# April 25, 2019

1) go over answers Ionic Compounds WS
2) notes on Polyatomic Compounds

Quiz Tuesday on ALL Ionic Cmpds

Test Tuesday May 7th on Chp 5

## Warm-Up

Name each of the following ionic compounds:

1. CrO — chromium (II) oxide
2. $K_3P$ — potassium phosphide

Write the formula for each of the following:

1. strontium phosphide — $Sr^{2+}P^{3-}$ → $Sr_3P_2$
2. tin (IV) oxide — $Sn^{4+}O^{2-}$ → $Sn_2O_4$ → $SnO_2$

(a) magnesium oxide $Mg^{2+}O^{2-}$ = MgO

(b) sodium fluoride $Na^{1+}F^{1-}$ = NaF

(c) aluminum nitride $Al^{3+}N^{3-}$ = AlN

(d) potassium sulfide $K^{1+}S^{2-}$ $K_2S$

(e) lithium iodide $Li^{1+}I^{1-}$ LiI

(f) calcium bromide $Ca^{2+}Br^{1-}$ $CaBr_2$

(g) beryllium oxide $Be^{2+}O^{2-}$ BeO

(h) nickel chloride $Ni^{2+}Cl^{1-} = NiCl_2$

(i) magnesium nitride $Mg^{2+}N^{3-} = Mg_3N_2$

(j) aluminum sulfide $Al^{3+}S^{2-} = Al_2S_3$

(k) copper(I) bromide $Cu^{1+}Br^{1-} = CuBr$

(l) tin(II) iodide $Sn^{2+}I^{1-} = SnI_2$

(m) iron(III) chloride $Fe^{3+}Cl^{1-} = FeCl_3$

(n) calcium phosphide $Ca^{2+}P^{3-} = Ca_3P_2$

(o) lead(II) oxide $Pb^{2+}O^{2-} = PbO$

(p) lead(IV) fluoride $Pb^{4+}F^{1-} = PbF_4$

(q) tin(IV) bromide $Sn^{4+}\ Br^{1-} = SnBr_4$

(r) copper(II) sulfide $Cu^{2+}\ S^{2-} = CuS$

(s) iron(II) oxide $Fe^{2+}\ O^{2-} = FeO$

(t) calcium nitride $Ca^{2+}\ N^{3-} = Ca_3N_2$

2. Write the names for the following compounds.

(a) $Li_2O$ lithium oxide

(b) $AlCl_3$ aluminum chloride

(c) $MgS$ magnesium sulfide

(d) $CaO$ calcium oxide

(e) $KBr$ potassium bromide

(f) $BeF$ beryllium fluoride

(g) $Na_3N$ sodium nitride

(h) $Al_2O_3$ aluminum oxide

(i) $CuCl_2$ copper (II) choride

(j) $FeBr_3$ iron (III) bromide

(k) $PbS$ lead (II) sulfide

(l) $SnO_2$ tin (IV) oxide

(m) $Na_2S$ sodium sulfide

(n) $Mg_3P_2$ magnesium phosphide

(o) $NiO$ nickel (II) oxide

(p) $CuI$ copper (I) iodide

(q) $PbCl_4$ 2+,4+ 1- lead (IV) chloride

(r) $Fe_2P_3$ 2+ 3- iron (III) phosphide

(s) $CaF_2$ calcium flouride

(t) $K_3P$ potassium phosphide

# Polyatomic Compounds

many atoms

**Polyatomic Compounds**

- polyatomic ions are groups of atoms that stay together and carry a single charge

Ex. $NO_3^-$ (nitrate ion) the whole ion has a charge of -1

$PO_4^{-3}$ (phosphate) the whole ion has a charge of -3

- they are found on Table 2, pg. 196, also on the front of your periodic table in its own table of common polyatomic ions (they will not be on the actual periodic table of elements)

- you need to recognize polyatomic ions when they are in formulas so look over the names in the chart and become familiar with them (no need to memorize)

Sep 18-2:34 PM

# Writing Formulas for Polyatomic Compounds

- Write down the symbol and charge for the first ion on the periodic table ( if it is multivalent you will need to include the correct roman numeral)
- Write down the symbol and charge for the second ion from the chart
- Cross the charges the same as a regular ionic compound (if you need to put a subscript with the polyatomic ion put it in brackets first, then add the subscript on the outside of the bracket)

Ex. sodium hydroxide

$Na^{1+}OH^{1-}$ $NaOH$

Ex. calcium sulphate

$Ca^{2+}SO_4^{2-}$ $CaSO_4$

Ex. magnesium phosphate

$Mg^{2+}PO_4^{3-}$ $Mg_3(PO_4)_2$

pg 198 #3

Apr 25-9:30 AM