

## Dimensional Analysis Worksheet

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

*Directions: Answer the following questions using dimensional analysis. Be sure to report your answer with the appropriate number of significant figures. You must show your work!!*

1. A bottle of water holds 0.5 liters. How many cL of water is this?
2. The world record for the long jump is 8.95 meters. How many decimeters is that?
3. A standard tennis ball has a mass of 57.0 grams. How many micrograms is that?
4. The heaviest weight ever lifted by a human is 51.7 kg. How many grams is that?
5. According to the Village of Endicott's annual water report, one of the wells that supplies water to residents contains 89.6 mg/L of sodium. How many g/L of sodium does the water contain?
6. The Pacific Giant Kelp is the longest growing kelp at 600 cm long. How many inches long is it? (1 inch = 2.54 cm)
7. The biggest piece of fudge ever created weighted 1367 kg. How many pounds was it? (1 lb = .454 kg)

8. Carbonated beverage bottlers usually put 355 mL of soda in a can. How many cups is that?  
(1 oz = 29.57 mL and 8 oz = cup)

9. How many seconds old are you? (round your age to the nearest .1 year)

10. Each liter of air has a mass of 1.80 grams. How many liters of air are contained in 2500 kg of air?

11. 1.0 grams of Doritos contains 5.0 calories. Each bag of Doritos contains 28.0 grams. How many bags would you need to eat in order to consume 2150 Calories?

12. The moon is 384,403 km from the earth. Estimate how many quarters laid end to end it would take to reach the moon if a quarter has a diameter of 2.3 cm.