

# Chapter #8 Ionic Compounds: Names & Formulas

July 21, 2015 11:21 AM

## Monovalent: Naming Monovalent Compounds

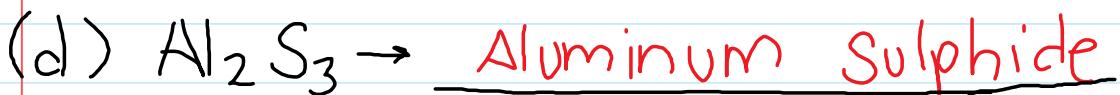
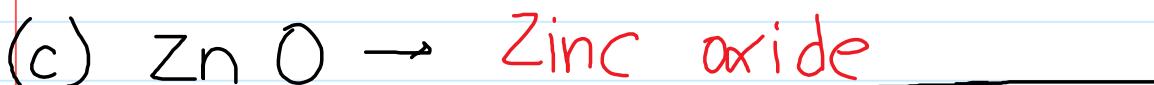
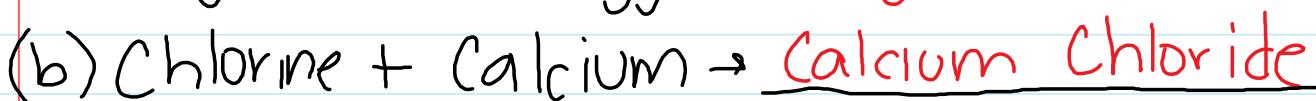
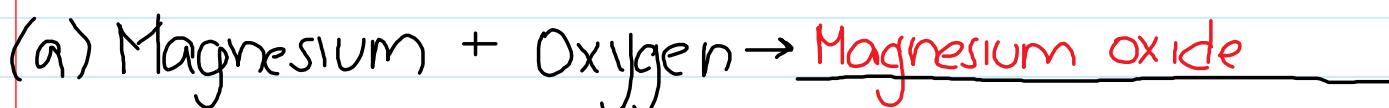
Each different compound has its own name which tells us what elements are in the compound

Monovalent elements have only one charge  
ex  $\text{Li}^{+1}$ ,  $\text{Ca}^{+2}$ ,  $\text{Al}^{+3}$

### Naming

1. Write the name of the metal first
2. Write the name of the non-metal element second and change its ending to "ide"

Ex #1



some tricky endings

Hydrogen  $\rightarrow$  hydride

oxygen → oxide

phosphorus → phosphide

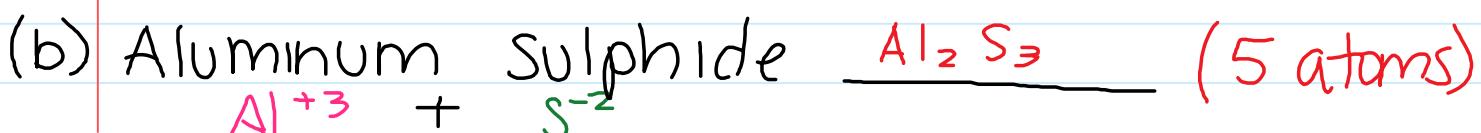
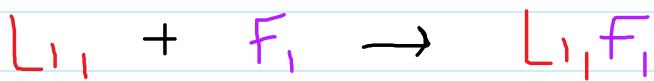
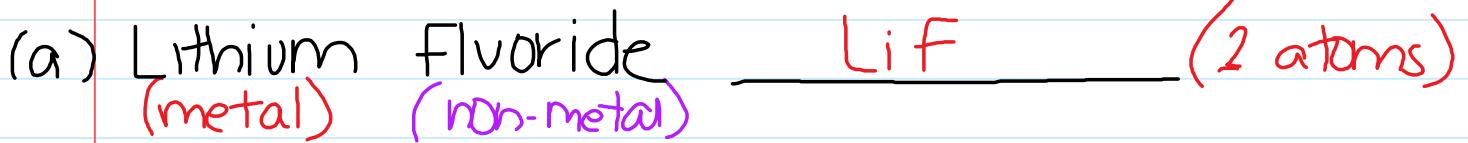
nitrogen → nitride

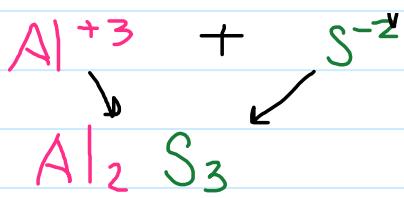
## Formulas.

To write the chemical formula of a compound, do the following steps

- 1 Write the metal and non-metal elements in their ion form
- 2 Re-write the elements without ion charges and criss-cross the numbers (omit the + and - signs)
  - \* the numbers are written as subscripts
  - \* if there is a common factor reduce
  - \* the number 1 is never written #

### Ex #2





(c) Barium Oxide  $\text{BaO}$  (2 atoms)



reduce <sup>III</sup>

Fractions

$$\frac{4}{2} \xrightarrow{-2} \frac{2}{1} \quad \frac{2}{2} \xrightarrow{-1} \frac{1}{1}$$

$$\frac{3}{6} \xrightarrow{-3} \frac{1}{2}$$