

Problem A. Weird Algorithm

Time limit 1000 ms
Mem limit 524288 kB

Consider an algorithm that takes as input a positive integer n . If n is even, the algorithm divides it by two, and if n is odd, the algorithm multiplies it by three and adds one. The algorithm repeats this, until n is one. For example, the sequence for $n = 3$ is as follows:

$$3 \rightarrow 10 \rightarrow 5 \rightarrow 16 \rightarrow 8 \rightarrow 4 \rightarrow 2 \rightarrow 1$$

Your task is to simulate the execution of the algorithm for a given value of n .

Input

The only input line contains an integer n .

Output

Print a line that contains all values of n during the algorithm.

Constraints

- $1 \leq n \leq 10^6$

Sample

Input	Output
3	3 10 5 16 8 4 2 1