

Problem L

Counting Trees

Time Limit: 1 seconds

Memory Limit: 512 megabytes

There are trees on a road. Each tree has a distinct height. Bill wants to count the number of unordered pairs of tree in on the road such that they are taller than every tree in between them.

More formally, let d be a sequence of the heights of the trees in order from left to right. Bill wants to count the number of pairs of indices i and j with $i < j$ such that for all k with $i < k < j$, $d_i > d_k$, and $d_j > d_k$. Note that if $j = i + 1$ (when there are no k 's between i and j), it is true.

Input

The first line contains an integer n , which is the number of trees on the road.

Each of the next n line contains a single integer d_i . These are the heights of the trees, in the order of where they are on the road. The sequence is guaranteed to be permutation of the integers 1 through n .

Output

The output contains a single integer, which is the number of pairs of trees which are taller than every tree in between them.

Sample Input

Sample Output

3 2 1 3	3
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