3.4 **DENSITY**

Section Review

Objectives

- Calculate the density of a material from experimental data
- Describe how density varies with temperature

Key Term

- density

Key Equation

- Density $= \dfrac{\text{mass}}{\text{volume}}$

Part A Completion

Use this completion exercise to check your understanding of the concepts and terms that are introduced in this section. Each blank can be completed with a term, short phrase, or number.

The ratio of the mass of an object to its volume is its __1__.

Density is an __2__ property that depends only on the __3__

of a substance, not on the size of the sample.

1. _____

2. _____

3. _____

Part B True-False

Classify each of these statements as always true, AT; sometimes true, ST; or never true, NT.

_____ **4.** The density of a substance decreases as its temperature is increased.

_____ **5.** Density has units of grams per cubic centimeter.

Part D Questions and Problems

Solve the following problems in the space provided. Show your work.

6. A rock has a mass of 127 g and displaces 32.1 mL of water. What is the density of the rock?

_____

_____

7. A 1.00-L sample of carbon tetrachloride has a mass of 1.58 kg. What is the density of this substance in g/cm^3?

_____

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