Chem I Name _____

Date _____ Per ____

Worksheet # C6: The Density of Liquids

1. What is the formula for density? _____

2. What is the mathematical principle behind conversions? _____

_____

Equalities:

1.000 pounds = 453.59 grams 1 cm^3 = 1 cc = 1 mL

1.000 grams = 0.0353 ounces 1.000 teaspoons = 4.9289 mL

1.000 gallons = 4.0000 quarts = 16.000 cups = 3.7854 liters

3. A glass cylinder on the contains four liquids. Given the following information about each of the liquids, determine each of their densities. Then draw a picture of the cylinder and label it to show which layer is which liquid.

a. 150. mL of Liquid A has a mass of 129 grams.

b. 2.664 pounds of liquid B would fill up 4.56 cups.

c. 3.56 teaspoons of liquid C weighs 0.490 ounces

d. 1.00 kg of liquid D would have a volume of 1.00 L

4. Conversion practice

Equalities:

1.000 pounds = 0.45359 kilograms = 453.59 grams 1 cm^3 = 1 cc = 1 mL

1.000 grams = 0.0353 ounces 1.000 teaspoons = 4.9289 mL

1.000 gallons = 16.000 cups = 3.7854 liters

1.000 inch = 2.54 cm 1.000 mile = 5,280.00 feet = 1.6093 km

a. How many inches are in 1.00 kilometer?

b. How many teaspoons are in 1.00 cup?

c. The density of water is 1.00 g/mL. How many pounds would 1.00 gallon of water weigh?

d. How many kilograms would an 8.00 pound baby weigh?

e. A quarter has a width of 2.38 cm. If you had enough quarters to make a row of them 1.000 mile long, how rich would you be? (Answer in dollars.)