

Connecting Towns



Problem Statement

Gandalf is travelling from **Rohan** to **Rivendell** to meet Frodo but there is no direct route from **Rohan** (T_1) to **Rivendell** (T_n).

But there are towns $T_2, T_3, T_4 \dots T_{n-1}$ such that there are N_1 routes from Town T_1 to T_2 , and in general, N_i routes from T_i to T_{i+1} for $i=1$ to $n-1$ and 0 routes for any other T_i to T_j for $j \neq i+1$

Find the total number of routes Gandalf can take to reach Rivendell from Rohan.

Note

Gandalf has to pass all the towns T_i for $i=1$ to $n-1$ in numerical order to reach T_n .

For each T_i , T_{i+1} there are only N_i distinct routes Gandalf can take.

Input Format

The first line contains an integer T , T test-cases follow.

Each test-case has 2 lines. The first line contains an integer N (the number of towns).

The second line contains $N - 1$ space separated integers where the i^{th} integer denotes the number of routes, N_i , from the town T_i to T_{i+1}

Output Format

Total number of routes from T_1 to T_n modulo 1234567

http://en.wikipedia.org/wiki/Modular_arithmetic

Constraints

$1 \leq T \leq 1000$

$2 \leq N \leq 100$

$1 \leq N_i \leq 1000$

Sample Input

```
2
3
1 3
4
2 2 2
```

Sample Output

```
3
8
```

Explanation

Case 1: 1 route from T_1 to T_2 , 3 routes from T_2 to T_3 , hence only 3 routes.

Case 2: There are 2 routes from each city to the next, at each city, Gandalf has 2 choices to make, hence $2 * 2 * 2 = 8$.