

Mega Inversions (megainversions)

Given a sequence a_1, a_2, \dots, a_n , a megainversion is a triple of indices (i, j, k) such that $i < j < k$ and $a_i > a_j > a_k$.

Task

Find the number of megainversions in a given sequence.

Input specification

The first line of the input is the length of the sequence, $1 \leq n \leq 10^5$.

The next line contains the integer sequence a_1, a_2, \dots, a_n . You can assume that all $a_i \in [1, n]$.

Output specification

Output a single line with a single integer: the number of megainversions in the given sequence.

Examples

input	output
3 1 2 3	0

input	output
4 3 3 2 1	2