

DATE:

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## CHAPTER 4

## Binary Ionic Compounds

BLM 2-12

**Goal** • Demonstrate your ability to write the names and formulas of binary ionic compounds.

**What to Do**

1. Complete the following table.

Name of Compound	Formula
(a) beryllium fluoride	$\text{BeF}_2$
(b) sodium nitride	$\text{Na}_3\text{N}$
(c) calcium sulphide	$\text{CaS}$
(d) aluminum chloride	$\text{AlCl}_3$
(e) lithium oxide	$\text{Li}_2\text{O}$
(f) magnesium nitride	$\text{Mg}_3\text{N}_2$
(g) gallium sulphide	$\text{Ga}_2\text{S}_3$
(h) barium bromide	$\text{BaBr}_2$

# Names and Formulas of Binary Ionic Compounds

**Goal** • Use this page to review the names and formulas of binary ionic compounds.

## What to Do

1. Fill in the missing names of these ionic compounds.

Formula	Metal Ion	Name of Compound
(a) $\text{FeCl}_3$	$\text{Fe}^{3+}$	iron (III) chloride
(b) $\text{FeO}$	$\text{Fe}^{2+}$	iron (II) oxide
(c) $\text{Cu}_2\text{S}$	$\text{Cu}^+$	copper (I) sulphide
(d) $\text{PbO}_2$	$\text{Pb}^{4+}$	lead (IV) oxide

2. Fill in the missing formulas for these ionic compounds.

Name of Compound	Chemical Formula
(a) copper(I) oxide	$\text{Cu}_2\text{O}$
(b) lead(IV) bromide	$\text{PbBr}_4$
(c) iron(III) sulphide	$\text{FeS}_3$
(d) nickel(III) fluoride	$\text{NiF}_3$
(e) manganese(IV) sulphide	$\text{MnS}_2$

3. Fill in the missing names for these ionic compounds.

Formula	Name of Compound
(a) $\text{Ti}_2\text{O}_3$	titanium (III) oxide
(b) $\text{NaCl}$	sodium chloride
(c) $\text{CuCl}_2$	copper (II) chloride
(d) $\text{NO}_2$	magnesium oxide