Breakeven X74981_en

Given a sequence of integers $x_1, \ldots, x_n$, position j is a breakeven if $x_1 + \cdots + x_{j-1} = x_j + \cdots + x_n$. For instance, the sequence $5, 1, 2, 1, 3$ has a breakeven at position 3. Sequence $1, 2, 1$ has no breakeven. Write a program that finds the first breakeven of a sequence, if there is any.
Exam score: 3.500000 **Automatic part:** 20.000000%

Input

An integer n greater than zero followed by a sequence of integers $x_1, \ldots, x_n$.

Output

In case the sequence has a breakeven, the output is is the first position j, where $1 \leq j \leq n$, such that $x_1 + \cdots + x_{j-1} = x_j + \cdots + x_n$. The output must be -1 if the sequence has no breakeven.

Sample input 1

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

Sample output 1

```
3
```

Sample input 2

```
3
1 2 1
```

Sample output 2

```
-1
```

Sample input 3

```
6
3 1 0 -1 2 1
```

Sample output 3

```
2
```

Sample input 4

```
4
-1 2 3 -4
```

Sample output 4

```
1
```

Observation

The code has to avoid unnecessary computations.

Problem information

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Generation : 2019-05-03 12:11:52