

# Section Review

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## Elements

### USING VOCABULARY

1. Use *element* and *pure substance* in the same sentence.

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### UNDERSTANDING CONCEPTS

2. **Classifying** Compare the properties of metals and nonmetals.

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### CRITICAL THINKING

3. **Applying Concepts** From which category of elements would you choose to make a container that would not shatter if dropped? Explain your answer.

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4. **Making Inferences** List four possible properties of a substance classified as a metalloid. Can your list be used to classify an unknown substance as a metalloid? Explain your answer.

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# Section Review

## Compounds

### UNDERSTANDING CONCEPTS

1. **Identifying** What type of change is needed to break down a compound?

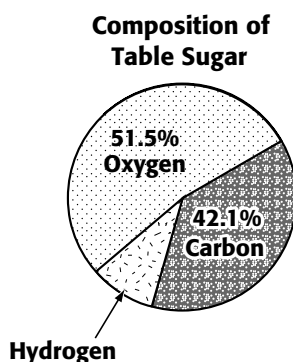
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### INTERPRETING GRAPHICS

The chart below shows the composition of table sugar in percent by mass. Use the chart to answer the next two questions.



2. **Evaluating** List the 3 elements that make up table sugar.

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3. **Analyzing** What percentage by mass of table sugar is hydrogen?

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**Section Review** *continued*

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**CRITICAL THINKING**

**4. Applying Concepts** Iron is a solid, gray metal. Oxygen is a colorless gas. When iron and oxygen chemically combine, rust is made. Rust has a reddish brown color. Why does rust differ from iron and oxygen?

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**CHALLENGE**

**5. Analyzing Ideas** A jar contains samples of the elements carbon and oxygen. Does the jar contain a compound? Explain your answer.

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Skills Worksheet

# Section Review

## Mixtures

### USING VOCABULARY

Correct each statement by replacing the underlined term.

1. The solvent is the substance that is dissolved.

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2. A measure of the amount of solute dissolved in a solvent is solubility.

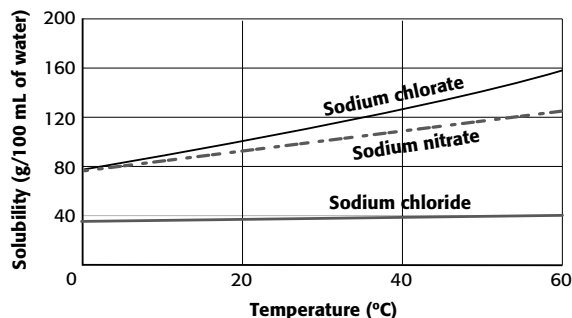
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### UNDERSTANDING CONCEPTS

#### Interpreting Graphics

Use the graph below to answer the next two questions.

**Solubility of Different Substances**



3. **Identifying** At what temperature is 120 g of sodium nitrate soluble in 100 mL of water?

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4. **Comparing** At 60°C, how much more sodium chlorate than sodium chloride will dissolve in 100 mL of water?

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5. **Analyzing** Identify the solute and solvent in a solution made of 15 mL of oxygen and 5 mL of helium.

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**Section Review** *continued*

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**CRITICAL THINKING**

**6. Applying Concepts** Soft drinks contain sugar and carbon dioxide. An open soda will lose carbonation. But, the soda will not become less sweet. Use the properties of the solutes to explain why.

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**7. Making Comparisons** What are three ways that mixtures differ from compounds?

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**CHALLENGE**

**8. Applying Concepts** Suggest a procedure by which to separate iron filings from sawdust. Explain why this procedure works.

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