Problem for Cengiz

Time Limit: 1.0s **Memory Limit:** 256M

Fahri has an interesting problem for Cengiz. There is an array of N elements $a_1, a_2, \ldots, a_N$. Count the number of intervals $[l, r]$ such that

- $1 \leq l \leq r \leq N$,
- $a_l + a_{l+1} + \ldots + a_{r-1} + a_r < K$.

Could you help Cengiz to solve this problem?

Input

The first line contains integer N.

The next line contains N integers $a_1, a_2, \ldots a_N$ separated with single spaces.

The following line contains integer K.

Output

Print the number of intervals.

Constraints

- $1 \leq N \leq 2 \cdot 10^5$
- $-10^9 \leq a_i \leq 10^9$
- $-10^9 \leq K \leq 10^9$

Samples

Input(stdin)

```
4
1 1 1 2
3
```

Output(stdout)

```
6
```

Notes

While solving the sample Cengiz counts six intervals:

$[1,1], [2,2], [3,3], [4,4], [1,2], [2,3]$.