Instructions: For each part of this Lab, first create a Maple Program that carries out the requested procedure. Then use it to compute the requested operations. You may want to double check your answers using other Maple commands.

1. Create a Maple Procedure that computes the average of 5 numbers. Use your procedure to compute the average of the following data sets:

   (a) $\{94, 78, 85, 64, 87\}$

   (b) $\{4.235, 7.827, 6.921, 11.502, 16.175\}$

2. Create a Maple Procedure that takes as input two integers k and n and prints the integers from k to $k+n$ in order. Hint: use a while loop, an incrementing variable, and the command: $print(evalf(i))$ where i is a local variable.

   (a) Use your procedure to print the integers from 1 to 10

   (b) Use your procedure to print the integers from 25 to 50

3. Create a Maple Procedure that find the Right Rectangle Riemann Sum for a function on a given interval and a specified number of equally spaced subdivisions. Use your procedure to compute a Right Rectangle Approximation for the following:

   (a) $f(x) = e^{-x^2}$ on $[-10, 10]$ with $n = 50$.

   (b) $f(x) = \sqrt{\tan x}$ on $[0, 1]$ with $n = 100$

4. Create a program to find Trapezoid Rule Approximations and use it on the same pair of functions.

5. Create a program to find Simpson's Rule Approximations and use it on the same pair of functions.