MATH 0290 SEC 1050 Introduction to Differential Equations
HW# 2 Due Friday September 4th 11:59pm EST

Questions from Polking, Boggess and Arnold, *Differential Equations with Boundary Value Problems*, second edition

Chapter 6.1 #3, 5
Chapter 6.2 #23

*If you use a Matlab code, Excel file for similar, please include that file in your submission (not a photo of the Excel file. I want to check to make sure the equations in it are correct). Otherwise, please show your calculations.

6.1
For each initial value problem, hand calculate the first five iterations of Euler's method with step size $h = 0.1$. Arrange your results in tabular form similar to the one set up in Exercise 1.

3. $y' = ty, \quad y(0) = 1$

5. $z' = x - 2z, \quad z(0) = 1$

6.2
23. Compute by hand the first three iterations using the fourth-order Runge-Kutta method with step size $h = 0.1$. Arrange your results in tabular form similar to the one set up in Exercise 1

$$z' = x - 2z, \quad z(0) = 1$$