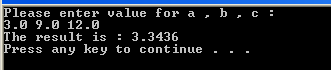
**Practical 7**

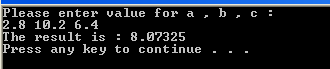
1. With reference to the following equation:



Write a function to determine *x* based on the input from user of the *a, b* and *c* values. You should use the predefined maths function provided by C++.

**Sample output:**

****

****

1. Write a program that is able to triple the value that user entered in the main function. The operation of tripling the value shall be done:
2. In a function int triple (int x) in which this function shall perform the operation and return the value.
3. In a function void triple (int x, int &result). In which this function shall perform the operation and no value needs to be returned as the result is pass by reference.
4. With reference to the above functions, explain the main difference between pass by value and pass by reference.
5. Write a program that calculates the sum of the digits in an integer. Implement your function using the following signature:

int SumD (int n)

For example SumD(123) will yield the return result of 1+2+3 = 6. Implement a

full program that would prompt the user the value of n and display the result

accordingly.

1. Write a program that will prompt a user whether he/she wants to calculate area for

a circle, triangle and rectangle. Write three functions following the type of polygon

chosen. Once the selection is made, the program then will invoke the relevant

function. In the respective function, the user shall be prompted with the necessary

input of variables like radius, width, length, base or height.

1. Write a program that is able to evaluate simple mathematical operations like

*addition (+), subtraction (-), division (/) and multiplication (\*).*

User of the program only needs to input two numbers and the operation that the user

wants to execute. The program will then generate the result of the operation for the

two numbers. The program needs to be implemented using four (4) funtions

*(add, subtract, multiply and divide)*

Following is the intended outcome of the program:

**Please enter your selection of operations:**

**1) Addition (press 1)**

**2) Subtraction (press 2)**

**3) Multiplication (press 3)**

**4) Division (press 4)**

**Your choice: 1**

**Type in your expression:**

**23 + 27**

**Result is 50**

If there is operation that involved Division by zero, the system would notify the user

with the following message *“Division by zero”*. All the functions are needed to accept two arguments as entered by the user for the necessary operation. The functions need to return the result of the operation. The program needs display result of the operation.