Problem E. **Let Me Tell You a Story**

This contest is open for practice. You can try every problem as many times as you like, though we won't keep track of which problems you solve. Read the **Quick-Start Guide** to get started.

Small input 14 points	Solve E-small	
Large input 50 points	Solve E-large	

Problem

The story goes...

A long, long time ago, King Tyrone the Fair had 4 ministers. The first minister (the king's top adviser) was paid 7 gold pieces per week. The second minister was paid 4 gold pieces per week. The third and fourth ministers were each paid 6 gold pieces per week. Unfortunately, Tyrone accidentally forgot the Ministerial Compensation List in the photo copier one day, and the List ended up on the front page of the Kingdom Times newspaper. At this point, the second minister requested to speak to the king, upset that his own salary was lower than that of the lower ranked third minister.

His Fairness King Tyrone saw no other solution than to fire the third minister. After all, lowering the third minister's salary, raising the salary of the second minister, or changing job titles were all unfair solutions to the problem, in the king's opinion. And who are we to question King Tyrone? Of course, firing the third minister did not solve the problem. The second minister continued to complain because his salary was still lower than that of the fourth minister. So King Tyrone fired the fourth minister as well. At this point, neither of the two remaining ministers complained, and everyone lived happily ever after.

...wait a minute. I messed that up. I'm sorry. My memory is not what it used to be. One moment please... Right. King Tyrone the Fair. Four ministers. Paid 7, 4, 6, and 6 respectively. Ah, yes. The ending went like this...

When the second minister complained of unfairness, King Tyrone fired the first minister. Some might say this was a bit harsh, as the first minister wasn't involved in any way, but we shouldn't question King Tyrone. Obviously, the second minister still complained, so King Tyrone simply fired him. Of the remaining two ministers, each one was being paid at least as much as any minister below him, so none of them complained. And everyone lived happily ever after.

Much better... I think. Maybe? Now I'm not sure anymore. I know for certain that there were **N** ministers, and I clearly remember their salaries. I also know that every time a minister's salary was lower than the salary of a minister below him, somebody would complain, and *some minister* got fired; but that it could have been *any minister*, regardless of whether that minister had anything at all to do with the problem. Ministers continued to be fired until no one complained because all of the salaries were non-increasing. At that point, the firings stopped. But I do not remember in which order the ministers got fired.

Can you help me fix my story? Or at least please tell me how many different stories I could have told. Two stories are different if the sequences of fired ministers in them are not the same.

Input

The first line of the input gives the number of test cases, **T**. **T** test cases follow. Each one consists of two lines. The first line will contain an integer **N**, and the second line will contain **N** space-separated integers denoting the ministers' salaries, in order from the first minister to the **N**'th minister.

Output

For each test case, output one line containing "Case #x: y", where x is the case number (starting from 1) and y is the number of stories I could tell you, modulo 10007.

Limits

Each salary will be positive and at most 10000.

Small dataset

1 ≤ **T** ≤ 100.
1 ≤ **N** ≤ 100.

Large dataset

1 ≤ **T** ≤ 20.

For 80% of test cases, $1 \le N \le 2000$.
For all test cases, $1 \le N \le 8000$.

Sample

Input	Output
3	Case #1: 14
4	Case #2: 1
7 4 6 6	Case #3: 2
8	
90 80 70 60 50 50 40 30	
2	
7 8	