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All Domains > Algorithms > Implementation > Cut the sticks

# **Cut the sticks**



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You are given N sticks, where the *length* of each stick is a positive integer. A *cut operation* is performed on the sticks such that all of them are reduced by the length of the smallest stick.

Suppose we have six sticks of the following lengths:

544228

Then, in one *cut operation* we make a cut of length 2 from each of the six sticks. For the next *cut operation* four sticks are left (of non-zero length), whose lengths are the following: 3 2 2 6

The above step is repeated until no sticks are left.

Given the length of N sticks, print the number of sticks that are left before each subsequent *cut operations*.

Note: For each cut operation, you have to recalcuate the length of smallest sticks (excluding zero-length sticks).

#### **Input Format**

The first line contains a single integer N.

The next line contains N integers:  $a_0$ ,  $a_1$ ,... $a_{N-1}$  separated by space, where  $a_i$  represents the length of  $i^{th}$  stick.

## **Output Format**

For each operation, print the number of sticks that are cut, on separate lines.

# Constraints

 $1 \le N \le 1000$ 

 $1 \le a_i \le 1000$ 

#### Sample Input #00

6 5 4 4 2 2 8

## Sample Output #00

6 4 2 1

# Sample Input #01

8 1 2 3 4 3 3 2 1

# Sample Output #01

8

6 4 1

# **Explanation**

## Sample Case #00:

```
sticks-length
length-of-cut
sticks-cut

5 4 4 2 2 8
2
6

3 2 2 _ 6
2
4

1 _ _ 4
1
2

- _ - 3
3
1

- _ - - 3
DONE
DONE
```

## Sample Case #01

sticks-length	length-of-cut	sticks-cut
1 2 3 4 3 3 2 1	1	8
_ 1 2 3 2 2 1 _	1	6
1 2 1 1	1	4
1	1	1
	DONE	DONE

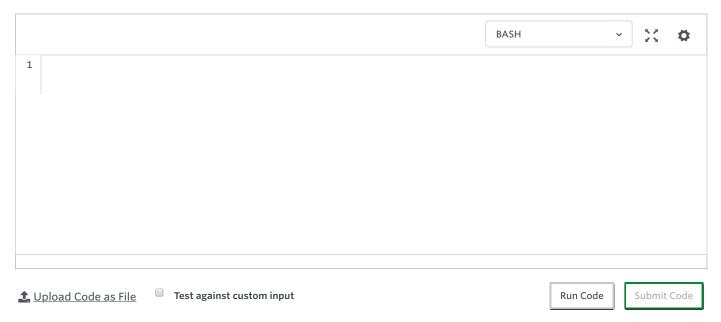
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Difficulty: Easy

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