A. Inversions

time limit per test: 1 second

memory limit per test: 1024 megabytes

input: standard input

output: standard output

Given a permutation p_i of n elements, find for each i the number of j such that $j < i$ and $p_j > p_i$.

Input

The first line contains the number n ($1 \le n \le 10^5$), the second line contains n numbers p_i. It is guaranteed that p_i form a permutation of numbers from 1 to n.

Output

Print n numbers, the i-th number is equal to the number of j such that $j < i$ and $p_j > p_i$.

Example

input	Copy
5 4 1 3 5 2	
output	**Copy**
0 1 1 0 3	