COMP 210, Spring 2002, Homework 1
Due Wednesday, January 23 at the start of class

Before you start the homework, you should remind yourself of our General Advice, Advice on Homeworks, and Grading Guidelines. All are available from the class web site (http://www.owlnet.rice.edu/~comp210).

You should turn in one copy of the homework for your team (not one per person). Clearly print the names of both team members on the homework. Staple together all of the pages (before you get to class).

Read Sections 1 through 4 of the book.

1. (1 point) Put the following expressions into Scheme's prefix notation. Type the results into Dr. Scheme's interactions window and see if you get the expected results.
   a) 17
   b) 17 * 12
   c) 170 – 5 * 12
   d) 5 * 6 * 7 * 8
2. (2 points) Hand evaluate the following Scheme expressions. After you are done, type them into the interactions window in Dr. Scheme to confirm your results.
   a) (- (* 3 5) 20)
   b) (* pi (* 10 10))
   c) (+ 73 false)
   d) (/ 12 0)
3. (1 point) Go to the definitions window and type in the four functions from Lecture 2: **Owe**, **Wage**, **Area**, and **ToppingArea**. Click the execute button. Go to the interactions window, and invoke each function on two different arguments.
4. (1 point) Write a function **Rectangle** that consumes a height and a width, and produces the area of a rectangle of that size. Be sure to write down the contract and purpose. Test your program on several inputs. Hand evaluate the expression

   (Rectangle 10 15)