Homework 3

MATH 5610 FALL 2016

NAME: GRADE:_____

Problem 1. Implement a code that will find roots of a function of one variable using the Bisection method. Make sure your code tests the input to the algorithm for errors that might occur.

Problem 2. Implement a code that will find roots of a function of one variable using Functional Iteration. Make sure that the code checks for any possible errors in the input to the algorithm.

Problem 3. Implement a code that will find roots of a function of one variable using Newton's method. Make sure that the code checks for any possible errors in the input to the algorithm.

Problem 4. Implement a code that will find roots of a function of one variable using the Secant method. Make sure that the code checks for any possible errors in the input to the algorithm.

Problem 5. Implement a code that will find roots of a function of one variable using hybrid method that starts using the Bisection method and then switches to Newton's method. Make sure that the code checks for any possible errors in the input to the algorithm.

Problem 6. Complete Problem 1. at the end of Chapter 3 in the textbook.

Problem 7. Complete Problem 2. at the end of Chapter 3 in the textbook.

Problem 8. Complete Problem 4. at the end of Chapter 3 in the textbook.

Problem 9. Complete Problem 7. at the end of Chapter 3 in the textbook.

Problem 10. Complete Problem 10. at the end of Chapter 3 in the textbook.
