**Problem 2. Sequence**

Recently, Ivancho has been studying different algorithm used for sorting arrays. Hе has already learned most of them but still can’t use them in problems and now he is a bit confused.

So here is the problem. You are given an array of integers and you are allowed to do the following operation: you take a single element from the array, delete it and add it to the end of the array. What is the minimum number of operation required to sort the array.

**Input**: On the first line of the input file **seq.in** will be written a single integer N. Follow N numbers Ai – the array.

**Output**: The output file **seq.out** must contain a single number – the minimum number of operations required to sort the array.

**Constraints:**

1 N100000

1 Ai 1000

**TIME LIMIT – 0.5 sec**

**Example:**

|  |  |
| --- | --- |
| **seq.in** | **seq.out** |
| 8  24 3 15 6 26 6 10 8 | 4 |