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## 2243. Number Sequence

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Given a positive integer number, we want to generate a number sequence with the following rules:

If the current number is 1, the process will be terminated. Otherwise, if the current number is even, the next number will be  $n/2$ . If the current number is odd (except 1), the next number will be  $3*n+1$ . Then we turn to deal with the new number, until we get 1.

For example, given the first number 22, we will get {22, 11, 34, 17, 52, 26, 13, 40, 20, 10, 5, 16, 8, 4, 2, 1}. The length of this sequence is 16.

Given the first number, your task is to find the length of the sequence generated with these rules. We assume that the length will not be more than 1000.

### Input

There is only one number  $N$  ( $1 \leq N \leq 1000$ ) for each test case, indicating the first number of the sequence.

The input is terminated by a zero.

### Output

Output one number in a line for each test case, indicating the length of the sequence we generate.

### Sample Input

```
22
1000
1
0
```

### Sample Output

```
16
112
1
```

Author: RoBa

Source: TOJ 2006 Weekly Contest 7

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