

## Naming Ionic Compounds : Notes-75

An **ion** is an atom that has lost or gained electrons.

An **ionic compound** is a compound that is composed of a metallic ion and a non-metallic ion.

When naming an ionic compound, the metal comes first and the non-metal comes second. (see notes-70)

In an ionic compound, a metallic ion (+), is attracted to a non-metallic (-) ion. The metallic ions have lost electrons, and the non-metallic ions have gained electrons.

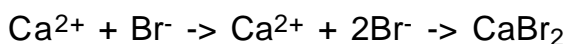
Examples:

Potassium ion combines with chlorine ion



The name of this compound is **potassium chloride**.

Calcium ion combines with bromine ion

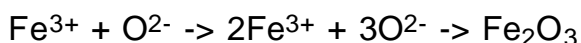


The name of this compound is **calcium bromide**.

We need two bromine ions so the 2+ charge on the calcium ion is balanced by the two 1- charges on the two bromine ions.

Some metal atoms can lose 1, 2, 3 or 4, electrons. (See Common Ions Table: Notes-70). The iron atom may lose three or two electrons. It will become an iron (III) ion or an iron (II) ion. In the table, the more common ion is listed first.

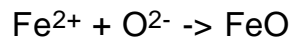
Iron combines with oxygen. There are two compounds.



The two is put in front of the Fe and the three is put in front of the O so that the charges are balanced.

The name of this compound is **iron (III) oxide**.

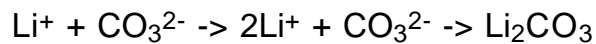
The second compound is:



The name of this compound is **iron (II) oxide**.

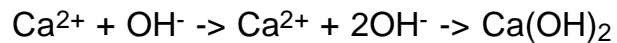
Some non-metallic ions are complex ions.

Lithium ion combines with carbonate ion



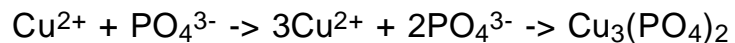
**lithium carbonate**

Calcium ion combines with hydroxide ion



**calcium hydroxide**

Copper (II) ion combines with phosphate ion



**copper (II) phosphate**