

Sept 20, 2019

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

Quiz Wednesday on ALL Ionic Compounds!!

Test Tuesday Oct 1st on Chp 5

Warm-Up

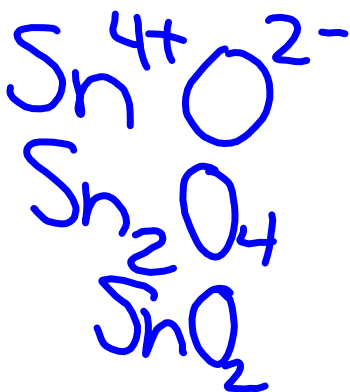
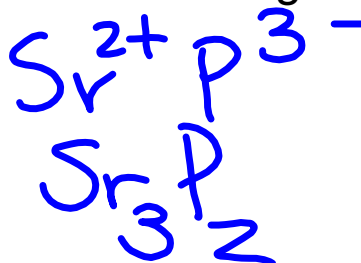
Name ³/₂ each of the following ionic compounds:

1. CrO Chromium (II) oxide
2. K₃P potassium phosphide

Write the formula for each of the following:

1. strontium phosphide

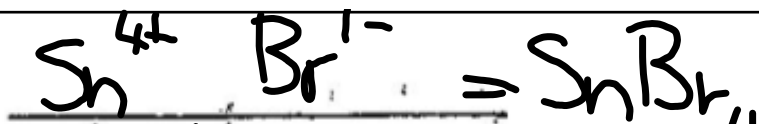
2. tin (IV) oxide



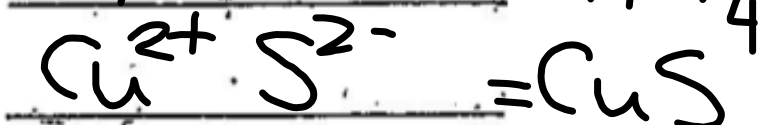
(a) magnesium oxide	$Mg^{2+} O^{2-}$	= MgO
(b) sodium fluoride	$Na^{1+} F^{1-}$	= NaF
(c) aluminum nitride	$Al^{3+} N^{3-}$	= AlN
(d) potassium sulfide	$K^{1+} S^{2-}$	K_2S
(e) lithium iodide	$Li^{1+} I^{1-}$	LiI
(f) calcium bromide	$Ca^{2+} Br^{1-}$	$CaBr_2$
(g) beryllium oxide	$Be^{2+} O^{2-}$	BeO

(h) nickel chloride	$Ni^{2+} Cl^{-}$	$= NiCl$
(i) magnesium nitride	$Mg^{2+} N^{3-}$	$= Mg_3N_2$
(j) aluminum sulfide	$Al^{3+} S^{2-}$	$= Al_2S_3$
(k) copper(I) bromide	$Cu^{+} Br^{-}$	$= CuBr$
(l) tin(II) iodide	$Sn^{2+} I^{-}$	$= SnI_2$
(m) iron(III) chloride	$Fe^{3+} Cl^{-}$	$= FeCl_3$
(n) calcium phosphide	$Ca^{2+} P^{3-}$	$= Ca_3P_2$
(o) lead(II) oxide	$Pb^{2+} O^{2-}$	$= PbO$
(p) lead(IV) fluoride	$Pb^{4+} F^{-}$	$= PbF_4$

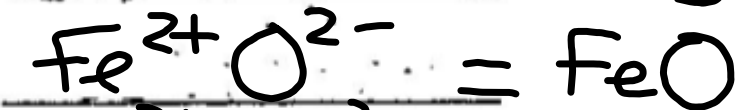
(q) tin(IV) bromide



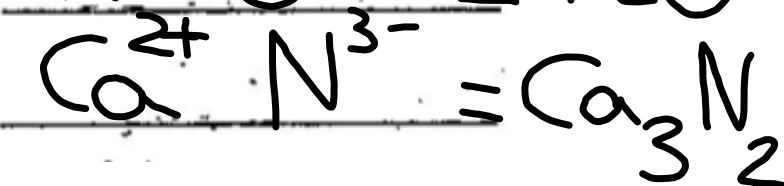
(r) copper(II) sulfide



(s) iron(II) oxide



(t) calcium nitride



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) chloride
(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	lead (IV) chloride
(r) FeP	iron (III) phosphide
(s) CaF_2	calcium fluoride
(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

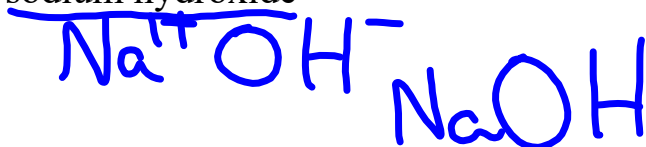
- they are found on Table 2, pg. 196, also in the chart at the top of the periodic table you were given (they will not be on the actual periodic table of elements)

- 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)

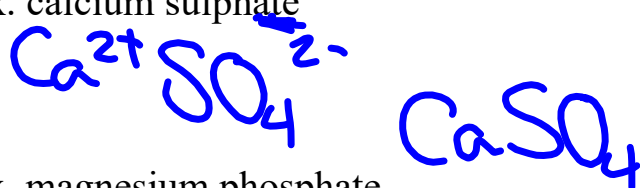
Writing Formulas for Polyatomic Compounds

- 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)

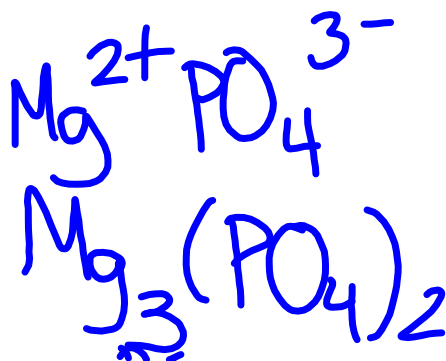
Ex. sodium hydroxide



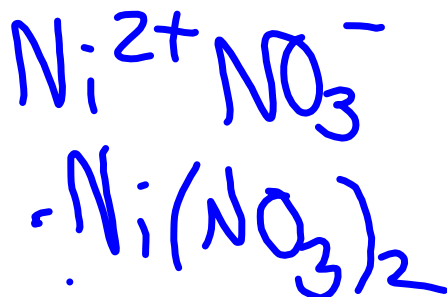
Ex. calcium sulphate



Ex. magnesium phosphate



nickel (II) nitrate



Naming Polyatomic Ions

Combination of the name of the metal, and the name of the polyatomic ion.

Remember a compound has **ONLY two names no** more!!!!

Ex. K_2CO_3 ——— chart

1. Determine which ions make compound: **3 capital letters = polyatomic**
periodic table

2. Name each ion:

potassium carbonate

Ex. CaCO_3

Ex. CuPO_4

p.198 #1-7

