Problem A. Ultra-QuickSort

Time limit   7000 ms
Mem limit   65536 kB

In this problem, you have to analyze a particular sorting algorithm. The algorithm processes a sequence of n distinct integers by swapping two adjacent sequence elements until the sequence is sorted in ascending order. For the input sequence

$$9\ 1\ 0\ 5\ 4\ ,$$

Ultra-QuickSort produces the output

$$0\ 1\ 4\ 5\ 9\ .$$

Your task is to determine how many swap operations Ultra-QuickSort needs to perform in order to sort a given input sequence.

Input
The input contains several test cases. Every test case begins with a line that contains a single integer n < 500,000 -- the length of the input sequence. Each of the the following n lines contains a single integer $0 \leq a[i] \leq 999,999,999$, the i-th input sequence element. Input is terminated by a sequence of length n = 0. This sequence must not be processed.

Output
For every input sequence, your program prints a single line containing an integer number op, the minimum number of swap operations necessary to sort the given input sequence.

Sample

Input	Output
5 9 1 0 5 4 3 1 2 3 0	6 0

Input	Output
5 9 1 0 5 4	6 0