

# CSES - Weird Algorithm

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 -> 10 -> 5 -> 16 -> 8 -> 4 -> 2 -> 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

$1 \leq n \leq 10^6$

## Example

*Input:*

3

*Output:*

3 10 5 16 8 4 2 1