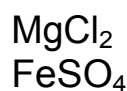


# Dec 8 , 2011

## Answers Review ALL Ionic Compounds Worksheet Molecular Compounds

### Warm-Up

Name each of the following ionic compounds:



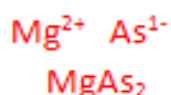
Write the formula for each of the following:

lithium phosphide  
strontium carbonate

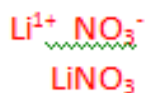
### Answers Extra Practice ALL Ionic Compounds

- Aluminum nitrate  
 $\text{Al}^{3+} \text{NO}_3^{1-}$   
 $\text{Al}(\text{NO}_3)_3$
- Calcium fluoride  
 $\text{Ca}^{2+} \text{F}^{1-}$   
 $\text{CaF}_2$
- Sodium bromide  
 $\text{Na}^{1+} \text{Br}^{1-}$   
 $\text{NaBr}$
- Cobalt (III) chloride  
 $\text{Co}^{3+} \text{Cl}^{1-}$   
 $\text{CoCl}_3$
- Magnesium chlorate  
 $\text{Mg}^{2+} \text{ClO}_3^{1-}$   
 $\text{Mg}(\text{ClO}_3)_2$
- Potassium hydroxide  
 $\text{K}^{1+} \text{OH}^{1-}$   
 $\text{KOH}$
- Nickel (II) oxide  
 $\text{Ni}^{2+} \text{O}^{2-}$   
 $\text{NiO}$
- Lead (IV) selenide  
 $\text{Pb}^{4+} \text{S}^{2-}$   
 $\text{Pb}_2\text{S}_4$   
 $\text{PbS}_2$
- Cobalt (II) nitrate  
 $\text{Co}^{2+} \text{NO}_3^{1-}$   
 $\text{Co}(\text{NO}_3)_2$
- Vanadium (V) phosphate  
 $\text{V}^{5+} \text{PO}_4^{3-}$   
 $\text{V}_3(\text{PO}_4)_5$

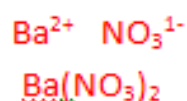
11. Magnesium astatide



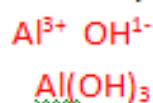
12. Lithium nitride



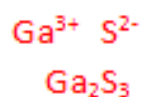
13. Barium nitrate



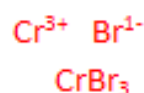
14. Aluminum hydroxide



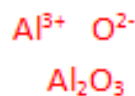
15. Gallium sulfide



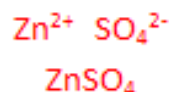
16. Chromium (III) bromide



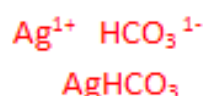
17. Aluminum oxide



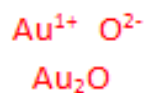
18. Zinc sulfate



19. Silver bicarbonate



20. Gold (I) oxide



Name each of the following compounds:

1.  $\text{NH}_4\text{Cl}$  - ammonium chloride

2.  $\text{TiBr}_3$  - titanium bromide

3.  $\text{Cu}_3\text{P}$  - copper (I) phosphide

4.  $\text{Sn}_3\text{Se}_2$  - tin (II) selenide

5.  $\text{Pb}(\text{SO}_4)_2$  - lead (IV) sulfate

6.  $\text{RbHCO}_3$  - rubidium bicarbonate

7.  $\text{NiPO}_4$  - nickel (III) phosphate

8.  $\text{MnSO}_3$  - manganese (II) sulfite

9.  $\text{GaAs}$  - gallium astatide

10.  $\text{NaBr}$  - sodium bromide

11.  $\text{Sc}(\text{OH})_3$  - scandium hydroxide

12.  $\text{V}_2(\text{SO}_4)_5$  - vanadium (IV) sulphate

13.  $\text{NH}_4\text{F}$  - ammonium fluoride

14.  $\text{Li}_2\text{SO}_3$  - lithium sulfite

15.  $\text{Zn}_3\text{P}_2$  - zinc phosphide

16.  $\text{Cu}_2\text{O}$  - copper (I) oxide

17.  $\text{Ag}_3\text{PO}_4$  - silver phosphate

18.  $\text{CoCO}_3$  - cobalt (II) carbonate

19.  $\text{Fe}(\text{HCO}_3)_2$  - iron (II) bicarbonate

20.  $\text{HgO}$  - mercury oxide

# MOLECULAR COMPOUNDS

-made up of two or more non-metals.

