

C. Cool Partition

time limit per test: 2 seconds

memory limit per test: 256 megabytes

Yousef has an array a of size n . He wants to partition the array into one or more contiguous segments such that each element a_i belongs to exactly one segment.

A partition is called *cool* if, for every segment b_j , all elements in b_j also appear in b_{j+1} (if it exists). That is, every element in a segment must also be present in the segment following it.

For example, if $a = [1, 2, 2, 3, 1, 5]$, a *cool* partition Yousef can make is $b_1 = [1, 2]$, $b_2 = [2, 3, 1, 5]$. This is a *cool* partition because every element in b_1 (which are 1 and 2) also appears in b_2 . In contrast, $b_1 = [1, 2, 2]$, $b_2 = [3, 1, 5]$ is not a *cool* partition, since 2 appears in b_1 but not in b_2 .

Note that after partitioning the array, you do **not** change the order of the segments. Also, note that if an element appears several times in some segment b_j , it only needs to appear at least once in b_{j+1} .

Your task is to help Yousef by finding the maximum number of segments that make a *cool* partition.

Input

The first line of the input contains integer t ($1 \leq t \leq 10^4$) — the number of test cases.

The first line of each test case contains an integer n ($1 \leq n \leq 2 \cdot 10^5$) — the size of the array.

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

It is guaranteed that the sum of n over all test cases doesn't exceed $2 \cdot 10^5$.

Output

For each test case, print one integer — the maximum number of segments that make a *cool* partition.

Example

input	Copy
8	
6	
1 2 2 3 1 5	
8	
1 2 1 3 2 1 3 2	
5	
5 4 3 2 1	
10	
5 8 7 5 8 5 7 8 10 9	
3	
1 2 2	
9	
3 3 1 4 3 2 4 1 2	
6	
4 5 4 5 6 4	
8	
1 2 1 2 1 2 1 2	
output	Copy
2	
3	
1	
3	
1	
3	
3	
4	

Note

Codeforces Round 1029 (Div. 3)

Contest is running

01:34:26

Contestant



→ Submit?

Language:
GNU G++23 14.2 (64 bit, ms)

Choose file:

Choose File

No file chosen

Submit

→ Last submissions

Submission	Time	Verdict
323457518	Jun/08/2025 18:13	Accepted

The first test case is explained in the statement. We can partition it into $b_1 = [1, 2]$, $b_2 = [2, 3, 1, 5]$. It can be shown there is no other partition with more segments.

In the second test case, we can partition the array into $b_1 = [1, 2]$, $b_2 = [1, 3, 2]$, $b_3 = [1, 3, 2]$. The maximum number of segments is 3.

In the third test case, the only partition we can make is $b_1 = [5, 4, 3, 2, 1]$. Any other partition will not satisfy the condition. Therefore, the answer is 1.

[Codeforces](#) (c) Copyright 2010-2025 Mike Mirzayanov
The only programming contests Web 2.0 platform
Server time: Jun/08/2025 22:15:21^{UTC+7} (k1).
Desktop version, switch to [mobile version](#).
[Privacy Policy](#) | [Terms and Conditions](#)

Supported by

