

A. Antony's Training

time limit per test: 2 s.
 memory limit per test: 256 MB

Antony is a soccer player who is never picked for the first team by his coach. The coach picks first team players based off training performances. On the i -th day of training, the coach rates Antony's training performance as t_i ($|t_i| \leq 10^9$).

Now, Antony has trained for n days and he believes the coach will pick him for the first team if he is in good *form*. Antony calculates his *form* as the number of ranges $[l, r]$ ($l \leq r$) such that $t_l + t_{l+1} + \dots + t_{r-1} + t_r < s$, where s is his favorite number. Help Antony calculate his *form*.

Input

The first line contains two integers n and s ($1 \leq n \leq 200\,000$, $|s| \leq 2 \cdot 10^{14}$) — the number of days Antony trained and his favorite number.

The second line contains a sequence of integers t_1, t_2, \dots, t_n ($|t_i| \leq 10^9$) — the ratings Antony got from his coach.

Output

Print the value of Antony's *form*.

Examples

input	Copy
5 4 5 -1 3 4 -1	
output	Copy
5	

input	Copy
3 0 -1 2 -3	
output	Copy
4	

input	Copy
4 -1 -2 1 -2 3	
output	Copy
3	

Note

In the first sample test case, the following $[l, r]$ ranges have sum less than 4:

- $[2, 2]$, sum of training ratings is -1
- $[2, 3]$, sum of training ratings is 2
- $[3, 3]$, sum of training ratings is 3
- $[4, 5]$, sum of training ratings is 3
- $[5, 5]$, sum of training ratings is -1

UIUC CS 491 Spring 2025

Private

Participant



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- Convex Hull - Preclass
- Number Theory I - Homework
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- Number Theory II - Homework
- Combinatorics - Homework
- Geometry - Preclass
- Geometry - Homework
- Convex Hull - Homework (Extra Credit)
- Rabin Karp - Homework
- Number Theory II - Preclass
- Combinatorics - Preclass
- DP TSP - Homework
- KMP - Homework
- DP Tree - Homework
- Number Theory I - Preclass
- KMP - Preclass
- DP Palindromes - Homework
- Rabin Karp - Preclass
- DP Edit Distance - Homework
- DP Knapsack - Homework
- DP TSP - Preclass
- DP Longest Increasing Subsequence - Homework
- DP Intro - Homework
- DP Tree - Preclass
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- Fenwick Tree - Homework