Sell All the Cars

Problem Code: **CARSELL**

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Chef owns N cars (numbered 1 through N). He wishes to sell all of them over N years by selling exactly one car per year. For each valid i, the initial price of the i-th car is P_i. Due to depreciation, the price of each car decreases by 1 unit per year until it is sold.

Note that the price of a car cannot drop below 0 no matter how many years have passed, i.e. when the price of a car reaches 0 in some year, it remains 0 in all subsequent years.

Find the maximum profit Chef can make if he sells his cars in an optimal way. Since this number may be large, compute it modulo $1,000,000,007$ ($10^9 + 7$).

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 $P_1, P_2, \ldots, P_N$.

Output

For each test case, print a single line containing one integer — the maximum profit Chef can make, modulo $1,000,000,007$.

Constraints

- $1 \le T \le 25$
- $1 \le N \le 10^5$
- $1 \le P_i \le 10^9$ for each valid i

Subtasks

Subtask #1 (30 points): $N \le 2 \cdot 10^3$

Subtask #2 (70 points): original constraints

Example Input

```
2
3
6 6 6
3
0 1 0
```

Example Output

```
15
1
```

Explanation

Example case 1:

- During the first year, Chef's profit so far is 0 and the prices of the cars are $[6, 6, 6]$. Chef sells one of these cars.
- During the second year, Chef's profit so far is 6 and the prices of the remaining cars are $[5, 5]$. Again, Chef sells one of these cars.
- During the third year, Chef's profit so far is 11 and there is one car with price 4. Chef sells this car.
- In the fourth year, Chef has sold all of his cars and his profit is 15. This is the maximum profit he can make.

Example case 2:

- During the first year, Chef's profit so far is 0 and the prices of the cars are $[0, 1, 0]$. Chef sells the second car.
- During the second year, Chef's profit so far is 1 and the prices of the remaining cars are $[0, 0]$. Chef sells one of these cars.
- During the third year, Chef's profit so far is 1 and there is one car with price 0. Chef sells this car.
- During the fourth year, Chef has sold all his cars and his profit is 1.

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Source Limit:	50000 Bytes
Languages:	C, CPP14, JAVA, PYTH, PYTH 3.6, PYPY, CS2, PAS fpc, PAS gpc, RUBY, PHP, GO, NODEJS, HASK, rust, SCALA, swift, D, PERL, FORT, WSPC, ADA, CAML, ICK, BF, ASM, CLPS, PRLG, ICON, SCM qobi, PIKE, ST, NICE, LUA, BASH, NEM, LISP sbcl, LISP clisp, SCM guile, JS, ERL, TCL, SQL, kotlin, PERL6, TEXT, CPP17, SCM chicken, PYP3, CLOJ, R, COB, FS

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