# Problem A. Sequence in the Pocket

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|---|---|
| Input file: | `standard input` |
| Output file: | `standard output` |
| Time limit: | 1 second |
| Memory limit: | 256 megabytes |

DreamGrid has just found an integer sequence $a_1, a_2, \ldots, a_n$ in his right pocket. As DreamGrid is bored, he decides to play with the sequence. He can perform the following operation any number of times (including zero time): select an element and move it to the beginning of the sequence.

What's the minimum number of operations needed to make the sequence non-decreasing?

## Input

There are multiple test cases. The first line of the input contains an integer $T$, indicating the number of test cases. For each test case:

The first line contains an integer $n$ ($1 \leq n \leq 10^5$), indicating the length of the sequence.

The second line contains $n$ integers $a_1, a_2, \ldots, a_n$ ($1 \leq a_i \leq 10^9$), indicating the given sequence.

It's guaranteed that the sum of $n$ of all test cases will not exceed $10^6$.

## Output

For each test case output one line containing one integer, indicating the answer.

## Example

| standard input | standard output |
|---|---|
| 2<br>4<br>1 3 2 4<br>5<br>2 3 3 5 5 | 2<br>0 |

## Note

For the first sample test case, move the 3rd element to the front (so the sequence become {2, 1, 3, 4}), then move the 2nd element to the front (so the sequence become {1, 2, 3, 4}). Now the sequence is non-decreasing.

For the second sample test case, as the sequence is already sorted, no operation is needed.