Sequence

Time Limit : 2s

Supervin has a sequence of integers A of length N. The i-th number of A is indicated by A_i. He wants to find the maximum value of l possible such that there exists another sequence k_1, k_2, k_3, ..., k_l where $1 \le k_1 \le k_2 \le ... \le k_l \le n$ and $|A_{k_i} - A_{k_{i+1}}| = 1$ for every $1 \le i < l$.

Help him!

Format Input
First line is an integer T ($1 \le T \le 30$), the number of cases.
For each testcases, there will be an integer N ($1 \le N \le 50\,000$) representing the length of sequence A.
The next line will consist of N integers. The i-th number is the value of A_i ($-1\,000\,000\,000 \le A_i \le 1\,000\,000\,000$).

Format Output
For each case, output "Case #X: Y" (without quotes) in a line where X is the case number (starts from 1) and Y is the maximum value of l possible as explained in the problem statement.

Sample Input

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

Sample Output

```
Case #1: 3
Case #2: 1
```

Explanation
For the first sample, the possible sequence k is {1, 2, 4}.