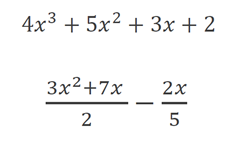
**Lab Task 1 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [2]**

Write a program which evaluates the following three expressions for when x = 1,2,3,4 and 5.



**Lab Task 2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]**

Write a program that reads in two integer inputs, then determines and prints if the first is a multiple of the second. To input a variable, use the following syntax:

***variable = input(“prompt\_message”)***

**Lab Task 3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]**

Write a program that prompts the user for two numbers as input. Then, the program must compare the two numbers and print if they are equal or not. If the numbers are not equal, it must also print which number is greater (or lesser) than the other. The syntax for conditional statements is given as follows:

**if *condition*:**

***statement\_1***

***else:***

***statement\_2***

**Lab Task 4 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]**

Write a program that takes two numbers as inputs. Then, the program must compare the two numbers and print appropriately from among the following lines:

* Both numbers are positive
* Both numbers are negative
* Both numbers are zero
* At least one number is zero
* One number is positive and the other number is negative

**Lab Task 5 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]**

Write a program that calculates the factorial of a number. To calculate the factorial, you will need to make use of a *while* loop. The syntax of the while loop is given as follows:

**while *condition*:**

***statement\_1***

***statement\_2***

**Lab Task 6 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]**

Write a function that takes 2 integer arguments and returns their product but you must **NOT** use the product operator (\*). You will need to provide the function definition and the function call. (Hint: You need to make use of loops in your function.) The function definition syntax is given below:

**def *function\_name*:**

***statement\_1***

***statement\_2***

***…***

***return output***

**Lab Task 7 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]**

Write a program that prompts the user for 3 strings variables. The user will input the strings separately at the prompt, e.g. “TRI”, “GONO” and “METRY”. The strings will then be passed to a function as arguments. The function must use a *for* loop to iterate through the characters and print each character on a new line. The function must also print the total number of characters in the final string. For this, you can use the len() function The for loop syntax is given as follows:

**for index in *iterable*:**

***statement\_1***

***statement\_2***

**Lab Task 8 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]**

Write a program that generates the following number sequences and print the output. You can use the range() function for this task. Use a loop to invoke the range function iteratively.

1, 2, 3… 20

2, 4, 6… 40

3, 6, 9… 60

4, 8, 12 … 80

…

10, 20, 30… 200