

Math 261 Fall 2011  
Assignment #4

This assignment is due at the beginning of class on Friday, October 14, 2011.

- 1.** Implement the bisection method algorithm distributed in class to solve Exercise #6 on page 54 in MATLAB (or OCTAVE). Be sure to hand in a copy of your computer code and clearly indicate your solutions.
- 2.** Implement the bisection method algorithm distributed in class to solve Exercise #20 on page 55 in MATLAB (or OCTAVE). Be sure to hand in a copy of your computer code and clearly indicate your solutions.
- 3.** Write a Newton's method algorithm in MATLAB (or OCTAVE) based on Algorithm 2.3 on page 68. Implement your algorithm to solve Exercise #6 (a), (b), and (e) on page 75. Be sure to hand in a copy of your computer code and clearly indicate your solutions.
- 4.** Implement your Newton's method algorithm to solve Exercise #26 on page 77 in MATLAB (or OCTAVE). Be sure to hand in a copy of your computer code and clearly indicate your solutions.
- 5.** Write a secant method algorithm in MATLAB (or OCTAVE) based on Algorithm 2.4 on page 72. Implement your algorithm to solve Exercise #8 (c), (d), and (f) on page 75. Be sure to hand in a copy of your computer code and clearly indicate your solutions.
- 6.** Write a method of false position algorithm in MATLAB (or OCTAVE) based on Algorithm 2.5 on page 74. Implement your algorithm to solve Exercise #12 on page 76. (Note that you just need to use the method of false position to solve this problem. Do not apply the bisection, secant, or Newton's method to it.) Be sure to hand in a copy of your computer code and clearly indicate your solutions.