

6321. Smallest Missing Non-negative Integer After Operations

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You are given a **0-indexed** integer array `nums` and an integer `value`.

In one operation, you can add or subtract `value` from any element of `nums`.

- For example, if `nums = [1,2,3]` and `value = 2`, you can choose to subtract `value` from `nums[0]` to make `nums = [-1,2,3]`.

The MEX (minimum excluded) of an array is the smallest missing **non-negative** integer in it.

- For example, the MEX of `[-1,2,3]` is `0` while the MEX of `[1,0,3]` is `2`.

Return the maximum MEX of `nums` after applying the mentioned operation **any number of times**.

User Accepted:	77
User Tried:	103
Total Accepted:	77
Total Submissions:	148
Difficulty:	Medium

Example 1:

**Input:** `nums = [1,-10,7,13,6,8]`, `value = 5`  
**Output:** `4`  
**Explanation:** One can achieve this result by applying the following operations:  
- Add `value` to `nums[1]` twice to make `nums = [1,0,7,13,6,8]`  
- Subtract `value` from `nums[2]` once to make `nums = [1,0,2,13,6,8]`  
- Subtract `value` from `nums[3]` twice to make `nums = [1,0,2,3,6,8]`  
The MEX of `nums` is `4`. It can be shown that `4` is the maximum MEX we can achieve.

Example 2:

**Input:** `nums = [1,-10,7,13,6,8]`, `value = 7`  
**Output:** `2`  
**Explanation:** One can achieve this result by applying the following operation:  
- subtract `value` from `nums[2]` once to make `nums = [1,-10,0,13,6,8]`  
The MEX of `nums` is `2`. It can be shown that `2` is the maximum MEX we can achieve.

Constraints:

- $1 \leq \text{nums.length}$ ,  $\text{value} \leq 10^5$
- $-10^9 \leq \text{nums}[i] \leq 10^9$

JavaScript

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⚙️

```
1 const findSmallestInteger = (a, v) => {
2   let mods = Array(v).fill(0), cur = 0;
3   for (const x of a) mods[(x % v + v) % v]++;
4   while (mods[cur % v] > 0) {
5     mods[cur % v]--;
6     cur++;
7   }
8   return cur;
9 };
```

☐ Custom Testcase

Use Example Testcases

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Submission Result: **Accepted** (/submissions/detail/917888724/) ⓘ

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