

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		

Describing Ionic Compounds (pages 171–173)

- Is the following sentence true or false? The name of an ionic compound must distinguish the compound from other ionic compounds containing the same elements. _____
- Circle the letter(s) of the information provided by the formula for an ionic compound.
 - number of bonds in the compound
 - ratio of ions in the compound
 - elements in the compound
- Is the following sentence true or false? Names of ions are formed by placing the suffix *-ide* after part of the name of the nonmetal.

- When a metal forms more than one ion, the name of the ion contains a Roman numeral to indicate the _____ on the ion.
- 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

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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.
- one
 - two
 - three

Some Polyatomic Ions			
Name	Formula	Name	Formula
Ammonium	NH_4^+	Acetate	$\text{C}_2\text{H}_3\text{O}_2^-$
Hydroxide	OH^-	Peroxide	O_2^{2-}
Nitrate	NO_3^-	Permanganate	MnO_4^-
Sulfate	SO_4^{2-}	Hydrogen sulfate	HSO_4^-
Carbonate	CO_3^{2-}	Hydrogen carbonate	HCO_3^-
Phosphate	PO_4^{3-}	Hydrogen phosphate	HPO_4^{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.
- number of atoms in the compound
 - number of bonds in the compound
 - elements in the compound
8. What appears first in the name of a molecular compound? Circle the correct answer.
- the least metallic element
 - the most metallic element
 - 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.
- _____
10. Circle the letter that identifies the method of naming the number of atoms in molecular compounds.
- prefix
 - suffix
 - number