Count the number of inversions in an array

Cost: 15 | Solved: 74

Memory limit: 256 MBs

Time limit: 1 s

Input: input.txt

Output: output.txt

Task:

You are given an array of *n* integers.

You have to find the number of inversions in the array.

An inversion is a pair of numbers (i, j) for which both conditions (i < j) and (A[i]>A[j]) are true.

Input:

The first line contains a natural number *n* ($1 \le n \le 10^5$) – the quantity of elements of the array.

The second line contains *n* numbers – the elements of the array.

Output:

The number of inversions in the array.

Example:

Input	Output
5 1 9 6 4 5	5

The inversions in the example are (9, 6), (9, 4), (9, 5), (6, 4), (6, 5).