` must go into array `A`. * All other elements must go into array `B`.

Return the **absolute** difference between the sums of the two arrays: `|sum(A) - sum(B)|`.

Note: An empty array has a sum of 0.

Example 1:

Input: nums = [2,3,4]

Output: 1

Explanation:

* The only prime index in the array is 2, so `nums[2] = 4` is placed in array `A`. * The remaining elements, `nums[0] = 2` and `nums[1] = 3` are placed in array `B`. * `sum(A) = 4`, `sum(B) = 2 + 3 = 5`. * The absolute difference is `|4 - 5| = 1`.

Example 2:

Input: nums = [-1,5,7,0]

Output: 3

Explanation:

* The prime indices in the array are 2 and 3, so `nums[2] = 7` and `nums[3] = 0` are placed in array `A`. * The remaining elements, `nums[0] = -1` and `nums[1] = 5` are placed in array `B`. * `sum(A) = 7 + 0 = 7`, `sum(B) = -1 + 5 = 4`. * The absolute difference is `|7 - 4| = 3`.

Constraints:

* `1 <= nums.length <= 105` * `-109 <= nums[i] <= 109`

Code Snippets

C++:

```cpp
class Solution {
public:
long long splitArray(vector<int>& nums) {


}
};
```

Java:

```java
class Solution {
public long splitArray(int[] nums) {


}
}
```

Python3:

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