

## B. Increase and Decrease

time limit per test: 2 seconds

memory limit per test: 256 megabytes

input: standard input

output: standard output

Polycarpus has an array, consisting of  $n$  integers  $a_1, a_2, \dots, a_n$ . Polycarpus likes it when numbers in an array match. That's why he wants the array to have as many equal numbers as possible. For that Polycarpus performs the following operation multiple times:

- he chooses two elements of the array  $a_i, a_j$  ( $i \neq j$ );
- he simultaneously increases number  $a_i$  by 1 and decreases number  $a_j$  by 1, that is, executes  $a_i = a_i + 1$  and  $a_j = a_j - 1$ .

The given operation changes exactly two distinct array elements. Polycarpus can apply the described operation an infinite number of times.

Now he wants to know what maximum number of equal array elements he can get if he performs an arbitrary number of such operation. Help Polycarpus.

### Input

The first line contains integer  $n$  ( $1 \leq n \leq 10^5$ ) — the array size. The second line contains space-separated integers  $a_1, a_2, \dots, a_n$  ( $|a_i| \leq 10^4$ ) — the original array.

### Output

Print a single integer — the maximum number of equal array elements he can get if he performs an arbitrary number of the given operation.

### Examples

input
2 2 1
output
1
input
3 1 4 1
output
3

### → Attention

Package for this problem was not updated by the problem writer or Codeforces administration after we've upgraded the judging servers. To adjust the time limit constraint, solution execution time will be multiplied by 2. For example, if your solution works for 400 ms on judging servers, then value 800 ms will be displayed and used to determine the verdict.

### Codeforces Round #151 (Div. 2)

Finished

### → Virtual participation

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Start virtual contest

### → Problem tags

greedy math

No tag edit access

### → Contest materials

- Announcement 
- Tutorial 