Problem D
Inversion
Time limit: 3 seconds
Memory limit: 256 megabytes

Problem Description

Given a positive integer n and a sequence $s_1, \ldots, s_n$ where s_i is an integer for each $i \in \{1, \ldots, n\}$. The inversion number of the sequence $s_1, \ldots, s_n$ is the number of pairs (i, j) such that $s_i > s_j$ and $i < j$. For example, the inversion number of the sequence $1, 2, 5, 3, 4$ is 2 since the only two pairs $(3, 4)$ and $(3, 5)$ satisfy the criteria. Write a program to compute the inversion number.

Input Format

The input contains at most 25 test cases. Each case consists of two lines. The first line contains only an integer n where $n \leq 100000$. The second line consists of n 32-bit signed integers $s_1, \ldots, s_n$ separated by blanks. You should compute the inversion numober of $s_1, \ldots, s_n$.

Output Format

For each case, output the inversion number in one line.

Sample Input

```
2
5
1 2 5 3 4
5
1 2 5 4 3
```

Sample Output

```
2
3
```