Computer Assignment 1

Introduction to Python (Part 1)

1. Write a simple program to solve these mathematical operations with combination of string and integer/floating values:

    a) $y = 2x + 4x^2 + 6x^2$ where $x = 2$
    b) $y = \left(\frac{1 - \cos x}{x}\right)$, where $x = 1$
    c) $y = e^x$, where $x = 1$

2. Write a simple program using loop for the following mathematics operation $\sum_{i=0}^{n} x_i$, and test for $n = 10, 100$ and 1000.

3. Solve the following function by using 'def' in python program
    a) $f(x) = \sin(x), \ x \in [0, \pi]$
    b) $f(x) = e^{-x}, \ x \in [0,1]$
    c) $f(x) = x^2 e^{-x}, \ x \in [0,2]$
    d) $f(x) = x^{5/2}, \ x \in [0,1]$