Answer Key

Naming Ionic Compounds with Multi-Valent Metals

(Honors Chemistry)

Use the Stock System		Use the Classical Name	
CrS	**Chromium (II) sulfide**	$Sn(ClO_4)_2$	**Stannous perchlorate**
$PbBr_4$	**Lead (IV) bromide**	HgO	**Mercuric oxide**
$Sb(OH)_5$	**Antimony (V) hydroxide**	$Sn_3(PO_4)_2$	**Stannous phosphate**
Co_2S_3	**Cobalt (III) sulfide**	Cr_2S_3	**Chromic sulfide**
$Fe(MnO_4)_2$	**Iron (II) permanganate**	$PbCl_2$	**Plumbous chloride**
HgF_2	**Mercury (II) fluoride**	$Sn(NO_3)_4$	**Stannic nitrate**
Cu_2SO_4	**Copper (I) sulfate**	Au_2SO_4	**Aurous sulfate**
$Sn(ClO)_2$	**Tin (II) hypochlorite**	$CoBr_3$	**Cobaltic bromide**
$HgCrO_4$	**Mercury (II) chromate**	$HgHCO_3$	**Mercurous hydrogen carbonate**
$Sn_3(PO_3)_4$	**Tin (IV) phosphite**	$CuCrO_4$	**Cupric chromate**
$Cr_2(SO_4)_3$	**Chromium (III) sulfate**	$Sn(CN)_4$	**Stannic cyanide**
$NiBr_3$	**Nickel (III) bromide**	$Hg_2Cr_2O_7$	**Mercurous dicrhomate**
Pb_3N_2	**Lead (II) nitride**	Mn_3P_4	**Manganic phosphide**
$CrSO_3$	**Chromium (III) sulfite**	$Mn(C_2H_3O_2)_4$	**Manganic acetate**
VBr_5	**Vanadium (V) bromide**	$Au_2(CO_3)_3$	**Auric carbonate**
$Ni(ClO_2)_2$	**Nickel (II) chlorite**	$Pb(C_2O_4)_2$	**Plumbic oxalate**
$Fe_2(C_2O_4)_3$	**Iron (III) oxalate**	$Fe_2(CO_3)_3$	**Ferric carbonate**

Writing Chemical Formulas with Multi-Valent Metals

(Honors Chemistry)

Write the Formula from the Stock System		Write the Formula from the Classical Name	
$Fe(C_2H_3O_2)_2$	Iron (II) acetate	SnO_2	Stannic Oxide
Cu_2SO_4	Copper (I) sulfate	Cu_2S	Cuprous Sulfide
$Pb(NO_2)_4$	Lead (IV) nitrite	$HgCl$	Mercurous Chloride
$Sn(CN)_2$	Tin (II) cyanide	CoI_3	Cobaltic Iodide
$HgClO_2$	Mercury (I) chlorite	Pb_3P_4	Plumbic Phosphide
$NiCr_2O_7$	Nickel (II) dichromate	Fe_3N_2	Ferrous Nitride
$Cr_2(C_2O_4)_3$	Chromium (III) oxalate	$SnBr_2$	Stannous Bromide
AuI	Gold (I) iodide	$PbSO_4$	Plumbous Sulfate
$Mn_3(PO_3)_2$	Manganese (II) Phosphite	$CuCO_3$	Cupric carbonate
$Co(ClO_4)_3$	Cobalt (III) perchlorate	$CuCN$	Cuprous cyanide
$Fe(ClO)_3$	Iron (III) hypochlorite	Hg_3N	Mercurous Nitride
CuS	Copper (II) sulfide	$Hg(ClO_2)_2$	Mercuric chlorite
$Pb(NO_3)_2$	Lead (II) nitrate	$Fe(ClO_3)_2$	Ferrous chlorate
$Ti(MnO_4)_4$	Titanium (IV) permanganate	$Pb_3(PO_3)_4$	Plumbic Phosphite
$HgCO_3$	Mercury (II) carbonate	$Cu(ClO_4)_2$	Cupric perchlorate
$Fe(ClO_3)_3$	Iron (III) chlorate	$Sn(C_2O_4)_2$	Stannic Oxalate
$CuSO_4$	Copper (II) sulfite	Cu_2CrO_4	Cuprous chromate