-do not form ions in order to bond



-atoms involved in molecular compounds share electrons.

-the bonds formed by the sharing of electrons are called covalent bonds. A covalent bond is a pair of shared electrons.

-see Fig. 3 page 202 and sketch the diagram(two chlorine atoms sharing a pair of electrons)

-the diagram of the two chlorines is an example of a diatomic molecule. (Two atoms of the same element). This happens mainly with elements in Table 1-page 202.

1																	2
H Hydrogen																	He Helium
3	4											5	6	7	8	9	10
Li Lithium	Be Beryllium											B Boron	C Carbon	N Nitrogen	O Oxygen	F Fluorine	Ne Neon
11	12											13	14	15	16	17	18
Na Sodium	Mg Magnesium											Al Aluminum	Si Silicon	P Phosphorus	S Sulfur	Cl Chlorine	Ar Argon
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
K Potassium	Ca Calcium	Sc Scandium	Ti Titanium	V Vanadium	Cr Chromium	Mn Manganese	Fe Iron	Co Cobalt	Ni Nickel	Cu Copper	Zn Zinc	Ga Gallium	Ge Germanium	As Arsenic	Se Selenium	Br Bromine	Kr Krypton
37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
Rb Rubidium	Sr Strontium	Y Yttrium	Zr Zirconium	Nb Niobium	Mo Molybdenum	Tc Technetium	Ru Ruthenium	Rh Rhodium	Pd Palladium	Ag Silver	Cd Cadmium	In Indium	Sn Tin	Sb Antimony	Te Tellurium	I Iodine	Xe Xenon
55	56	57	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86
Cs Cesium	Ba Barium	La Lanthanum	Hf Hafnium	Ta Tantalum	W Tungsten	Re Rhenium	Os Osmium	Ir Iridium	Pt Platinum	Au Gold	Hg Mercury	Tl Thallium	Pb Lead	Bi Bismuth	Po Polonium	At Astatine	Rn Radon
87	88	89	104	105	106	107	108	109									
Fr Francium	Ra Radium	Ac Actinium	Rf Rutherfordium	Db Dubnium	Sg Seaborgium	Bh Bohrium	Hs Hassium	Mt Meitnerium									

58	59	60	61	62	63	64	65	66	67	68	69	70	71
Ce Cerium	Pr Praseodymium	Nd Neodymium	Pm Promethium	Sm Samarium	Eu Europium	Gd Gadolinium	Tb Terbium	Dy Dysprosium	Ho Holmium	Er Erbium	Tm Thulium	Yb Ytterbium	Lu Lutetium
90	91	92	93	94	95	96	97	98	99	100	101	102	103
Th Thorium	Pa Protactinium	U Uranium	Np Neptunium	Pu Plutonium	Am Americium	Cm Curium	Bk Berkelium	Cf Californium	Es Einsteinium	Fm Fermium	Md Mendelevium	No Nobelium	Lr Lawrencium

# Naming Molecular Compounds

- named similarly to ionic compounds
- name first element listed, with a prefix to count number of atoms  
**(do not use a prefix for one atom of the first element)**
- name second element, with a prefix to count number of atoms.  
Change the suffix of second non-metal to -ide

# of Atoms	Prefix
1	mono
2	di
3	tri
4	tetra
5	penta

## Examples of Naming Molecular compounds:

$\text{PCl}_5$  - phosphorous pentachloride

$\text{NO}$  - nitrogen monoxide

$\text{NH}_3$  - nitrogen trihydride

$\text{N}_2\text{O}_5$  - dinitrogen pentaoxide

## Writing Formulas

When writing the formulas for molecular compounds. Look at the prefix given and that is what you write as a subscript.

Examples:

dihydrogen monoxide =  $\text{H}_2\text{O}$

carbon tetrahydride =  $\text{CH}_4$

### **Examples of Writing Molecular compounds:**

carbon dioxide -  $\text{CO}_2$

diboron hexahydride -  $\text{B}_2\text{H}_6$

nitrogen tribromide -  $\text{NBr}_3$

# Homework

p. 204 #5,6

## Attachments

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answers pg 204 #1-6.notebook

answers polyatomic compounds names and formulas WS.notebook