1. See Fall 2013 exam 3:
   http://www.math.colostate.edu/~calc/MATH160/exams/M160Exams_Fall2013.pdf

2. Page 254 #9-14; page 255 #19

3. Page 219-221 #1-11, 14, 15, 20, 22; page 241 #51-55, 59

4. Page 238 #1-88, 91-94, 95

5. Page 236-237 #17-48, 61-64

6. Page 271 #15-22

7. Page 202 #63-66

8. Page 212 #93-96

9. The following questions are going to be about the function, \( f(x) \), in the picture below.

   (a) Draw rectangles using the subintervals provided and left endpoints. Write the Riemann Sum that represents the area of the rectangles you drew.

   (b) Draw rectangles using the subintervals provided and right endpoints. Write the Riemann Sum that represents the area of the rectangles you drew.

   (c) Draw rectangles using the subintervals provided and midpoints. Write the Riemann Sum that represents the area of the rectangles you drew.

   (d) Discuss the value (positive, negative, or zero) for each of the following

   i. \( \int_{x_0}^{x_6} f(x)dx \)
   ii. \( \int_{x_0}^{x_5} f(x)dx \)
   iii. \( \int_{x_0}^{x_3} f(x)dx \)

10. Page 241 #23-32. (1) Find critical points, (2) Determine intervals of increasing, decreasing, and constant, (3) Determine intervals on which the function is concave up and concave down, (4) Identify all extrema by using the first or second derivative test, (5) Identify inflection points, (6) Sketch the graph (see also sections 4.3 and 4.4 in your textbook for more problems)

11. Know definitions and theorems from the relevant sections

   • Rolle’s Theorem
   • The Mean Value Theorem
   • Increasing, Decreasing, Constant
   • Critical Point
   • First and Second Derivative Tests
   • Concave Up, Concave Down
   • Inflection Point (or Point of Inflection)

   • Antiderivative
   • Initial Value Problem, General Solution, Particular Solution
   • Integral
   • Upper Sum, Lower Sum
   • Right Endpoint Estimation, Left Endpoint Estimation, Midpoint Estimation
12. Note: Be sure to check endpoints when solving optimization problems!!