

## B. The Fibonacci Segment

time limit per test

1 second

memory limit per test

256 megabytes

input

standard input

output

standard output

You have array  $a_1, a_2, \dots, a_n$ . Segment  $[l, r]$  ( $1 \leq l \leq r \leq n$ ) is good if  $a_i = a_{i-1} + a_{i-2}$ , for all  $i$  ( $l+2 \leq i \leq r$ ).

Let's define  $len([l, r]) = r - l + 1$ ,  $len([l, r])$  is the length of the segment  $[l, r]$ . Segment  $[l_1, r_1]$ , is longer than segment  $[l_2, r_2]$ , if  $len([l_1, r_1]) > len([l_2, r_2])$ .

Your task is to find a good segment of the maximum length in array  $a$ . Note that a segment of length 1 or 2 is always good.

### Input

The first line contains a single integer  $n$  ( $1 \leq n \leq 10^5$ ) — the number of elements in the array.

The second line contains integers:  $a_1, a_2, \dots, a_n$  ( $0 \leq a_i \leq 10^9$ ).

### Output

Print the length of the longest good segment in array  $a$ .

### Examples

#### input

Copy

10

1 2 3 5 8 13 21 34 55 89

#### output

Copy

10

#### input

Copy

5

1 1 1 1 1

#### output

Copy

2