(Adv.) Competitive Programming

Submit until 14.06.2019 13:30, via the judge interface

Problem: herm (1 second timelimit)

Herm and his friends like permutations. For years, they admired their beauty, took them to the park, and fed them until they where long and lexicographically large. But lately the focus of the group has shifted. It's all about triplets now. After a long discussion about prime triplets (three primes where the smallest and largest differ by 6), Herm yearns for the factorial number system again. He vividly remembers the good old times. His permutation, River, has always been the strongest one.

Herm decides to introduce a new triplet-based beauty-standard, which should renew his friends' interest in permutations. The beauty of a permutation is based on how cute it looks if you slide a segment tree over its curly fur. In other words, the beauty of a permutation p is the number of triplets $i < j < k$ such that $p_i > p_j > p_k$. As you can see, lexicographically large permutations like River benefit from this beauty-standard. Still, Herm wants to make sure that River looks cute with a segment tree on her head.

Input The input is a detailed description of Herms permutation River. The first line contains her size $n \leq 300000$. The second line contains her measures p_i (shoulders, chest, waist ...) where $0 \leq i, p_i < n$.

Output Print Rivers beauty.

Sample input	Sample output
3 2 1 0	1
4 3 1 2 0	2
10 8 4 2 0 3 7 5 9 1 6	15