

WORKSHOP 3**Nomenclature**

Name _____

A. Write the correct formula for each of the following compounds. Remember the different ways compounds are named depending upon whether they are ionic or covalent.

Diphosphorus pentoxide _____	potassium chloride _____
Nitrogen dioxide _____	Magnesium chloride _____
Dichlorine heptoxide _____	Aluminum chloride _____
Tetraphosphorus trisulfide _____	Potassium sulfate _____
Carbon monoxide _____	Ammonium sulfate _____
Ferric carbonate _____	Ferrous carbonate _____
Phosphoric acid _____	Barium phosphate _____
Tungsten(V)phosphide _____	Lead(IV)oxalate _____
Sodium selenate _____	Cupric cyanide _____
Potassium hydroxide _____	Ammonia _____

B. Write the common name for each of the following compounds. Again note that covalent compounds are named one way and ionic compounds another way.

N_2O_4 _____	N_2O _____
PCl_3 _____	PbF_4 _____
CCl_4 _____	$KHSO_3$ _____
Cu_2SO_4 _____	PbO _____
$Co(ClO_3)_3$ _____	NH_4OH _____
$FeSO_4$ _____	$CoSO_3$ _____
$Fe(C_2H_3O_2)_3$ _____	$Cu(NO_3)_2$ _____

C. Give the systematic (IUPAC) name for the following compounds:

AlCl_3 _____

SO_3 _____

$\text{As}_2(\text{SO}_4)_3$ _____

LiBrO_3 _____

$\text{Fe}(\text{SCN})_3$ _____

KIO_3 _____

$\text{Ca}(\text{IO}_4)_2$ _____

AgNO_3 _____

$\text{Ba}_3(\text{PO}_4)_2$ _____

KMnO_4 _____

ZnBr_2 _____

CoCrO_4 _____

WN_2 _____

$\text{Sn}(\text{NO}_3)_4$ _____

XeF_6 _____

NH_4Cl _____

PCl_5 _____

CuCN _____

LiClO_2 _____

$\text{NH}_4\text{C}_2\text{H}_3\text{O}_2$ _____

SeCl_2 _____

$\text{Mg}(\text{NO}_2)_2$ _____

RbHCO_3 _____

CaO _____

K_2S _____

$\text{Sr}(\text{OH})_2$ _____

ThCr_2O_7 _____

TiH_2 _____

SF_6 _____

$\text{Cs}_2\text{C}_2\text{O}_4$ _____

D. Name the following salts then write the formula and name for the corresponding acid.

	Name of salt	formula of acid	name of acid
HBr	_____	_____	_____
HBrO	_____	_____	_____
HBrO ₂	_____	_____	_____
HBrO ₃	_____	_____	_____
HBrO ₄	_____	_____	_____
H ₂ S	_____	_____	_____
H ₂ SO ₃	_____	_____	_____
H ₂ SO ₄	_____	_____	_____
HCN	_____	_____	_____
H ₂ CO ₃	_____	_____	_____

E. Fill in the corresponding information (either give name or formula)

2-heptene _____

PF₅ _____

1-butyne _____

Potassium dichromate _____

Cr(OH)₃ _____

Nickel(II) phosphate _____

2, 4, - Octadiene _____

HIO(aq) _____

KH _____

Cr₂O₃ _____

lead(IV) oxalate _____

MgSO₄•6H₂O _____

CH₃CH₂CH₃ _____

CsClO₂ _____

Gallium nitrate _____

Carbonic acid _____

Ag₃PO₃ _____

V₂(CrO₄)₅ _____

Xenon hexachloride _____

hydrosulfuric acid _____

Sn(MnO₄)₄ _____

I₂O₇ _____

Lithium dihydrogen phosphite _____

nonane _____

F. Write chemical equations for each of the following reactions (unbalanced).

(1) Solid silver oxide decomposes at high temperatures to form metallic silver and oxygen.
The equation for this reaction is:

(2) A few milliliters of a solution of cupric nitrate is placed in a large test tube. Dilute sodium hydroxide is added drop by drop until a precipitate forms. The precipitate is cupric hydroxide. Sodium nitrate is also formed. Write an equation for the reaction:

(3) A small piece of zinc metal is dissolved in dilute hydrochloric acid. The gas evolved is hydrogen. The zinc dissolves in the acid to form soluble zinc chloride. The equation for this reaction is:

(4) An aqueous solution of soluble iron (III) chloride is mixed with aqueous sodium hydroxide to produce insoluble iron (III) hydroxide and a sodium chloride solution.

(5) Aqueous silver nitrate reacts with aqueous aluminum chloride to produce the insoluble salt silver chloride and soluble aluminum nitrate.