Approximating a Constant Range

When Xellos was doing a practice course in university, he once had to measure the intensity of an effect that slowly approached equilibrium. A good way to determine the equilibrium intensity would be choosing a sufficiently large number of consecutive data points that seems as constant as possible and taking their average. Of course, with the usual sizes of data, it's nothing challenging — but why not make a similar programming contest problem while we're at it?

You're given a sequence of n data points $a_1, \ldots, a_n$. There aren't any big jumps between consecutive data points — for each $1 \le i < n$, it's guaranteed that $|a_{i+1} - a_i| \le 1$.

A range $[l, r]$ of data points is said to be almost constant if the difference between the largest and the smallest value in that range is at most 1. Formally, let M be the maximum and m the minimum value of a_i for $l \le i \le r$; the range $[l, r]$ is almost constant if $M - m \le 1$.

Find the length of the longest almost constant range.

Input Format

The first line of the input contains a single integer n $(2 \le n \le 100\,000)$ — the number of data points.

The second line contains n integers $a_1, a_2, \ldots, a_n$ $(1 \le a_i \le 100\,000)$.

Output Format

Print a single number — the maximum length of an almost constant range of the given sequence.

Sample test

inputcopy
5 1 2 3 3 2
outputcopy
4
inputcopy

11 5 4 5 5 6 7 8 8 8 7 6
outputcopy
5

Explanation for sample test

In the first sample, the longest almost constant range is [2,5][2,5]; its length (the number of data points in it) is 44.

In the second sample, there are three almost constant ranges of length 44: [1,4],[6,9][1,4],[6,9] and [7,10][7,10]; the only almost constant range of the maximum length 55 is [6,10][6,10].