Formula Writing Binary Ionic Compounds

-- You don't need to draw the transfer of electrons to write binary ionic compounds.

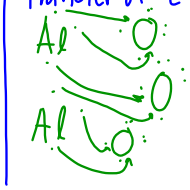
* Compounds are always neutral.

What do you notice about the charge and the subscripts when you write the formula with Al and O?

Write ions ex: Mg^{+2}

Al^{+3} O^{-2}

transfer of e^-



Al_2O_3

$+6 \quad -6 = 0$

Oct 5-10:44 AM

Formula Writing Binary Ionic Compounds

SO_4^{-2} - ion

SO_2 - comp.

1. Figure out the charges for each ion
2. Drop the sign of the charge (+ or -)
3. Switch the number of the charge from the cation to the anion and vice versa.
4. Compounds are always neutral.

Mg and P

Mg^{+2} P^{-3} → Mg_3P_2

$+6 \quad -6 = 0$

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Practice:

1. Sr and Cl — $SrCl_2$
2. K and N — K_3N
3. Be and N — Be_3N_2
4. Mg and O — MgO (not Mg_2O_2)

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Naming Binary Ionic Compounds:

Cation: lose electrons, positive charge, metal

-- NAME DOES NOT CHANGE

Anion: gain electrons, negative charge, nonmetal

-- CHANGE THE ENDING TO --ide (drop the original ending)

example: K and S

potassium sulfide

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Practice:

1. $CaCl_2$ — Calcium Chloride
2. Rb_3N — Rubidium Nitride
3. Sr_3N_2 — Strontium Nitride
4. MgS — Magnesium Sulfide

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