

## Assessment

**Quiz**

2-2

**Section: Properties of Matter**

In the space provided, write the letter of the term or phrase that best completes each statement or best answers each question.

- \_\_\_\_\_ 1. Diamond is known for its  
a. hardness. c. reactivity.  
b. flammability. d. All of the above
- \_\_\_\_\_ 2. What is the density of a sample of liquid that has a volume of 125 mL and a mass of 200 g?  
a. 75 g/mL c. 1.6 g/mL  
b. 16 g/mL d. 0.625 g/mL
- \_\_\_\_\_ 3. Helium is used in balloons because it is  
a. reactive with rubber. c. flammable.  
b. lighter than air. d. a colored gas.
- \_\_\_\_\_ 4. A chemical property of copper is its  
a. density. c. color.  
b. reactivity. d. melting point.
- \_\_\_\_\_ 5. A physical property of gold is its  
a. density. c. nonflammability.  
b. reactivity with powerful acids. d. None of the above
- \_\_\_\_\_ 6. The mass of a 20 L sample of gas with a density of 0.04 mg/L is  
a. 0.08 mg. c. 8 mg.  
b. 0.8 mg. d. 80 mg.
- \_\_\_\_\_ 7. Aluminum is used in kitchen foil because it is  
a. very heavy. c. shiny.  
b. hard to bend. d. None of the above
- \_\_\_\_\_ 8. An object's volume can be found by dividing its mass by its  
a. pressure. c. density.  
b. temperature. d. weight.
- \_\_\_\_\_ 9. Which of the following is *not* a physical property of iron?  
a. melting point c. color  
b. ability to rust d. conductivity

# Concept Review

2-2

## Section: Properties of Matter

1. **Classify** each of the following as a physical or chemical property of sulfur.

- \_\_\_\_\_ a. Its density is  $2.97 \text{ g/cm}^3$ .
- \_\_\_\_\_ b. It reacts with hydrogen to form a gas.
- \_\_\_\_\_ c. It is a yellow solid.
- \_\_\_\_\_ d. Its melting point is  $112^\circ\text{C}$ .
- \_\_\_\_\_ e. It combines with oxygen.

2. **Classify** each of the following as a physical or chemical property of phosphorus.

- \_\_\_\_\_ a. It is a white, waxy solid.
- \_\_\_\_\_ b. It burns in air.
- \_\_\_\_\_ c. Its melting point is  $44.1^\circ\text{C}$ .
- \_\_\_\_\_ d. It has a density of  $1.82 \text{ g/cm}^3$ .
- \_\_\_\_\_ e. Its boiling point is  $280.3^\circ\text{C}$ .

3. **Explain** why aluminum is a suitable material to use in making cans based on its physical and chemical properties.

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4. **Calculate** the mass of a sample of pure silver (density =  $10.49 \text{ g/cm}^3$ ) that has a volume of  $12.99 \text{ cm}^3$ .

5. **Compute** the density of an 820 g sample of pure silicon occupying a  $350 \text{ cm}^3$  container.