Name	Class	Date	
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#### **Chapter 6** Chemical Bonds

# **Section 6.3 Naming Compounds and Writing Formulas**

(pages 170-175)

This section explains how to name and write formulas for ionic and molecular compounds.

#### Reading Strategy (page 170)

**Predicting** Before you read, predict the meaning of the term *polyatomic ion*, and write your prediction in the table. After you read, if your prediction was incorrect, revise your definition. For more information on this Reading Strategy, see the **Reading and Study Skills** in the **Skills and Reference Handbook** at the end of your textbook.

Vocabulary Term	Before You Read	After You Read
Polyatomic ion	Students should assume that any particle described as an ion has a charge. If they know the meaning of <i>poly</i> , they may predict that the ion contains two or more atoms.	A covalently bonded group of atoms that has a positive or negative charge and acts as a unit.

1. Is the following sentence true or false? The name of an ionic compound must distinguish the compound from other ionic compounds containing

### **Describing Ionic Compounds** (pages 171–173)

	the same elements
2.	Circle the letter(s) of the information provided by the formula for an ionic compound.
	<ul> <li>a. number of bonds in the compound</li> <li>b. ratio of ions in the compound</li> <li>c. elements in the compound</li> </ul>
3.	Is the following sentence true or false? Names of ions are formed by placing the suffix <i>-ide</i> after part of the name of the nonmetal.
	true
4.	When a metal forms more than one ion, the name of the ion contains
	a Roman numeral to indicate the <u>charge</u> on the ion.
5.	A is a covalently bonded group of atoms that has a positive or negative charge and acts as a unit. Circle the correct answer.
	charged particle molecule polyatomic ion

#### Chapter 6 Chemical Bonds

- **6.** Circle the letter that identifies the number of ammonium ions needed to form a compound with one phosphate ion. Use the table to help you.
  - a. one
  - b. two
  - c.) three

	Some P	olyatomic lons	
Name	Formula	Name	Formula
Ammonium	NH <sub>4</sub> <sup>+</sup>	Acetate	C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> -
Hydroxide	OH-	Peroxide	O <sub>2</sub> 2-
Nitrate	NO <sub>3</sub> -	Permanganate	MnO <sub>4</sub> <sup>-</sup>
Sulfate	SO <sub>4</sub> 2-	Hydrogen sulfate	HSO <sub>4</sub> <sup>-</sup>
Carbonate	CO <sub>3</sub> 2-	Hydrogen carbonate	HCO <sub>3</sub> -
Phosphate	PO <sub>4</sub> 3-	Hydrogen phosphate	HPO <sub>4</sub> 2-

## **Describing Molecular Compounds** (pages 174-175)

- **7.** Circle the letter(s) of the information provided by the name and formula of a molecular compound.
  - (a.) number of atoms in the compound
  - b. number of bonds in the compound
  - c. elements in the compound
- **8.** What appears first in the name of a molecular compound? Circle the correct answer.
  - a. the least metallic element
  - (b.) the most metallic element
  - c. the polyatomic ion
- **9.** Is the following sentence true or false? The formula for a molecular compound is written with the symbols for the elements in the same order as the elements appear in the name of the compound.

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- **10.** Circle the letter that identifies the method of naming the number of atoms in molecular compounds.
  - a. prefix
  - b. suffix
  - c. number