

Problem B. Ambar and Inversions

Input file: standard input
Output file: standard output
Time limit: 1 second
Memory limit: 512 megabytes

Recently in algorithms class Ambar learned about algorithm based on Merge Sort to find number of inversions in an array.

Now he is interested in finding the number of 3–inversions; a 3–inversion is a triple of indices (i, j, k) such that $i < j < k$ and $A_i > A_j > A_k$.

Input

The first line contains an integer N ($1 \leq N \leq 10^5$), the length of the array. The next line contains N space separated integers, the elements A_i of the array ($1 \leq A_i \leq 10^5$).

Output

A single integer, the number of 3–inversions in the array.

Examples

standard input	standard output
3 1 2 3	0
4 3 3 2 1	2