Name:_____   **Period:** _____   **Date:** _____

Dimensional Analysis #2 and Chapter 2

Do the following problems from Chapter 2 Review (p 63-65) #88, 89, 90, 91, 92, 101, 104, 105, 106, . (40 pts)
Show all work for the following <u>dimensional analysis</u> problems. (5 pts each)

1) How many nanometers cubed do you have in 4.36 x 10^{-3} meters cubed? **(4.36 x 10^{24} nm^3)**

2) Some species of paramecium can move at the rate of 1.00 x 10^3 micrometers per second. What is the equivalent in kilometers per hour? **(3.60 x 10-3 km/hr)**

3) A certain fuel burns to give 15% ash. How many pounds of fuel need to be burned to produce 120 kilograms of ash? (2.2 lb = 1 kg) **(1.8 x 10^3 lb)**

4) A tile floor has a pattern which requires 4 red tiles for every 17 blue tiles. If there are a total of 7749 tiles in the floor, how many of these are red? **(1476 red tiles)**

5) An automobile gets 21.5 miles to the gallon of gasoline. How many kilometers per liter is this equal to?
(1 in = 2.54 cm; 1 mi = 5280 ft; 4 qt = 1 gal; 1 liter = 1.06 qt) **(9.17 km/L)**

6) Gold is currently sold for $1330 per ounce. How many milligrams of gold could you buy for a nickel?
(16 oz = 1 lb; 454 g = 16 0z) **(1.07 mg)**