## Table of Some Common Ions and Acids

	la	
+1		
Ammonium	NH4	
Ammonia	NH <sub>3</sub>	
Copper (I) or Cuprous	Cu	
Hydrogen	Н	
Lithium	Li	
Potassium	Κ	
*Mercury (I) or	Has	
Mercurous	Hg <sub>2</sub>	
Sodium	Na	
Silver	Ag	
*Mercury (I) ions occur	as	
groups of two (2		
symbol is Hg <sub>2</sub> and		
total charge is +2		
+2		
Barium	Ba	
Beryllium	Be	
Cadmium	Cd	
Calcium	Ca	
Cobalt (II)	Co	
Chromium (II)	Cr	
Copper (II) or Cupric	Cu Ea	
Iron (II) or Ferrous Lead (II) or Plumbous	Fe Pb	
Magnesium	Mg	
Manganese (II)	Mn	
Mercury (II) or Mercuric	Hg	
Nickel (II)	Ni	
Strontium	Sr	
Tin (II) or Stannous	Sn	
Zinc	Zn	
+3	. 1	
Aluminum Chromium (III)	Al Cr	
Chromium (III) Antimony (III)	Cr Sb	
Bismuth	Bi	
Iron (III)	Fe	
Arsenic	As	

+4	
Lead (IV) or Plumbic	Pb
Tin (IV) or Stannic	Sn
Carbon	С
Silicon	Si

Co

Mg

Cobalt (III)

Manganese (III)

+5 Antimony (V)	Sb	
Arsenic (V) Bismuth (V)	As Bi	
-1		
Acetate	$C_2H_3O_2$	
	(CH <sub>3</sub> COO)	
Bromate	BrO <sub>3</sub>	
Bromide	Br	
Chlorate	ClO3	
Chlorite	ClO <sub>2</sub>	
Chloride	Cl	
Cyanide	CN	
Fluoride	F	
Hydride Hydrogen Carbonate o	H	
Bicarbonate	HCO3	
Hydrogen Sulfate or	5	
Bisulfate	HSO <sub>4</sub>	
Hydrogen Sulfite or		
Bisulfite	HSO <sub>3</sub>	
Hydroxide	OH	
Hypochlorite	ClO	
Hydrogen Sulfide	HS	
Iodate	IO <sub>3</sub>	
Iodide	I	
Nitrate	NO <sub>3</sub>	
Nitrite	NO <sub>2</sub>	
Perchlorate	ClO <sub>4</sub>	
Permanganate	MnO <sub>4</sub>	
Thiocynate	SCN	

Mechanisms and rules for writing chemical formulas:

THE CRISS-CROSS METHOD

**RULE 1**: The resulting formula for a compound must have a total charge of zero (0). **RULE 2**: Write the positive ion first and cross the

valences.

RULE 3: Do not cross any signs.

RULE 4: Don't cross any ones.

RULE 5: If both valences are the same, don't cross them.

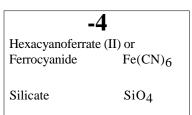
**RULE 6:** More than one atom, more than one time, use parentheses

**RULE 7**: If the final answer has subscripts that can be reduced, they must be reduced.

**RULE 8**: If the name of the compound has prefixes in it, change the prefixes to subscripts and do not cross the valences.

-2	
Carbonate	CO <sub>3</sub>
Chromate	CrO <sub>4</sub>
Cyanamide	CN <sub>2</sub>
Dichromate	Cr <sub>2</sub> O <sub>7</sub>
Hydrogen Phosphate	HPO <sub>4</sub>
Oxalate	$C_2O_4$
Oxide	0
Peroxide	O <sub>2</sub>
Stannate	SnO3
Stannite	$SnO_2$
Sulfate	SO <sub>4</sub>
Sulfite	SO3
Sulfide	S
Tartrate	C4H4O6

_3		
-5		
Borate	BO3	
Hexacyanoferrate (III) or		
Ferricyanide	Fe(CN) <sub>6</sub> PO <sub>4</sub>	
Phosphate	PO <sub>4</sub>	
Phosphite	PO <sub>3</sub>	
Phosphide	Р	
Nitride	Ν	



Some Common Acids		
Acetic	HC <sub>2</sub> H <sub>3</sub> O <sub>2</sub>	
Carbonic	H <sub>2</sub> CO <sub>3</sub>	
Hydrochloric	HCl	
Hydrobromic	HBr	
Hydrofluoric	HF	
Nitric	HNO <sub>3</sub>	
Phosphoric	H <sub>3</sub> PO <sub>4</sub>	
Sulfuric	H <sub>2</sub> SO <sub>4</sub>	