

Contest Duration: 2025-09-27(Sat) 22:00 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20250927T2100&p1=248>) - 2025-09-27(Sat) 23:40 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20250927T2240&p1=248>) (local time) (100 minutes)

[Back to Home \(/home\)](#)

[Top \(/contests/abc425\)](#)

[Tasks \(/contests/abc425/tasks\)](#)

[Clarifications \(/contests/abc425/clarifications\)](#)

[Results ▾](#)

[Standings \(/contests/abc425/standings\)](#)

[Virtual Standings \(/contests/abc425/standings/virtual\)](#)

[Editorial \(/contests/abc425/editorial\)](#)

[Discuss \(<https://codeforces.com/blog/entry/146790>\)](#)



E - Count Sequences 2

[Editorial \(/contests/abc425/tasks/abc425_e/editorial\)](#)



Time Limit: 2 sec / Memory Limit: 1024 MiB

Score : 450 points

Problem Statement

You are given a positive integer N and a sequence of positive integers $C = (C_1, C_2, \dots, C_N)$ of length N .

Find, modulo a given positive integer M , the number of sequences of positive integers that satisfy all of the following conditions.

- All elements of the sequence are between 1 and N , inclusive.
- For each $i = 1, 2, \dots, N$, the value i appears exactly C_i times in the sequence.

T test cases are given, so find the answer for each. M is common to all T test cases.

Constraints

- $1 \leq T \leq 10^5$
- $2 \leq M \leq 10^9$
- $1 \leq N$
- $1 \leq C_i$
- $\sum_{i=1}^N C_i \leq 5000$
- The sum of N over all test cases is at most 3×10^5 .
- All input values are integers.

Input

The input is given from Standard Input in the following format:

```
T M  
case1  
case2  
:  
caseT
```

The i -th test case, case_i , is given in the following format:

```
N  
C1 C2 ... CN
```

Output

Output T lines. The i -th line should contain the answer for the i -th test case.

Sample Input 1

Copy

```
3 1000000000  
2  
2 2  
5  
1 1 1 1 1  
6  
1 2 3 4 5 6
```

Copy

Sample Output 1

Copy

```
6  
120  
230379200
```

Copy

For the first test case, the sequences that satisfy the conditions are

$(1, 1, 2, 2), (1, 2, 1, 2), (1, 2, 2, 1), (2, 1, 1, 2), (2, 1, 2, 1), (2, 2, 1, 1)$, which is six sequences.

Sample Input 2

Copy

2026-01-02 (Fri)
05:30:51 +11:00
Copy

```
3 998244353
1
1
3
4 2 5
10
500 500 500 500 500 500 500 500 500
```

Sample Output 2

[Copy](#)

```
1
6930
261233246
```

[Copy](#)

'#telegram)

url=https%3A%2F%2Fatcoder.jp%2Fcontests%2Fabc425%2Ftasks%2Fabc425_e%3Flang%3Den&title=E%20-

[Rule \(/contests/abc425/rules\)](#) [Glossary \(/contests/abc425/glossary\)](#)

[Terms of service \(/tos\)](#) [Privacy Policy \(/privacy\)](#) [Information Protection Policy \(/personal\)](#) [Company \(/company\)](#)
[FAQ \(/faq\)](#) [Contact \(/contact\)](#)

Copyright Since 2012 ©AtCoder Inc. (<http://atcoder.co.jp>) All rights reserved.