

## CHAPTER 2 REVIEW

# *Measurements and Calculations*

### SECTION 2

**SHORT ANSWER** Answer the following questions in the space provided.

1. Complete the following conversions:

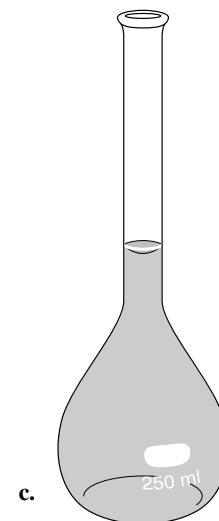
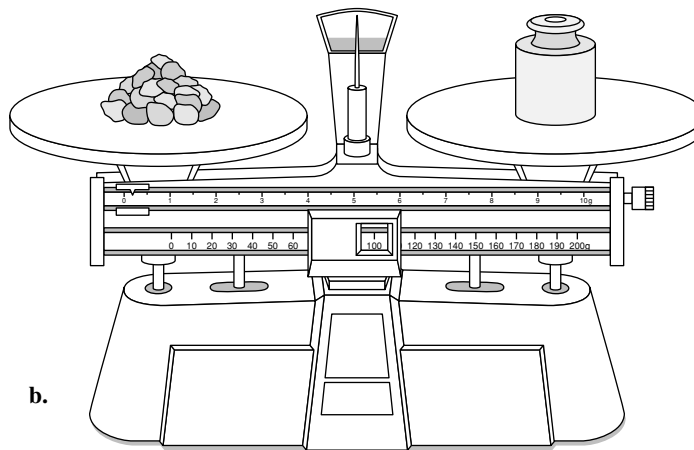
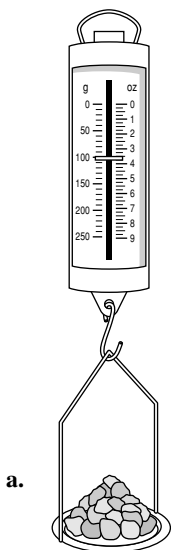
a.  $100 \text{ mL} = \underline{\hspace{2cm}} \text{ L}$

b.  $0.25 \text{ g} = \underline{\hspace{2cm}} \text{ cg}$

c.  $400 \text{ cm}^3 = \underline{\hspace{2cm}} \text{ L}$

d.  $400 \text{ cm}^3 = \underline{\hspace{2cm}} \text{ m}^3$

2. For each measuring device shown below, identify the quantity measured and tell when it would remain constant and when it would vary.




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**SECTION 2 continued**

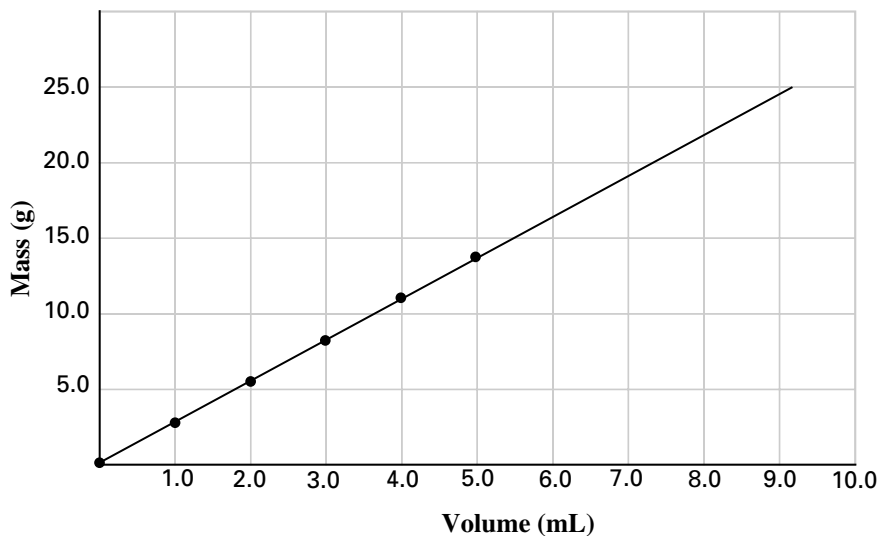
3. Use the data found in **Table 4** on page 38 of the text to answer the following questions:

- \_\_\_\_\_ a. If ice were denser than liquid water at 0°C, would it float or sink in water?
- \_\_\_\_\_ b. Water and kerosene do not dissolve readily in one another. If the two are mixed, they quickly separate into layers. Which liquid floats on top?
- \_\_\_\_\_ c. The other liquids in **Table 4** that do not dissolve in water are gasoline, turpentine, and mercury. Which of these liquids would settle to the bottom when mixed with water?

4. Use the graph of the density of aluminum below to determine the approximate mass of aluminum samples with the following volumes.

- \_\_\_\_\_ a. 8.0 mL
- \_\_\_\_\_ b. 1.50 mL
- \_\_\_\_\_ c. 7.25 mL
- \_\_\_\_\_ d. 3.50 mL

**Mass vs. Volume of Aluminum**



**PROBLEMS** Write the answer on the line to the left. Show all your work in the space provided.

5. \_\_\_\_\_ Aluminum has a density of 2.70 g/cm<sup>3</sup>. What would be the mass of a sample whose volume is 10.0 cm<sup>3</sup>?
6. \_\_\_\_\_ A certain piece of copper wire is determined to have a mass of 2.00 g per meter. How many centimeters of the wire would be needed to provide 0.28 g of copper?