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Finding Teammate   Problem Code: **TEAMMATE**   Submit (/submit/TEAMMATE)   ✔

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as well.

Snackdown 2019 is coming! Since Snackdown is a contest of teams with up to two
members, everyone is looking for a teammate. There are N contestants
(numbered 1 through N) who want to participate in Snackdown; let's denote the
skill level of the i-th contestant by S_i. These people want to pair up in $N/2$
teams; each team should consist of two people.

Clearly everyone wishes for their teammate to be as skilled as possible, so
everyone wants to maximize their teammate's skill level. We call a pairing (an
unordered $N/2$-tuple of teams) *valid* if there are no two teams consisting of
people (A, B) and (C, D) such that $S_D > S_B$ and $S_A > S_C$ — in that case, A
and D would both prefer to be on the same team rather than with their current
teammates.

Find the number of valid pairings. Since this number can be large, compute it
modulo $1,000,000,007$.

Input

- The first line of the input contains a single integer T denoting the number of
  test cases. The description of T test cases follows.
- The first line of each test case contains a single integer N.
- The second line contains N space-separated integers $S_1, S_2, \ldots, S_N$.

Output

For each test case, print a single line containing one integer — the number of valid
pairings modulo $1,000,000,007$.

Constraints

- $1 \le T \le 1,000$
- $2 \le N \le 10^5$
- N is even
- the sum of N for all test cases does not exceed 10^6
- $1 \le S_i \le 10^6$ for each valid i

Example Input

```
2
4
1 7 3 8
4
2 3 2 2
```

Example Output

```
1
3
```

Explanation

Example case 1: The only valid pairing is for contestant 2 to be paired with contestant 4 (so contestants 1 and 3 form the other team).

Example case 2: Since person 2 has the highest skill level and all others have the same skill levels, person 2 can choose anyone among the other three as a teammate. The remaining two people also form a team, so the number of pairings is 3.

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