Mafia nights

- Time limit: 1 second
- Memory limit: 256 MB

nowhere country$n$Every city has its own mafia group. Also, each group with a number (which is a unique natural number between 1 and$n$is) is known. On the other hand, in a strange way in this country, all the cities are located in a line and next to each other. Mafia groups have decided to destroy each other so that they can have more power in the country. They act to destroy each other in the following way:
every night, if the number of the mafia group of the city to the right of a group is smaller than the number of that group, they bomb that city and destroy the mafia of that city. This process is repeated every night until no group can destroy the other group according to these conditions. Pay attention that a group may be destroyed and destroy another group in one night! The country's police need to know how many nights this killing operation will last, so they want you to write a program that takes the number of groups and how they are located, and says that after a few nights we will reach a state where no more operations will be carried out after that. .

Input

The input consists of two lines, in the first line the number of cities (n) comes and in the second line$n$A natural number comes that determines the order of their placement.

$$1 \leq n \leq 1\,0^5$$

Output

In the only output line, describe the number of steps necessary to reach a steady state.

Example

Sample input 1

```
10
10 9 7 8 6 5 3 4 2 1
```

Sample output 1

```
2
```

Groups will be destroyed in the following order:

$$[\,10\,,\_9\,,7\,,8\,,6\,,5\,,3\,,4\,,2\,,1\,] \rightarrow [\,10\,,\_8\,,4\,] \rightarrow [\,1\,0\,]$$

ورودی نمونه ۲

```
6
1 2 3 4 5 6
```

خروجی نمونه ۲

```
0
```