**CSCI 1081, MATLAB Assignment 01**

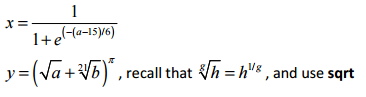
1. Create a script called Problem01.m that does the following:

Make the following variables

a = 10

b = 2.5 ×1023

Using these variables, calculate



Display the values of x and y.

1. Create a script called Problem02.m that does the following:

Create and display the following vectors and/or results.

1. A row vector A of size 6 with these values: 10,20,30,40,50,60
2. A column vector B of size 6 with random numbers
3. The transpose of A.
4. A new vector C that stores the inverse (i.e. 1/x) of each value x in A (hint .^ -1)
5. A multiplied elementwise by the C.
6. The sum of the values in A.
7. A multiplied by B.
8. Create a script called Problem03.m that does the following. Create the following matrices. For h, use an initialization expression.

g = 1 1 1 1

2 2 2 2

3 3 3 3

h = 2 2 2 2

2 2 2 2

2 2 2 2

Then, display the following:

1. g added to h
2. each element in g multiplied by the corresponding element in h
3. each element in g multiplied by 10
4. the square root of each element in g
5. g multiplied by transpose of h (i.e. matrix multiplication)
6. Display the last two rows of h.
7. Create a script called Problem04.m that does the following. For each part display the results.
   1. Write a loop to calculate the sum 1\*2+2\*3+3\*4+ ... + 99\*100.
   2. Create a loop to calculate the sum 1+2+3+...+300.  Display the total after each 50 (i.e. 50, 100, 150 …).
   3. Using nested loops, produce a 3 by 3 (square) matrix A. The matrix should look like this:

0 1 2

3 4 5

6 7 8

* 1. Create a function *multiply* that multiplies it’s three arguments and returns the result. Test with 1,2,3.