Skills Worksheet)

Name

# **Vocabulary and Section Summary B**

# **Chemical Formulas and Equations**

## VOCABULARY

After you finish reading the section, try this puzzle! Use the definitions below to unscramble the vocabulary words.

**1.** a substance that forms in a chemical reaction

DORCUTP product

2. a combination of chemical symbols and numbers used to represent a substance

HACCILME	AFLOUMR	chemical formula
----------	---------	------------------

**3.** a representation of a chemical reaction that uses symbols to show the relationship between the reactants and the products

LEHCMACI NOQTEAUI

- 4. a substance or molecule that participates in a chemical reaction
  - AANETTCR reactant
- **5.** law that states that mass cannot be created or destroyed in ordinary chemical and physical changes

WAL FO VACESRONNOIT FO SAMS

the law of conservation of mass

## SECTION SUMMARY

### Read the following section summary.

- A chemical formula uses symbols and subscripts to describe the makeup of a compound.
- Chemical formulas can often be written from the names of covalent and ionic compounds.
- A chemical equation uses chemical formulas, chemical symbols, and coefficients to describe a reaction.
- A balanced equation has the same numbers and kinds of atoms on each side of the equation.
- A balanced equation shows the law of conservation of mass: mass is neither created nor destroyed during ordinary physical and chemical changes.

Skills Worksheet

# **Directed Reading B**

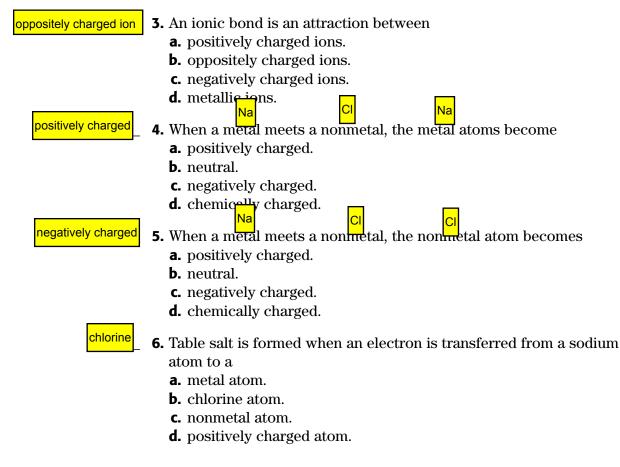
# Section: Ionic and Covalent Compounds

- **1.** What is a chemical bond?
  - **a.** the outermost energy level of an atom
  - **b.** the interaction that holds atoms and ions together
  - $\boldsymbol{\mathsf{c}}.$  a repeating three-dimensional pattern
  - **d.** a positively charged ion

#### valence electrons

- **2.** What are the electrons found in the outermost energy levels of an atom called?
  - a. valence electrons
  - **b.** ionic electrons
  - **c.** covalent electrons
  - **d.** compound electrons

#### IONIC COMPOUNDS AND THEIR PROPERTIES



Name	Class	Date
Directed Reading B continued		
at room temperature <b>7.</b> Ionic compounds tend to <b>a.</b> at room temperature.	) be brittle solids	5
<ul> <li><b>b.</b> at high temperatures.</li> <li><b>c.</b> at any temperature.</li> <li><b>d.</b> when wet.</li> </ul>		
<ul> <li>8. In a crystal lattice, each</li> <li>a. pattern it is made with</li> <li>b. surrounding ions of th</li> <li>c. surrounding ions of th</li> <li>d. crystal's edge.</li> </ul>	h. 1e opposite char <sub>i</sub>	
<ul> <li>breaks apart</li> <li>9. When an ionic compound other, and the crystal</li> <li>a. becomes more solid.</li> <li>b. forms a new lattice.</li> <li>c. breaks apart.</li> <li>d. becomes bonded.</li> </ul>	d is hit, the patte	ern shifts, ions repel each
<ul> <li>a high melting point 10. Because strong ionic bor</li> <li>a. a low melting point.</li> <li>b. a lukewarm melting p</li> <li>c. a high melting point.</li> <li>d. a variable melting point.</li> </ul>	oint.	gether, ionic compounds have
<ul> <li>in water 11. Many ionic compounds of a. in air.</li> <li>b. at high temperatures.</li> <li>c. in water.</li> <li>d. in electric current.</li> </ul>	dissolve easily	
<b>12.</b> When an ionic compound dissol current?	lves in water, wh	y can it conduct electric
The electric current is the motion of (aqueous aq) as they freely move to wires.		

### **COVALENT COMPOUNDS AND THEIR PROPERTIES**

- electrons
- **13.** Covalent compounds are formed when atoms share
  - **a.** uncharged particles.
  - **b.** neutrons.
  - **c.** protons.
  - **d.** electrons.

Copyright  $\ensuremath{\mathbb{O}}$  by Holt, Rinehart and Winston. All rights reserved.