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PROBLEMS SUBMIT CODE MY SUBMISSIONS STATUS HACKS ROOM STANDINGS CUSTOM INVOCATION

A. Common Multiple

time limit per test: 1 second memory limit per test: 256 megabytes

You are given an array of integers a_1,a_2,\ldots,a_n . An array x_1,x_2,\ldots,x_m is beautiful if there exists an array y_1,y_2,\ldots,y_m such that the elements of y are distinct (in other words, $y_i\neq y_j$ for all $1\leq i < j \leq m$), and the product of x_i and y_i is the same for all $1\leq i \leq m$ (in other words, $x_i\cdot y_i=x_j\cdot y_j$ for all $1\leq i < j \leq m$).

Your task is to determine the maximum size of a subsequence * of array a that is beautiful.

Input

Each test contains multiple test cases. The first line contains the number of test cases t ($1 \le t \le 500$). The description of the test cases follows.

The first line of each test case contains a single integer n ($1 \le n \le 100$) — the length of the array a.

The second line of each test case contains n integers a_1,a_2,\ldots,a_n $(1\leq a_i\leq n)$ — the elements of array a.

Note that there are **no** constraints on the sum of n over all test cases.

Output

For each test case, output the maximum size of a subsequence of array a that is beautiful.

Example

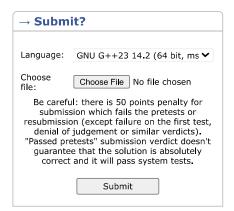
input	Сору
3	
3	
1 2 3	
5	
3 1 4 1 5	
1	
1	
output	Сору
3	
4	
1	

Note

In the first test case, the entire array a=[1,2,3] is already beautiful. A possible array y is [6,3,2], which is valid since the elements of y are distinct, and $1\cdot 6=2\cdot 3=3\cdot 2$.

In the second test case, the subsequence [3,1,4,5] is beautiful. A possible array y is [20,60,15,12]. It can be proven that the entire array a=[3,1,4,1,5] is not beautiful, so the maximum size of a subsequence of array a that is beautiful is a.

Contest is running 00:43:51 Contestant



→ Last submissions		
Submission	Time	Verdict
316542533	Apr/21/2025 17:56	Pretests passed

→ Score table	
	Score
<u>Problem A</u>	350
<u>Problem B</u>	700
<u>Problem C</u>	1050
<u>Problem D</u>	1400
<u>Problem E</u>	1925
<u>Problem F</u>	2100
Successful hack	100
Unsuccessful hack	-50
Unsuccessful submission	-50
Resubmission	-50

^{*} If you solve problem on 01:15 from the first attempt

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 $[\]overline{{}^*A}$ sequence b is a subsequence of a sequence a if b can be obtained from a by the deletion of several (possibly, zero or all) element from arbitrary positions.