1. Chapter 2.3 Problem 3, Page 106

2. Chapter 2.3 Problem 4, Page 106

3. Chapter 2.4&2.5&2.6 Problem 6, Page 119-129-139
   An initial value problem and its exact solution $y(x)$ are given. Apply Euler’s and the improved Euler method to approximate to this solution on the interval $[0, 0.5]$ first with step size $h = 0.25$, then with step size $h = 0.1$. Construct a table showing 5-decimal place values of the approximate solutions (Euler’s, the Improved Euler, the Runge Kutta) and an actual solution at the point $x = 0.5$.

   $y' = -2xy. \quad y(0) = 2; \quad y(x) = 2e^{-x^2}$

4. Chapter 3.1 Problem 6, Page 155

5. Chapter 3.1 Problem 40, Page 156

6. Chapter 3.1 Problem 54, Page 157