



洛谷 未找到



## D. Marble Council

time limit per test: 2 seconds

memory limit per test: 512 megabytes



You are given a multiset  $a$ , which consists of  $n$  integers  $a_1, a_2, \dots, a_n$ . You would like to generate a new multiset  $s$  through the following procedure:

- Partition  $a$  into any number of non-empty multisets  $x_1, x_2, \dots, x_k$ , such that each element of  $a$  belongs to exactly one of these multisets.
- Initially,  $s$  is empty. From each  $x_i$ , choose **one** of its **modes**\* and insert it into  $s$ .

Please count the number of different multisets  $s$  that can be generated through the procedure, modulo 998 244 353.

Please note that the number of different **multisets** is counted, which means that the order of elements does not matter. However, the count of each element does matter, i.e.  $\{1, 1, 2\}, \{1, 2\}, \{1, 1, 2, 2\}$  are all considered different.

\*The mode of a multiset is defined as the element which appears the most; if several elements are tied as the maximum, then all of them are considered modes.

DeepL 翻译



### Codeforces Round 1064 (Div. 2).

比赛进行中

01:34:05

Contestant



#### → 提交?

语言: GNU G++20 13.2 (64 bit, v

选择文件:  未选择文件

Be careful: there is 50 points penalty for submission which fails the pretests or resubmission (except failure on the first test, denial of judgement or similar verdicts). "Passed pretests" submission verdict doesn't guarantee that the solution is absolutely correct and it will pass system tests.

#### → 评分表

	Score
<a href="#">Problem A</a>	450



给你一个多集合  $a$ ，它由  $n$  个整数  $a_1, a_2, \dots, a_n$  组成。您希望通过以下步骤生成一个新的多集  $s$ ：

- 将  $a$  划分为任意多个非空多集  $x_1, x_2, \dots, x_k$ ，使得  $a$  中的每个元素都恰好属于其中一个多集。
- 最初， $s$  是空的。从每个  $x_i$  中选择其中一个模\*\* \*，并将其插入  $s$  中。

请计算通过该过程可以生成的不同多集  $s$  的个数，模数为 998 244 353。

请注意，计算的是不同多集的个数，这意味着元素的顺序并不重要。但是，每个元素的计数是重要的，即  $\{1, 1, 2\}, \{1, 2\}, \{1, 1, 2, 2\}$  都被认为是不同的。

\* 多集的模式定义为出现最多的元素；如果几个元素并列最大，那么所有元素都被视为模式。



### Input

Each test contains multiple test cases. The first line contains the number of test cases  $t$  ( $1 \leq t \leq 5000$ ). The description of the test cases follows.

The first line of each test case contains a single integer  $n$  ( $1 \leq n \leq 5000$ ) — the size of multiset  $a$ .

The second line of each test case contains  $n$  integers  $a_1, a_2, \dots, a_n$  ( $1 \leq a_i \leq n$ ).

It is guaranteed that the sum of  $n$  over all test cases does not exceed 5000.

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### 输入

每个测试包含多个测试用例。第一行包含测试用例的数量  $t$  ( $1 \leq t \leq 5000$ )。测试用例说明如下。

每个测试用例的第一行都包含一个整数  $n$  ( $1 \leq n \leq 5000$ ) - 多集合  $a$  的大小。

每个测试用例的第二行包含  $n$  个整数  $a_1, a_2, \dots, a_n$  ( $1 \leq a_i \leq n$ )。

保证所有测试用例中  $n$  的总和不超过 5000。



### Output

For each test case, print one line containing a single integer — the number of different multisets you can obtain, modulo 998 244 353.

<a href="#">Problem B</a>	675
<a href="#">Problem C</a>	900
<a href="#">Problem D</a>	1350
<a href="#">Problem E</a>	1800
<a href="#">Problem F</a>	2700
Successful hack	100
Unsuccessful hack	-50
Unsuccessful submission	-50
Resubmission	-50

\* If you solve problem on 00:25 from the first attempt



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## 输出

为每个测试用例打印一行，其中包含一个整数 - 您能获得的不同多集的数量，取模 998 244 353 。

## Example

### input

Copy

```
5
3
1 2 3
3
1 1 1
3
1 2 2
10
1 1 1 1 2 2 2 3 3 4
10
1 1 1 2 2 2 3 3 3 4
```

### output

Copy

```
7
3
4
111
126
```



## Note

In the first test case, any non-empty subset of  $\{1, 2, 3\}$  can be achieved, for a total of 7 multisets.

In the third test case, we can generate 4 different multisets:

- Partition the elements into set  $\{1, 2, 2\}$ , resulting in multiset  $\{2\}$ .
- Partition the elements into sets  $\{1, 2\}$ ,  $\{2\}$ , resulting in multiset  $\{2, 2\}$ .
- Partition the elements into sets  $\{1\}$ ,  $\{2, 2\}$ , resulting in multiset  $\{1, 2\}$ .
- Partition the elements into sets  $\{1\}$ ,  $\{2\}$ ,  $\{2\}$ , resulting in multiset  $\{1, 2, 2\}$ .

It can be proven that no other multisets are possible.



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## 注

在第一个测试案例中， $\{1, 2, 3\}$  的任何非空子集都可以实现，总共有 7 个多集。

在第三个测试案例中，我们可以生成 4 个不同的多集合：

- 将元素分成集合  $\{1, 2, 2\}$ ，得到多集合  $\{2\}$ 。
- 将元素分成集合  $\{1, 2\}, \{2\}$ ，得到多集合  $\{2, 2\}$ 。
- 将元素分成集合  $\{1\}, \{2, 2\}$ ，得到多集合  $\{1, 2\}$ 。
- 将元素分成集合  $\{1\}, \{2\}, \{2\}$ ，得到多集合  $\{1, 2, 2\}$ 。

可以证明不可能有其他多集合。

GNU G++20 13.2 (64 bit, winlibs)



1



▶ 自定义测试数据(自动保存)



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