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. 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
```