

Contest Duration: 2025-12-27(Sat) 23:00 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20251227T2100&p1=248>) - 2025-12-28(Sun) 00:40 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20251227T2240&p1=248>) (local time) (100 minutes)

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C - 1D puyopuyo

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Time Limit: 2 sec / Memory Limit: 1024 MiB

Score : 300 points

Problem Statement

You are given an integer sequence $A = (A_1, A_2, \dots, A_N)$ of length N .

You can perform the following operation zero or more times in any order:

- Choose an integer k between 1 and $|A| - 3$, inclusive, such that $A_k = A_{k+1} = A_{k+2} = A_{k+3}$, and remove $A_k, A_{k+1}, A_{k+2}, A_{k+3}$ from A . (More formally, replace A with $(A_1, A_2, \dots, A_{k-1}, A_{k+4}, A_{k+5}, \dots, A_N)$.)

Here, $|A|$ represents the length of the integer sequence A .

Find the minimum possible value of the final $|A|$ after repeating the operation.

Constraints

- $1 \leq N \leq 2 \times 10^5$
- $1 \leq A_i \leq N$
- All input values are integers.

Input

The input is given from Standard Input in the following format:

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N $A_1 \ A_2 \ \dots \ A_N$

Output

Output the minimum possible value of the final $|A|$ after repeating the operation.

Sample Input 1

[Copy](#)

10

1 1 1 4 4 4 4 1 2 3

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Sample Output 1

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2

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You can make $|A| = 2$ with two operations as follows:

- Choose $k = 4$. This choice is valid since $A_4 = A_5 = A_6 = A_7 = 4$ holds. $A = (1, 1, 1, 1, 2, 3)$ is obtained.
- Choose $k = 1$. This choice is valid since $A_1 = A_2 = A_3 = A_4 = 1$ holds. $A = (2, 3)$ is obtained.

It is impossible to make $|A|$ less than 2, so output 2.

Sample Input 2

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3

2 1 3

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Sample Output 2

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3

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You cannot perform any operation from the beginning.

Sample Input 3

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13

1 1 4 4 4 1 1 1 1 4 1 4 1

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Sample Output 3

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5

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