

For a sequence of integer numbers $\langle x_1, x_2, \dots, x_n \rangle$, a contiguous subsequence $\langle x_i, x_{i+1}, \dots, x_j \rangle$ where $i < j \leq n$, is called “*interesting*” if its first and last elements are equal (i.e., $x_i = x_j$). Two interesting subsequences $S_1 = \langle x_i, x_{i+1}, \dots, x_j \rangle$ and $S_2 = \langle x_a, x_{a+1}, \dots, x_b \rangle$ are called “*conflict-free*” if either $a \geq j$ or $i \geq b$.

For a given sequence of known size, find the maximum number of interesting subsequences which are pairwise conflict-free.

Input

The first line of input contains an integer $T \leq 100$ denoting the number of test-cases. Each test-case begins with an integer $1 \leq N \leq 100,000$, on a separate line, denoting the size of the sequence. The following line contains N positive integers each between 1 and 100,000 (inclusive).

Output

For each test-case, output on a single line the maximum number of pairwise conflict-free interesting subsequences.

Sample Input

```
3
6
1 2 1 3 1 2
4
2 4 2 4
9
10 2 2 10 3 4 5 4 3
```

Sample Output

```
2
1
2
```