1 PE 3013 - Exam 3

Open Book, open notes, closed neighbor; no cell phones or internet access until you complete the exam. Save you file as ***Your_Name_Exam3.xls*** *and e-mail the results to lgt@utulsa.edu;* ***copy yourself*** *to make sure that the attachment came.* **Save your file before you try to run or debug! Example results are in the shares folder - see Exam3_Template.xls.**

If you do not Indent and Comment your Code you will lose 5 points

Use Newton's method to solve the following problems:

1. $$\sin x = x^3 + 1;\ x = -1$$

2. $$x = \ln x + 3;\ x = 2$$

3. $$x^3 - x - 1 = 0;\ x = 5$$

4. $$\sin x = x - 2;\ x = 2.5$$

Make sure to issue a warning message if the system did not converge. (Test your error message by using $x = 100$ as a guess for problem 4.) Write 1 function for each problem, then write 1 extra function that I can call from my sheet to solve any problem that the user selects.