

I. Inversion Counting

Problem ID: inversion

Given a permutation a from 1 to n , an inversion is defined as a pair of indices (i, j) such that $1 \leq i < j \leq n$ and $a_i > a_j$.

Counting the total number of inversions is an extremely classic problem. In this problem, we consider a variation.

For each k from 1 to $n - 1$, find the number of pairs (i, j) such that $1 \leq i < j \leq n$, $j - i = k$, and $a_i > a_j$.

Input

The first line contains a single integer n , representing the length of the sequence.

The second line contains n integers $a_1, a_2, \dots, a_n$, representing the permutation.

Constraints

- $2 \leq n \leq 2.5 \times 10^5$
- $a_1, a_2, \dots, a_n$ is a permutation from 1 to n .

Output

Output $n - 1$ space-separated integers on a single line. The k -th integer should represent the number of pairs (i, j) satisfying the conditions for the given value of k .

Sample Input 1	Sample Output 1
5 3 1 4 5 2	2 1 0 1
Sample Input 2	Sample Output 2
6 6 5 4 3 2 1	5 4 3 2 1

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