Mehak and Parade (70 Points)

Input file:	`standard input`
Output file:	`standard output`
Time limit:	3 seconds
Memory limit:	256 megabytes

Mehak and her friends went to attend the Republic Day Parade 2019. Mehak being the nice girl that she is, reached the venue early and saved seats for her friends who arrived much later. Mehak and her friends were looking forward to enjoy the parade in their moderately comfortable seats. But to their surprise, the audience were so energetic that once the parade started all of them abandoned their seats and stood up to get the best possible view of the proceedings. Mehak noticed that with everyone standing, the shorter people standing behind the taller individuals could not get a decent view to enjoy the parade.

Subtask 2 (70 Points)
Mehak was against this injustice and therefore encouraged the shorter people to fight for their rights through a paper ball resistance. Mehak devised the following guidelines for the paper ball resistance: In a row of **n** people, having **distinct** heights **H[1...n]**, if i > j and H[i] < H[j] then the person i will throw a paper ball at person j.

One basic requirement for successful execution of the paper ball resistance was of course a sufficient number of paper balls. However because of the security precautions at the parade, the only paper that Mehak had taken with her was her Aadhar Card. Since Aadhar card is only a small piece of paper, Mehak wonders if it will be enough to carry out the paper ball resistance.

Given **n** and the array **H**, your task is to find the number of paper balls that Mehak needs to make.

Hint: Think about extending the Merge-Sort Algorithm.

Input

First line contains the number of test cases **T**.
First line of each test contains **n**.
Second line of each test contains n space separated integers representing the array **H**.
$1 \leq T \leq 5$
$1 \leq n \leq 10^5$
$1 \leq H_i \leq n$

Output

Print a line for every test case containing the number of paper balls needed.

Example

standard input	standard output
2 3 2 1 3 5 3 2 1 5 4	1 4

Note

In the first sample, **1** paper ball is needed to be thrown by person 2 (height 2) at person 1 (height 1).
In the second sample, **4** paper balls are needed. 1 paper ball is to be thrown by person 2 (height 2) at person 1 (height 3). 2 paper balls are to be thrown by person 3 (height 1) at person 1 (height 3) and person 2 (height 2). 1 paper ball is to be thrown by person 5 (height 4) at person 4 (height 5).