Homework for Week 10
November 24-26, 2008

Written Homework

Your carefully written solutions to the following questions will be due at the beginning of
class on Monday, December 1. Show all of your work, and explain your steps as if you
were teaching someone else how to solve these problems.

1. Simplify each of the following expressions by hand. Do not use a calculator. Show all
   your work.

   (a) \( \left(8^{\frac{2}{3}}\right)^{\frac{3}{2}} \)
   (b) \( x^{\frac{1}{2}} \cdot x^{\frac{1}{5}} \)
   (c) \( \left(\frac{16}{7}^{\frac{1}{3}}\right) \)
   (d) \( x^{\frac{1}{2}} \left(x^{\frac{2}{3}} + x^{\frac{1}{4}}\right) \)
   (e) \( \frac{11^{\frac{1}{2}}}{13^{\frac{1}{2}}} \)

2. On a certain day, a gas station in Vancouver, B.C. was selling gas for 90.9 cents (Canadian)
   per liter. The currency conversion rate was $1.00 U.S. = $1.19 Canadian. Also, one liter is
   equal to 1.057 quarts, and there are four quarts in one gallon. What was the price of the
gas in U.S. dollars per gallon? Give your answer to the nearest tenth of a cent.

3. I plan to put compost on a raised bed in my garden. The raised bed is a rectangle, 8 feet
   long and 6 feet wide. I want to make the compost 3 inches deep. The compost is sold in
   bags of 1.5 cubic feet each. How many bags do I need to buy? (In your answer, remember
   that I can only buy a whole number of bags.)

Daily Practice Problems

You should do the suggested reading below and attempt these exercises after class each day.
You will not submit solutions to these questions for grading, but you may use them as notes
during the weekly quizzes.

After class on Monday, November 24, read Section 9.5 and work the following exercises:
Section 9.5, # 11, 19, 39, 43, 49, 57

After class on Tuesday, November 18, read the handout on ‘Unit Analysis’ and work the
following exercises:
Exercises # 1-7 from the handout