

## **Question 1**

A garden has many different plants.

Pesticides have been applied to each of the plants in varying amounts.

Each day, any plant that has more pesticide than the one to its left, although being weaker, dies.

The initial pesticide concentrations in each plant are provided to you.

Determine the number of days until no plant dies, or until no plant has a higher pesticide concentration than the plant to its left.

### **Example**

$A=[3,6,2,7,5]$  // pesticide levels

Use a 1-indexed array. On day 1, plants 2 and 4 die leaving  $A^1=[3,2,5]$ . On day 2, plant 3 in  $A^1$  dies leaving  $A^2=[3,2]$ . Because no plant has a higher pesticide concentration than the one to its left, plants stop dying after a day 2.

### **Function Description**

Complete the function `poisonousPlants` in the editor below.

`poisonousPlants` has the following parameter(s):

- `int A[n]`: the pesticide levels in each plant

Returns

- `int`: the number of days until plants no longer die from pesticide

### **Input Format**

The array's size is indicated on the first line  $N$  by an integer. The next line has numbers separated by spaces  $A[i]$

$1 \leq n \leq 10^5$

$0 \leq a[i] \leq 10^9$

Complete the function in any programming language or your choice or you may write sudo code for the same

Sample Input

7

6 5 8 4 7 10 9

Sample Output

2

### Explanation

Initially all plants are alive.

Plants = {(6,1), (5,2), (8,3), (4,4), (7,5), (10,6), (9,7)}

Plants[k] = (i,j) => j<sup>th</sup> plant has pesticide amount = i.

After the 1<sup>st</sup> day, 4 plants remain as plants 3, 5, and 6 die.

Plants = {(6,1), (5,2), (4,4), (9,7)}

After the 2<sup>nd</sup> day, 3 plants survive as plant 7 dies.

Plants = {(6,1), (5,2), (4,4)}

Plants stop dying after the 2<sup>nd</sup> day.

Complete the function in any programming language or your choice or you may write sudo code for the same