Question **1**

Correct

Marked out of 10.00

Alice is a kindergarten teacher. She wants to give some candies to the children in her class. All the children sit in a line and each of them has a rating score according to his or her performance in the class. Alice wants to give at least 1 candy to each child. If two children sit next to each other, then the one with the higher rating must get more candies. Alice wants to minimize the total number of candies she must buy.

For example, assume her students' ratings are [4, 6, 4, 5, 6, 2]. She gives the students candy in the following minimal amounts: [1, 2, 1, 2, 3, 1]. She must buy a minimum of 10 candies.

Task

You are given an integer n the number of children in the class and an array arr of integers representing the ratings of each student. Write a program to print the minimum number of candies Alice must buy.

Input Format

· The first line contains an integer, t denoting the number of test cases.

· The first line of each test case contains an integer, n denoting the size of the arr.

· The second line of each test case contains n space-separated integers describing the elements of array, where arr[i] indicates the rating of the student at position i.

Constraints

· $1<=n<=10^5$

· $1<=arr[i]<=10^5$

Output Format

Output a single line containing the minimum number of candies Alice must buy.

Sample Input 0

1

3

1 2 2

Sample Output 0

4

Explanation 0

Here 1, 2, 2 is the rating. Note that when two children have equal rating, they are allowed to have different number of candies. Hence optimal distribution will be 1, 2, 1.

Sample Input 1

2

10

2 4 2 6 1 7 8 9 2 1

8

2 4 3 5 2 6 4 5

Sample Output 1

19

12

Explanation 1

Optimal distribution for test case 1 will be 1,2,1,2,1,2,3,4,2,1.

Optimal distribution for test case 2 will be 1,2,1,2,1,2,1,2.

For example:

Input	Result
1 3 1 2 2	4

Input	Result
2 10 2 4 2 6 1 7 8 9 2 1 8 2 4 3 5 2 6 4 5	19 12

Answer: (penalty regime: 0 %)

```
test=int(input())
for i in range(test):
    n=int(input())
    arr=list(map(int,input().split()))
    out=[1]*n
    for i in range(1,n):
        if arr[i]>arr[i-1]:
            out[i]=out[i-1]+1
    for i in range(n-2,-1,-1):
        if arr[i]>arr[i+1]:
            out[i]=max(out[i],out[i+1]+1)

    print(sum(out))
```

	Input	Expected	Got	
✔	1 3 1 2 2	4	4	✔
✔	2 10 2 4 2 6 1 7 8 9 2 1 8 2 4 3 5 2 6 4 5	19 12	19 12	✔

Passed all tests! ✔