NOIP '04 P3 - Chorus Formation

Time limit: 1.0s **Memory limit:** 256M

N students stand in a row, and the music teacher asks $N-K$ students to leave so that the remaining K students form a chorus formation.

The chorus formation refers to such a formation: Suppose the K students left are numbered $1, 2, \ldots, K$ from left to right, and their heights are $T_1, T_2, \ldots, T_K$ respectively, then their heights satisfy $T_1 < \cdots < T_i > T_{i+1} > \cdots > T_K$ $(1 \leq i \leq K)$.

Your task is, given the heights of all N students, calculate the minimum number of students who need to leave, so that the remaining students can form a chorus formation.

Input Specification

The first line of the input consists of an integer N $(2 \leq N \leq 100)$ denoting the number of students. The second line consists of n integers separated by a single space denoting the height of the i-th student. The heights satisfy $130 \leq T_i \leq 230$.

Output Specification

Output the minimum number of students that should leave to form a chorus formation.

Sample Input

```
8
186 186 150 200 160 130 197 220
```

Sample Output

```
4
```

Constraints

For 50% of test cases, $n \leq 20$.

For all test cases, $n \leq 100$.