Problem L. Lauriel and the deck of cards

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 seconds
Memory limit:	128 megabytes

In the free time, Lauriel came up with a card game. She has a deck of cards consisting of N cards numbered from 1 to N, each with an integer between 1 and 100 written on it. After shuffling the order of the cards, Lauriel spreads them out in a horizontal row. At each step, Lauriel is allowed to choose two adjacent cards and discard them if their sum is even. In other words, at each turn, Lauriel can choose an integer i ($1 \leq i \leq N-1$) and simultaneously remove 2 cards at positions i and $i+1$ if sum of them is even. After that, the cards to the right will be added to fill the space (with the order remaining unchanged). Lauriel will win if all the cards are removed. In case of not being able to win, Lauriel will try to make the number of remaining cards as small as possible. Indicates the order of the cards from left to right.

Determine the minimum number of cards remaining if Lauriel plays optimally.

Input

Input consists of two lines.

The first line contains the positive integer N ($1 \leq N \leq 100000$), which is the number of cards.

The second line contains N integers between 1 and 100, describing the numbers written on the cards in order from left to right.

Output

Minimum number of cards remaining if Lauriel plays optimally.

Example

standard input	standard output
10 1 2 3 4 5 6 7 8 9 10	10