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time limit per test: 3 seconds
memory limit per test: 256 megabytes

You are given an array of integers $a_1, a_2, \ldots, a_n$ and two integers s and x. Count the number of subsegments of the array whose sum of elements equals s and whose maximum value equals x.

More formally, count the number of pairs $1 \le l \le r \le n$ such that:

- $a_l + a_{l+1} + \ldots + a_r = s$.
- $\max(a_l, a_{l+1}, \ldots, a_r) = x$.

Input

Each test consists of multiple test cases. The first line contains a single integer t ($1 \le t \le 10^4$) — the number of test cases. The description of the test cases follows.

The first line of each test case contains three integers n, s, and x ($1 \le n \le 2 \cdot 10^5$, $-2 \cdot 10^{14} \le s \le 2 \cdot 10^{14}$, $-10^9 \le x \le 10^9$).

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

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

Output

For each test case, output the number of subsegments of the array whose sum of elements equals s and whose maximum value equals x.

Example

input

```
9
1 0 0
0
1 -2 -1
-2
3 -1 -1
-1 1 -1
6 -3 -2
-1 -1 -1 -2 -1 -1
8 3 2
2 2 -1 -2 3 -1 2 2
9 6 3
1 2 3 1 2 3 1 2 3
13 7 3
0 -1 3 3 3 -2 1 2 2 3 -1 0 3
2 -2 -1
-2 -1
2 -2 -1
-1 -2
```

output

```
1
0
2
0
2
7
8
0
0
```

Note

In the first test case, the suitable subsegment is $l = 1, r = 1$.

In the third test case, the suitable subsegments are $l = 1, r = 1$ and $l = 3, r = 3$.

In the fifth test case, the suitable subsegments are $l = 1, r = 3$ and $l = 6, r = 8$.

In the sixth test case, the suitable subsegments are those for which $r = l + 2$.

In the seventh test case, the following subsegments are suitable:

- $l = 1, r = 7$.
- $l = 2, r = 7$.
- $l = 3, r = 6$.
- $l = 4, r = 8$.
- $l = 7, r = 11$.
- $l = 7, r = 12$.
- $l = 8, r = 10$.
- $l = 9, r = 13$.