# MATH 151 Homework 22
## Due 4/15

Read Sections 4.10 and 5.1

Do Section 4.7 Exercise 30
Do Section 4.10 Exercises 3, 23, 29, 37
Do Section 5.1 Exercise 4

Also, do the following exercises.

**SF52.** Use four equal width rectangles to estimate the area under the parabola $y = x^2$, above the $x$-axis, and to the left of the line $x = 1$. Do this three ways:

    (a) Use the height of the parabola on the right side of the rectangle for the height of each rectangle (compute $R_4$). Is this an overestimate or underestimate?

    (b) Use the height of the parabola on the left side for the height of each rectangle (compute $L_4$). Is this an overestimate or underestimate?

    (c) Use the height of the parabola in the middle of the rectangle for the height of each rectangle. Is this an overestimate or underestimate?