Collatz Conjecture
Input File: collatz.txt

The Collatz Conjecture is a theory that states that any positive number, when inputted into the rules below, will reduce to 1.

If number is odd, multiply by 3 add 1.
If number is even, divide by 2.

An exception has yet to be found. Your job is to determine how many steps it will take for a number to reduce to 1.

Input:

The first line contains an integer N. The following N lines contain a single integer. That integer represents the starting number for the function.

Output:

Output the number of steps, following the protocol above, are necessary to reduce the inputted number to 1.

Example Input:

4
1
4
5
123

Example Output:

0
2
5
46