

Singhal and Permutations

Input file: **standard input**
Output file: **standard output**
Time limit: 1 second
Memory limit: 256 megabytes

Singhal has a array of integers $a_1, a_2, \dots, a_n$.

Definition of an awesome array —

If K is the maximum element in the array, then the elements before K in the array should be in the strictly ascending order and the elements after K in the array should be in the strictly descending order.

Examples of awesome array are — $(1, 2, 3, 1), (1, 2, 3), (3, 2, 1), (1, 2, 1), (2, 3, 2, 1)$, but not $(1, 2, 2), (2, 2, 1), (1, 2, 2, 3), (1, 3, 2, 2)$.

He wants to know that how many distinct awesome arrays he will get after reordering the sequence.

Reorder of array $(1, 3, 3, 4)$ can results $(1, 4, 3, 3), (3, 4, 3, 1), (4, 3, 1, 3)$, but not $(1, 3, 3, 3), (1, 3, 3), (1, 3, 3, 4, 4)$. You are not allowed to change the value, insert or delete.

Notice that the answer might be large, please output the desired value modulo $10^9 + 7$.

Input

The first line contains a single integer $t(1 \leq t \leq 10^5)$ — the number of test cases in the input. Then t test cases follow.

Each query contains two lines. The first line contains one integer $n(1 \leq n \leq 10^5)$: the number of integers in the sequence, and the second line contains n integers $a_1, \dots, a_n(1 \leq a_i \leq 10^9)$.

It is guaranteed that the total sum of n is at most 10^5 .

Output

Print t answers to the test cases. Each answer must be consisting of single integer — the number of awesome arrays modulo $10^9 + 7$

Example

standard input	standard output
4	1
3	4
1 1 2	2
3	0
1 2 3	
2	
1 2	
3	
2 1 2	

Note

In the first query,

There are a total of 3 possible array after reordering the given array $(1, 1, 2)$. They are: $(1, 1, 2), (1, 2, 1)$ and $(2, 1, 1)$.

Out of the above, only $(1, 2, 1)$ is the awesome array.

In the second query,

There are a total of 6 possible array after reordering. They are: $(1, 2, 3), (1, 3, 2), (2, 1, 3), (2, 3, 1), (3, 1, 2)$

and $(3, 2, 1)$.

Out of the above 4 are awesome arrays.

In the last query ,

No awesome array we can formed after reordering the given array.