Making Polygons

A polygon is a closed shape with three or more sides. For example, triangles are polygons. A polygon is non-degenerate if it has no overlapping sides (and no sides of zero length).

You have n sticks with positive integer lengths, $a_0, a_1, \ldots, a_{n-1}$. You want to create a polygon using *all* n sticks. Because this is not always possible, you can cut one or more sticks into two smaller sticks (they *do not* necessarily need to be of integer length) and repeat the process of trying to create a polygon using *all* the sticks. Given the lengths of all n sticks, find and print the minimum number of cuts necessary to make a *non-degenerate polygon*.

Input Format

The first line contains a single integer, n.
The second line contains n space-separated integers describing the respective values of $a_0, a_1, \ldots, a_{n-1}$.

Constraints

- $1 \leq n \leq 50$
- $1 \leq a_i \leq 100$

Output Format

Print a single integer denoting the minimum number of cuts required to make the n sticks into a polygon.

Sample Input 0

```
3
3 4 5
```

Sample Output 0

```
0
```

Explanation 0
We can form a triangle without cutting any of the sticks, so we print 0 on a new line.

Sample Input 1

```
3
1 2 3
```

Sample Output 1

```
1
```

Explanation 1
We can form a 1×2 rectangle (convex quadrilateral) by cutting the stick having length 3 into two sticks having lengths 1 and 2. Because this requires one cut, we print 1 on a new line.