

WORKSHEET 2

Chemistry 110

Name _____

(last)

(first)

Due date: _____

A. Perform the following conversions, giving complete set-ups, including all units, and using correct significant figures. All work must be shown. Use the conversion factors on the handout given to you in class.

1. 4.55×10^{-16} centimeters to yards 1. _____

2. 13.5 kilograms to micrograms 2. _____

3. 7.33 milliliters to deciliters 3. _____

4. 46001 cubic millimeters to cubic centimeters 4. _____

5. 1.2×10^{12} grams to ounces 5. _____

6. 2.3×10^4 miles per hour to nanometers per second 6. _____

B. Solve the following problems, giving complete set-ups, including all units, and using correct significant figures. If work is not shown, NO CREDIT will be given for the correct answer. Use the conversion factors on the handout given to you in class.

1. Convert 99.5° C to Kelvin. 1. _____

2. A typical ice cube from the refrigerator measures 4.0 cm long by 3.5 cm high by 3.3 cm wide, and has a mass of 42.4 grams. Calculate the density of ice (solid water). 2. _____
3. The specific gravity of a piece of steel is found to be 7.0. Calculate the volume, in cubic millimeters, of 6573 g of steel. 3. _____
4. Aluminum has a density of 2.70 g/cm^3 .
- a. What is the volume, in mL, of 171 grams of aluminum? 4a. _____
- b. If 15.2 g of cork occupied the same volume as the aluminum sample in (a) above, what is the density of cork? 4b. _____
- c. Would one (1) kg of aluminum occupy a larger or a smaller volume than one (1) kg of cork? 4c. _____
5. The density of homogenized milk is 1.03 g/mL . What is the mass, in grams, of 2.0 cups of homogenized milk? 5. _____