

Picking Cards



Problem Statement

There are N cards on the table and each has a number between 0 and N . Let us denote the number on the i^{th} card by c_i . You want to pick up all the cards. The i^{th} card can be picked up only if at least c_i cards have been picked up before it. (As an example, if a card has a value of 3 on it, you can't pick that card up unless you've already picked up 3 cards previously) In how many ways can all the cards be picked up?

Input Format

The first line contains the number of test cases T . T test cases follow. Each case contains an integer N on the first line, followed by integers $c_1, \dots, c_i, \dots, c_N$ on the second line.

Output Format

Output T lines one corresponding to each test case containing the required answer for the corresponding test case. As the answers can be very big, output them modulo 1000000007.

Constraints:

$$1 \leq T \leq 10$$

$$1 \leq N \leq 50000$$

$$0 \leq c_i \leq N$$

Sample Input:

```
3
3
0 0 0
3
0 0 1
3
0 3 3
```

Sample Output:

```
6
4
0
```

Sample Explanations:

For the first case, the cards can be picked in any order, so there are $3! = 6$ ways.

For the second case, the cards can be picked in 4 ways: $\{1,2,3\}$, $\{2,1,3\}$, $\{1,3,2\}$, $\{2,3,1\}$.

For the third case, no cards can be picked up after the first one, so there are 0 ways to pick up all cards.