

CHEM 115  
Winter 2000

HOMEWORK #3

**Due:** Jan 25, 2000  
(in sections)

Write answers to the following problems:

Text Chapter 3 :

\*Review Problems (on p. 164-165): 2, 3, 4, 5, 6, 7, 8, 10, 12

\*Within the chapter problems (found on page \_\_\_): answers back of text

3-1 (p.89), 3-6 (p.95), 3-8 (p.101), 3-12 (p.107)

Chemistry in your daily life: "Proving that your annual auto emissions weigh more than your vehicle"

Data needed (for your vehicle, or your family's vehicle):

\*Approx weight (lbs) of the vehicle.

\*Average miles driven per year.

\*Average fuel efficiency (miles per gallon of gasoline).

Estimate the total weight of CO<sub>2</sub> produced by your vehicle per year and compare it to the weight of the vehicle. (Unless you drive a very fuel-efficient vehicle, even the weight of the fuel carbon alone will exceed the vehicle weight).

(Note: Each gallon of gasoline weighs about 5 lbs, producing  $(44/12)*5$  or 18 lbs of CO<sub>2</sub> exhaust)