Homework Assignment 2  
Math 472, Numerical Analysis II  
Prepared by Dr. Kareem Elgindy  
Due Date: 04:45 PM on 09/10/2019

“In the following questions retain at least FIVE decimal digits in all arithmetic operations of your answers. Use rounding to the nearest to round all your approximations.”

Question 1. [3 marks] Solve Question 1.a. in Exercise Set 3.4 of the Textbook. (Use Theorem 3.9 only.)

Question 2. [3 marks] Solve Question 3.a. in Exercise Set 3.4 of the Textbook. (Find also the truncation error bound.)

Question 3. [4 marks] Solve Question 8 in Exercise Set 3.4 of the Textbook using the divided-differences.

Question 4. [3 marks] Solve Question 11 in Exercise Set 3.5 of the Textbook.

Question 5. [3 marks] Solve Question 21 (a, b, and c) in Exercise Set 3.5 of the Textbook.

Question 6. [4 marks] Solve Question 27 in the Textbook using MATLAB software. (Plot the three curves in the same figure window.)