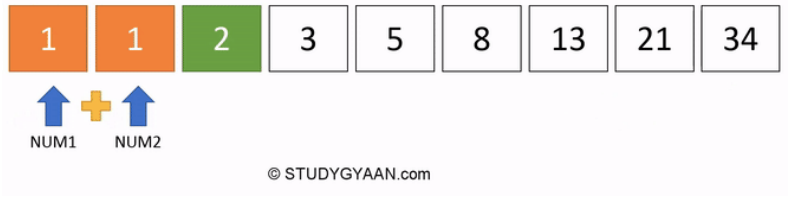
Mathletes Problem of the Week #14

Fibonacci Fun



The Fibonacci sequence is a series of numbers in which each number is the sum of the two previous numbers. The series starts with two ones. The next number is 2 (1 + 1), then 3 (1 + 2), and then 5 (2 + 3), and so on.

a) Try to continue the sequence started above. We can see that the 9th Fibonacci number is 34. What is the 20th Fibonacci number?
b) Now, try to continue the sequence above in the opposite direction. What number should come before the first one? What number should come before that? Keep going! How many can you find and what do you notice about them?
c) The following sequence follows the same rule as the Fibonacci sequence: every number is the sum of the two previous numbers. But this sequence starts with different numbers. Try to find the missing numbers! 506, ____, ____, ____, ____, 2017

Solutions & Explanations: (Try one or try them all! Show your solution and explain your thinking here and on the back!)

Name _____ **Class** _____

(First and last name, please!) **Solutions due: April 11th**