 **Foundation Certificate in Information Technology**

**Semester 1**

**Tutorial 04 – Developing an algorithm**

In the following problems, you will need to:

* Define the problem by constructing a **defining diagram**
* Create a solution algorithm using **pseudocode**
* Desk check the solution algorithm using a **valid** **test case**.

*Sample Output:*

**First Number: 10**

**Second Number: 5**

**Sum = 15**

* + 1. Write a pseudocode to do the followings,

1. Accept two integer numbers as user input
2. Calculate and display the sum of two numbers
   * 1. Write a pseudocode to input radius of a circle from user and display diameter, circumference and area of the circle.

*Sample Output:*

**Enter the radius of a circle: 10**

**Diameter = 20**

**Circumference = 62.79**

**Area = 314**

**Circumference = 2\*PI\*R**

**Area=PI\*R\*R**

**Diameter= 2\*R**

* + 1. Write a pseudocode to input length in centimeter and convert it to meter and kilometer.

Input

**Enter length in centimeter = 1000**

Output

**Length in meter = 10 m**

**Length in kilometer = 0.01 km**

* + 1. Write a pseudocode to accept two integers from the user as dividend and divisor and display the quotient and reminder

**Enter dividend: 25**

**Enter divisor: 4**

**Quotient = 6**

**Remainder = 1**

* + 1. Write a pseudocode which accept 4-digit integer number a display it according to the reverse order

**Enter an integer: 2345**

**Reversed Number = 5432**

* + 1. You require an algorithm that will receive an integer from the screen, add 5 to it, double it, subtract 7 from it, and display the final number to the screen.

**Enter an integer: 10**

**Answer = 23**

* + 1. Write an algorithm that will receive two integer numbers from the terminal, and display to the screen their sum, difference, product and quotient.

**Enter two integers: 10 2**

**Sum = 12**

**Difference = 8**

**Product = 20**

**Quotient = 5**