

## Collatz

The Collatz Conjecture states that if, given any positive integer  $n$ , modifying  $n$  according to the method below will eventually lead to  $n=1$ .

```
while n != 1:
    if n is even:
        n = n / 2 #remove decimal
    else:
        n = 3n + 1
```

So far, no matter what positive integer is chosen for  $n$ , it always ends up at 1. This exercise isn't interested in proving the conjecture, but is interested in modifying the value until it reaches 1.

### Input

A positive integer  $n$

### Output

The sequence of transforming  $n$  to 1 with the method above. Display only the last 15 steps (or less if there are less than 15 steps). Separate each value with  $\rightarrow$  (see example below)

### Example

Input (from keyboard)	Output (on screen)
10	10->5->16->8->4->2->1
18	11->34->17->52->26->13->40->20->10->5->16->8->4->2->1

In the case of  $n=18$ , the full sequence is :

18->9->28->14->7->22->11->34->17->52->26->13->40->20->10->5->16->8->4->2->1

However, only the last 15 steps are shown