

OBJWS Sig Figs, Metrics (Measurement), and D.A. (Dimensional Analysis)
Chem 1 H. (Ch. 3)

1. Where do we obtain references for the metric system?
2. What does SI stand for? What is it used for?
3. List two reasons why the metric system is used.
4. List all the steps in problem solving.
5. Do the following problems by the factor-label method or D.A.
 - a. $21.35 \text{ dg} = \underline{\hspace{2cm}} \text{ cg}$
 - b. $5.1 \text{ L} = \underline{\hspace{2cm}} \text{ dL}$
 - c. $75.2 \text{ mL} = \underline{\hspace{2cm}} \text{ cL}$
 - d. $5130 \text{ mL} = \underline{\hspace{2cm}} \text{ L}$
 - e. How fast 55 miles/hr. expressed in m/sec? (1 mile = 5280ft and 2.54cm=1 in.)
6. Distinguish between quantitative and qualitative measurements.
7. Classify each as qual. or quant. Measurements.
 - a. length of a pool is 10m
 - b. a man lifts weights
8. What is the difference between accuracy and precision?
9. Determine the number of sig figs in each.
 - a. 4000. L
 - b. $5.430 \times 10^{-4} \text{ m}$
 - c. 0.00900g
10. Round to the correct amount of sig figs.
 - a. $520.0 \text{ m} \times 0.056 \text{ m} =$
 - b. $23.4 \text{ cm} + 0.0445 \text{ cm} + 13.33 \text{ cm} =$
11. If a baseball has a mass of 200g on earth, how much is its mass on the moon? How about the weight? (hint: 1/6)
12. TERM density, specific gravity

What is the density of an apple, if the apple has a mass of 4.5g and a volume of 0.44mL?
What has higher density? Sucrose or copper
13. What instrument is used to measure specific gravity? What are the units for measurement?
14. TERM: temperature, heat transfer
15. List 3 units of measurement for temperature.
16. What is the boiling point of water in C and K? Convert 264 K into degrees C.