# Orasi Monthly Code Challenge

Silver League


# *September 2013*

*Challenge Submitted by:*

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*Challenge Due Date:*

9/30/13

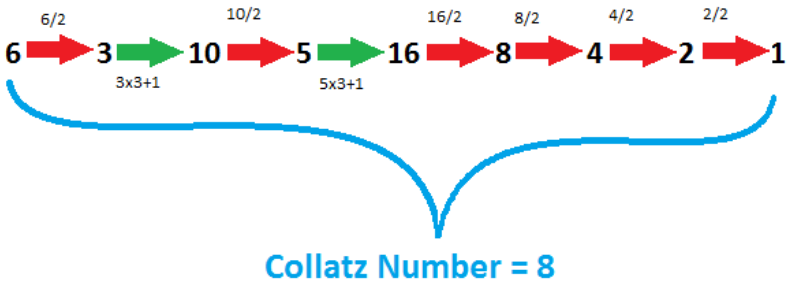
# September 2013 Orasi Code Challenge - Silver

## Challenge Description

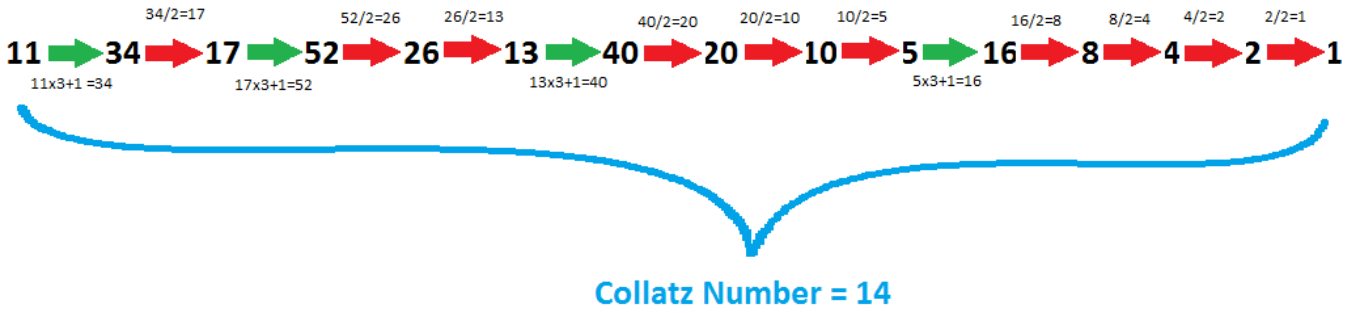
In mathematics, the Collatz Conjecture is an open problem stating that given any whole number greater than zero a specific sequence of operations can be performed on that number to bring it to one. Although the Collatz Conjecture has not been proven for all numbers, it has been computational verified for all numbers less than 100 billion. The sequence of operations only depends on if the number is even, divide the number by 2, or odd, multiply the number by 3 and add 1. The operation is then repeated on the result of the previous operation. By counting how many operations it takes to get from the initial number to 1 we find the Collatz Number. The Silver League coding challenge for September 2013 is to find the highest Collatz number in a given range of numbers.

## Collatz Number Examples:

Attempting to find the Collatz number for a starting value of 6 yields the following result:




Where the Collatz Number is the number of operations it took to bring 6 to 1. Doing the same procedure with the starting value of 11 yields this result:



## Submission Requirements:

Your function should accept two inputs (integers) indicating the minimum and maximum value for the range of numbers. For instance, the function will be called with FunctionName(0,12) to find the highest Collatz number between 0-12. The end points of the range should be included in the calculation. The function should output a single value (a string) showing, in a complete sentence, the number that has the highest Collatz number and the Collatz number itself. An example of this output would be "The largest Collatz number in the given range was 14 for the number 11". Additional information is acceptable and encouraged in this output. The function must comply with Orasi Coding Standards. You will be allowed 1 minute of execution time to accomplish this task. Anyone who successfully returns the correct response will be considered to have completed the challenge. A winner will be announced based on conformity to coding standards, efficiency, and creativity.

## Winning Solution:

********** Future Home of the winning solution **********