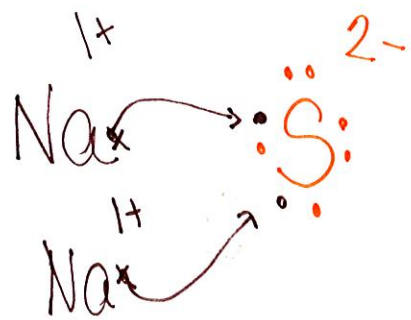
Notes- mon., 9/28

Review Ionic Bonding



Na_2S

Type I Binary Ionic Nomenclature
(2 elements) names / formulas

1) Names
- write name of metal cation (element)
- write name of nonmetal anion (element), change ending to <u>-IDE</u>!

Ex) NaCl sodium chloride

K_2O potassium oxide

Be_3P_2 beryllium phosphide

SrS strontium sulfide

RbI rubidium iodide

Al_2Se_3 aluminum selenide

2) Formulas

Use subscripts to show the # of each ion. The goal is to have the charges add up to <u>ZERO!</u>

Ex) potassium nitride

$(K^{1+})_3 N^{3-} = K_3N$

barium chloride

$Ba^{2+} (Cl^{1-})_2 = BaCl_2$

calcium phosphide

$(Ca^{2+})_3 (P^{3-})_2 = Ca_3P_2$

gallium iodide

Ga^{3+} I^{1-}

GaI_3

magnesium oxide

Mg^{2+} O^{2-}

MgO

Type I Tertiary Ionic Nomenclature

more than 2

nitrite

1-

NO_2

nitrate

1-

NO_3

sulfite

2-

SO_3

sulfate

2-

SO_4

Names

- Write name of metal cation
- Write name of nonmetal polyatomic anion.

Ex) $NaClO_2$ sodium chlorite

$Mg_3(PO_4)_2$ magnesium phosphate

$NaHCO_3$ sodium hydrogen carbonate (bicarbonate)

Formulas

1) Write symbol & charge of the metal cation
2) " " nonmetal polyatomic anion.

3) Criss-cross charges! If you are crossing over a number to the polyatomic anion, put the anion in parentheses first.

Ex) calcium cyanide

Ca^{2+} CN^{1-}

$Ca(CN)_2$

Ex) aluminum oxalate

Al^{3+} $C_2O_4^{2-}$

$Al_2(C_2O_4)_3$

Ex) potassium permanganate

K^{1+} MnO_4^{1-}

$KMnO_4$

Ex) barium acetate

Ba^{2+} $C_2H_3O_2^{1-}$

$Ba(C_2H_3O_2)_2$