CMSC21 Lab Exercise 11 – More recursion!

1. Write a recursive function that computes the nth fibonacci number fib(n):

a) 0, if n == 1
b) 1, if n == 2
c) fib(n-2) + fib(n-1)

2. Write a recursive function that computes x / y, where x and y are both natural numbers.

A natural is one of the following:

a) 0
b) n + 1 (where n is a natural)

3. This series of numbers is called A: 2, 5, 8, 11, 14, 17, 20 ...

Write a recursive function that computes the nth number in the series A. (You'll need a recursive definition of the series.)

A(1) = 2
A(5) = 14

4. Write a recursive function that computes for the sum of the digits of an integer.

5. Write a recursive function that returns true if a given integer is a palindrome.