(a) Write a function that receives 5 integers and returns the sum, average and standard deviation of these numbers. Call this function from **main( )** and print the results in **main( )**.

(b) Write a function that receives marks obtained by a student in 3 subjects and returns the average and percentage of these marks. Call this function from **main( )** and print the results in **main( )**.

(c) Write a C function to evaluate the series

$$\sin(x) = x - (x^3/3!) + (x^5/5!) - (x^7/7!) + \cdots$$

up to 10 terms.

(d) Given three variables **x**, **y**, **z** write a function to circularly shift their values to right. In other words if x = 5, y = 8, z = 10, after circular shift y = 5, z = 8, x =10. Call the function with variables **a**, **b**, **c** to circularly shift values.

(e) If the lengths of the sides of a triangle are denoted by **a**, **b**, and **c**, then area of triangle is given by

$$area = \sqrt{S(S-a)(S-b)(S-c)}$$

where, S = (a + b + c) / 2. Write a function to calculate the area of the triangle.

(f) Write a function to compute the distance between two points and use it to develop another function that will compute the area of the triangle whose vertices are **A(x1, y1)**, **B(x2, y2)**, and **C(x3, y3)**. Use these functions to develop a function which returns a value 1 if the

point (x, y) lines inside the triangle ABC, otherwise returns a value 0.

(g) Write a function to compute the greatest common divisor given by Euclid's algorithm, exemplified for J = 1980, K = 1617 as follows:

1980 / 1617 = 1	1980 – 1 * 1617 = 363
1617 / 363 = 4	1617 – 4 * 363 = 165
363 / 165 = 2	363 – 2 * 165 = 33
5 / 33 = 5	165 – 5 * 33 = 0

Thus, the greatest common divisor is 33.