

5.6 - How ionic compounds form

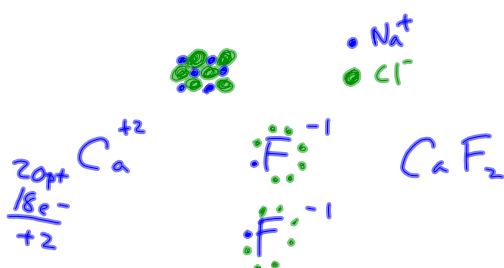
Ionic compounds are formed by combining positive metal ions and negative nonmetal ions. Metals tend to lose electrons to form positive ions or **cations**. Nonmetals tend to gain electrons to form negative ions or **anions**.

Ideally, atoms want to have a full outer (valence) level (Octet Rule) to become stable.



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Group	Ionic Charge
1	+1
2	+2
3-12	varying charges
13	+3
14	usually don't form ions
15	-3
16	-2
17	-1
18	no ions

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To write the formula of an ionic compound:

- Write each symbol with its charge.
- Figure out how many of each ion is required to have a total charge sum of zero.
- Write the number found in ② as a subscript beside each ion.

Examples:

Write the formula for the combinations of elements below:

a) potassium and nitrogen

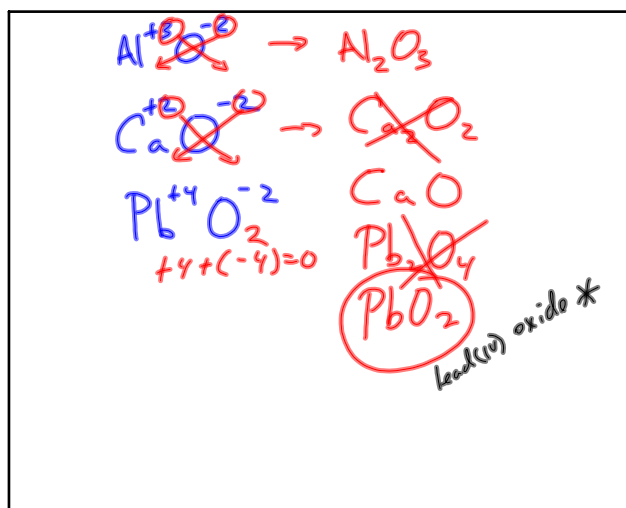


b) lithium and sulfur



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To name binary (only 2 elements) ionic compounds:

- ① Name the metal ion
- ② Name the nonmetal by changing its ending to "ide".

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