Problem - D - Codeforces 15/02/24, 7:18 PM





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D. Divisible Pairs

time limit per test: 2 seconds memory limit per test: 256 megabytes input: standard input output: standard output

Polycarp has two favorite integers x and y (they can be equal), and he has found an array aof length n.

Polycarp considers a pair of indices $\langle i, j \rangle$ $(1 \le i < j \le n)$ beautiful if:

- $a_i + a_i$ is divisible by x;
- $a_i a_j$ is divisible by y.

For example, if x = 5, y = 2, n = 6, a = [1, 2, 7, 4, 9, 6], then the only beautiful pairs are:

- (1,5): $a_1 + a_5 = 1 + 9 = 10$ (10 is divisible by 5) and $a_1 a_5 = 1 9 = -8$ (-8 is divisible by 2):
- (4,6): $a_4 + a_6 = 4 + 6 = 10$ (10 is divisible by 5) and $a_4 a_6 = 4 6 = -2$ (-2 is divisible by 2).

Find the number of *beautiful* pairs in the array a.

Input

The first line of the input contains a single integer t ($1 \le t \le 10^4$) — the number of test cases. Then the descriptions of the test cases follow.

The first line of each test case contains three integers n, x, and y ($2 \le n \le 2 \cdot 10^5$), $1 \le x, y \le 10^9$) — the size of the array and Polycarp's favorite integers.

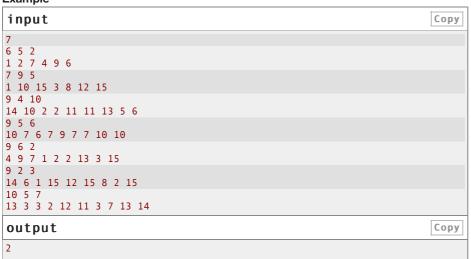
The second line of each test case contains n integers a_1, a_2, \ldots, a_n $(1 \le a_i \le 10^9)$ — the elements of the array.

It is guaranteed that the sum of n over all test cases does not exceed $2 \cdot 10^5$.

Output

For each test case, output a single integer — the number of beautiful pairs in the array a.

Example



Codeforces Round 925 (Div. 3)

Finished

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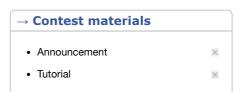
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