D. Pashmak and Parmida's problem

time limit per test: 3 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

Parmida is a clever girl and she wants to participate in Olympiads this year. Of course she wants her partner to be clever too (although he's not)! Parmida has prepared the following test problem for Pashmak.

There is a sequence a that consists of n integers $a_1, a_2, ..., a_n$. Let's denote $f(l, r, x)$ the number of indices k such that: $l \le k \le r$ and $a_k = x$. His task is to calculate the number of pairs of indicies i, j $(1 \le i < j \le n)$ such that $f(1, i, a_i) > f(j, n, a_j)$.

Help Pashmak with the test.

Input

The first line of the input contains an integer n $(1 \le n \le 10^6)$. The second line contains n space-separated integers $a_1, a_2, ..., a_n$ $(1 \le a_i \le 10^9)$.

Output

Print a single integer — the answer to the problem.

Examples

input
7 1 2 1 1 2 2 1
output
8

input
3 1 1 1
output
1

input
5 1 2 3 4 5
output
0

data structures | divide and conquer | sortings

No tag edit access

→ Contest materials

- Announcement
- Tutorial