

Problem 1590: Make Sum Divisible by P

Problem Information

Difficulty: Medium

Acceptance Rate: 39.41%

Paid Only: No

Tags: Array, Hash Table, Prefix Sum

Problem Description

Given an array of positive integers `nums`, remove the **smallest** subarray (possibly **empty**) such that the **sum** of the remaining elements is divisible by `p`. It is **not** allowed to remove the whole array.

Return _the length of the smallest subarray that you need to remove, or_-1` _if it 's impossible_.

A **subarray** is defined as a contiguous block of elements in the array.

Example 1:

Input: nums = [3,1,4,2], p = 6 **Output:** 1 **Explanation:** The sum of the elements in nums is 10, which is not divisible by 6. We can remove the subarray [4], and the sum of the remaining elements is 6, which is divisible by 6.

Example 2:

Input: nums = [6,3,5,2], p = 9 **Output:** 2 **Explanation:** We cannot remove a single element to get a sum divisible by 9. The best way is to remove the subarray [5,2], leaving us with [6,3] with sum 9.

Example 3:

Input: nums = [1,2,3], p = 3 **Output:** 0 **Explanation:** Here the sum is 6. which is already divisible by 3. Thus we do not need to remove anything.

****Constraints:****

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

Code Snippets

C++:

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

Java:

```
class Solution {  
public int minSubarray(int[] nums, int p) {  
  
}  
}
```

Python3:

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