Problem
Sequence

Input File: SequenceIn.txt
Output File: SequenceOut.txt
Project File: Sequence

A sequence of integers, called the 3n+1 sequence, is generated as follows: The first number in the sequence, n, is always a positive integer. The next number in the sequence, and all subsequent numbers in the sequence, is obtained as follows: if the previous number is even, divide by 2. If the previous number is odd, multiply be 3 and add 1. The sequence terminates when a term in the sequence calculates to 1.

It is conjectured, but not yet proven, that the sequence will terminate for every beginning integer, n. Still, the conjecture has been shown to be true for all values of n up to 1,000,000.

Inputs
The first term in the sequence, an integer between 1 and 1,000,000

Outputs
The sequence of integers, one integer per line.

Sample input
22

Sample output
22
11
34
17
52
26
13
40
20
10
5
16
8
4
2
1