CS 124

Unit 2 Test Practice Problems

1. Write a program that prompts the user for a real number and continues prompting for a real number until the user types in a negative number. The program should then display the average of all the numbers (except the last negative number entered. For example:

   Enter a number: 3.2
   Enter a number: 4.7
   Enter a number: 9.1
   Enter a number: -1
   The average is: 5.7

   If the first number entered is a negative number, then you can assume the average is 0.0. The result should be displayed with precision of 1. When you write the program, you should have at least 1 function in addition to your main.

2. Write a program that asks the user to enter the number of bacteria cells (whole number) and the number of minutes to run a simulation. The bacteria cells will split causing them to double in number every minute. For example, if you started with 5 cells, they would become 10 cells after one minute, 20 cells after two minutes, 40 cells after three minutes, and so on. The program should display the total cells that will exist after the time provided. For example:

   Enter number of starting cells: 10
   Enter number of minutes: 5
   Total cells: 320

   You do not need to do error checking for negative number inputs. When you write the program, you should have at least 1 function in addition to your main.

3. Write a program that prompts the user for a positive whole number. The program will then display all multiples of that number (i.e. all numbers that even divide the original number). For example:

   Enter a positive number: 32
   32
   16
   8
   4
   2
   1

   If a negative number is entered in, then no multiples should be displayed. Each multiple should be listed on a separate line and in decreasing order. When you write the program, you should have at least 1 function in addition to your main.