

THE ICPC 2019

VIETNAM SOUTHERN PROGRAMMING CONTEST Host: University of Science, VNU-HCM



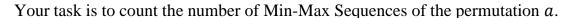
October 20, 2019

Problem K Magic Lamp 2 Time Limit: 1 second

You are so smart to solve the first quest of the Genie. Are you ready for the second quest? Let's go.

Given a sequence a which is a permutation of n numbers 1, 2, ..., n.

A subsequence [l,r] $(1 \le l \le r \le n)$ of the permutation a is a sequence whose elements are $a_l, a_{l+1}, ..., a_r$. The subsequence [l,r] is called a Min-Max Sequence if its maximum and minimum values lie on both ends of that sequence.





Input

The first line contains an integer n ($1 \le n \le 10^6$)

The second line contains n numbers a_1, a_2, \ldots, a_n .

Output

Print one single integer which is the number of Min-Max Sequences of a permutation a.

 Sample Input	Sample Output
5	10
2 5 3 1 4	

Explanation for the sample:

There are 10 Min-Max sequences which are: 2; 25; 5; 53; 531; 3; 31; 1; 14 and 4