

Name: _____

Review: Scientific Measurement

1. What is the difference between accuracy and precision?

2. Convert the values below. Write the answer with appropriate **units and sig figs**. Show your work.

$$1.60934 \text{ km} = 1 \text{ mi}$$

$$2.20462 \text{ lbs} = 1 \text{ kg}$$

$$0.264172 \text{ gal} = 1 \text{ L}$$

Convert 3.3 mi to cm:

Convert 349 g to lbs:

Convert 6.43 mL to gal:

3. How many significant figures are in the following values?

0.451 grams _____

600.0 grams _____

9.10×10^{-3} L _____

0.020220 m _____

1300 K _____

4. Solve the following problems using the correct number of significant figures in the answer (**don't forget units**):

$$65 \text{ grams} \div 2.113 \text{ mL} = \underline{\hspace{2cm}}$$

$$0.12 \text{ grams} + 12.998 \text{ grams} = \underline{\hspace{2cm}}$$

$$10.3 \text{ grams} - 0.07 \text{ grams} = \underline{\hspace{2cm}}$$

$$4500 \text{ mm} + 13.83 \text{ mm} = \underline{\hspace{2cm}}$$

$$16.84^\circ \text{ C} \div 22 \text{ sec} = \underline{\hspace{2cm}}$$

5. Convert the following numbers into scientific notation:

$$0.0000423 \underline{\hspace{2cm}}$$

$$2,400,000 \underline{\hspace{2cm}}$$

$$0.0091 \underline{\hspace{2cm}}$$

$$8,377 \underline{\hspace{2cm}}$$

$$0.06100 \underline{\hspace{2cm}}$$

6. Convert the following numbers into standard notation:

$$7.45 \times 10^7 \underline{\hspace{2cm}}$$

$$2.54 \times 10^{-5} \underline{\hspace{2cm}}$$

$$3.847 \times 10^{-4} \underline{\hspace{2cm}}$$

$$0.55 \times 10^{-1} \underline{\hspace{2cm}}$$

$$4.99 \times 10^5 \underline{\hspace{2cm}}$$