

# EXERCISE 1

Chem 100  
(Due in lab \_\_\_\_\_)  
10 points

Name \_\_\_\_\_  
(last) (first)

Lab Section # \_\_\_\_\_ Lab Instructor \_\_\_\_\_

## A. METRIC-METRIC CONVERSIONS

1. How many centigrams are in 7,586 micrograms? 1. \_\_\_\_\_
2. How many liters are in 1.5 milliliters? 2. \_\_\_\_\_
3. How many micrometers are in 0.049 decimeters? 3. \_\_\_\_\_
4. How many millimeters are in 43.29 centimeters? 4. \_\_\_\_\_
5. How many kilograms are in 2,080 grams? 5. \_\_\_\_\_
6. How many deciliters are in 0.289 kiloliters? 6. \_\_\_\_\_
7. How many centigrams are in 12 decigrams? 7. \_\_\_\_\_
8. How many meters are in 596 centimeters? 8. \_\_\_\_\_

B. ENGLISH-METRIC CONVERSIONS. Use English-Metric conversion factors provided in your lecture outline to solve the following. (Some English abbreviations you might need: ounce = oz., pound = lb. quart = qt. mile = mi. foot = ft. yard = yd.)

**SHOW WORK**

1. How many grams are in 0.20 ounces? 1. \_\_\_\_\_
2. How many cubic inches are in 328 milliliters? 2. \_\_\_\_\_
3. How many kilograms are in 15.4 pounds? 3. \_\_\_\_\_
4. How many quarts are in 4.5 liters? 4. \_\_\_\_\_
5. How many square meters are in 960 square yards? 5. \_\_\_\_\_
6. How many kilometers are in 28 miles? 6. \_\_\_\_\_

7. How many feet are in 15 meters?

7. \_\_\_\_\_

8. How many inches are in 3.81 centimeters?

8. \_\_\_\_\_

C. Complete the following table.

°F	°C	K
	127	
		310
-40		
	15	
		258
80		

D. Solve the following density problems.

**SHOW WORK**

1. 40.0 mL of a substance has a mass of 30.0 grams.  
What is the density of the substance?

1. \_\_\_\_\_

2. Substance A has a density of 4.0 g/mL. What volume (in mL)  
would 12.0 grams of A occupy?

2. \_\_\_\_\_

3. Lead has a density of 11.3 g/mL. What is the mass (in grams)  
of a lead block that is 8 cm long by 5 cm wide by 2 cm high?

3. \_\_\_\_\_