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PROBLEMS SUBMIT CODE MY SUBMISSIONS STATUS HACKS STANDINGS CUSTOM INVOCATION

B. Large Array and Segments

time limit per test: 2 seconds memory limit per test: 512 megabytes

There is an array a consisting of n **positive** integers, and a positive integer k. An array b is created from array a according to the following rules:

- b contains $n \cdot k$ numbers;
- the first n numbers of array b are the same as the numbers of array a, that is, $b_i=a_i$ for $i\leq n$;
- for any i > n, it holds that $b_i = b_{i-n}$.

For example, if a = [2, 3, 1, 4] and k = 3, then b = [2, 3, 1, 4, 2, 3, 1, 4, 2, 3, 1, 4].

Given a number x, it is required to count the number of such positions l $(1 \le l \le n \cdot k)$, for which there exists a position $r \ge l$, such that the sum of the elements of array b on the segment [l,r] is **at least** x (in other words, $b_l + b_{l+1} + \cdots + b_r \ge x$).

Input

Each test consists of several test cases. The first line contains one 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, k, x ($1 \le n, k \le 10^5$; $1 \le x \le 10^{18}$).

The second line of each test case contains n integers a_i ($1 \le a_i \le 10^8$).

Additional constraints on the input:

- the sum of n across all test cases does not exceed $2\cdot 10^5$;
- the sum of k across all test cases does not exceed $2 \cdot 10^5$.

Output

For each test case, output one integer — the number of suitable positions l in the array b.

Example

input	Сору
7	
5 3 10	
3 4 2 1 5	
15 97623 1300111	
105 95 108 111 118 101 95 118 97 108 111 114 97 110 116	
1 100000 1234567891011	
1	
1 1 1	
1	
1 1 1	
2	
2 1 2	
1 1	
2 1 5	
2 1	
output	Сору
12	
1452188	
0	
1	
1	
1	

Educational Codeforces Round 177 (Rated for Div. 2)

Finished

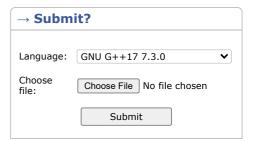
Practice



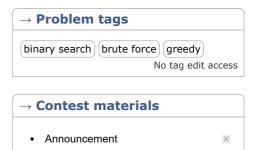
→ Virtual participation

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Start virtual contest



→ Last submissions		
Submission	Time	Verdict
313820692	Apr/03/2025 19:33	Wrong answer on test 1
313812093	Apr/03/2025 19:13	Wrong answer on test 1



Note

In the first test case, the array b looks like this:

[3, 4, 2, 1, 5, 3, 4, 2, 1, 5, 3, 4, 2, 1, 5]

There are 12 positions \emph{l} for which there exists a suitable position \emph{r} . Here are some (not all) of them:

- l=1, for which there is a position r=6, the sum over the segment [1,6] equals 18;
- l=2, for which there is a position r=5, the sum over the segment [2,5] equals 12;
- l=6, for which there is a position r=9, the sum over the segment [6,9] equals 10.

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