**5.3 Lab Warm Up Assessment:**

**1) Evaluate the following MATLAB expressions. Where x,y,z have values equal to**

**2.5, 0.5 and 2 respectively.**

**part (A)**

a = x + y + z

disp(a)

**part (B**)

a = x \* y \* z

disp(a)

**part (C)**

a = x / y

disp(a)

**part (D)**

a= x ^ y

disp(a)

**part (E)**

a=x ^ z

disp(a)

2) **Given two sides a = 3.2 and b = 4.6 of a triangle and angle theta = 60 between these two sides, find the**

**length of the third side and the arc of the triangle.**

**a=3.2;**

**b=4.6;**

**theta=60.0;**

**theta=theta\*pi/180.0;**

**c=sqrt(a^2 + b^2 - 2\*a\*b\*cos(theta));**

**arc=O.5\*a\*b\*sin(theta);**

**the answer is**

**c=4.08**

**arc=6.37**

**3) Write a program to convert temperature given in degrees Centigrade, say 35.4 C, to degrees Fahrenheit.**

a = 35.4;

b = (a \* (9/5))+ 32

disp(b)

**5.4 Exercise**

**5.4.1 Exercise 1**

**Evaluate the following MATLAB expressions. Where i,j,k and l have the following values:**

i = 1;

j = 2;

k = 3;

l = 4;

**exercise 5.4.1 (A)**

**a = i\*j + k\*l**

**disp(a)**

**%exercise 5.4.1 (B)**

**a = i+(j+k)\*l**

**disp(a)**

**%exercise 5.4.1 (C)**

**a=(i\*j)+(k/l)**

**disp(a)**

**exercise 5.4.1 (D)**

**a=(i+j)\*i^j**

**disp(a)**

**5.4.2 Exercise 2**

**Evaluate the following MATLAB expressions. Where x = 3-4i and y=1+2i.**

**x = 3-4i;**

**y = 1+2i;**

**(A)**

**a= x+y**

**disp(a)**

**(B)**

**a = x-y**

**disp(a)**

**C)**

**a = x\*y**

**disp(a)**

**(D)**

**a = x/y**

**disp(a)**

**(E)**

**a = x^y**

**disp(a)**

**5.4.3 Exercise 3**

**Write a program to solve Quadratic Equation in MATLAB.**

**a = 50.0;**

**b = -20.0;**

**c = 90.0;**

**d = b - (sqrt((b^2) - (4\*a\*c)));**

**e = b + (sqrt((b^2) - (4\*a\*c)));**

**f = d/2\*a;**

**g = e/2\*a;**

**disp(f)**

**disp(g)**

**5.4.4 Exercise 4**

**Write a program to solve Distance formula in MATLAB.**

**x1 = 1**

**x2 = 2**

**y1 = 3**

**y2 = 4**

**a = ((x2-x1)^2)+((y2-y1)^2);**

**b = sqrt(a);**

**disp(b)**

**5.4.5 Exercise 5**

**Write a program to solve mid-point in MATLAB.**

**x1 = 1**

**x2 = 2**

**y1 = 3**

**y2 = 4**

**a = (y2-y1)/(x2-x1);**

**disp(a)**