

Table of Common Ions !

Cations

Al^{+3}	aluminum
NH_4^{+1}	ammonium
Sb^{+3}	antimony
Ba^{+2}	barium
Bi^{+3}	bismuth
Cd^{+2}	cadmium
Ca^{+2}	calcium
Cr^{+2}	chromium II (chromous)
Cr^{+3}	chromium III (chromic)
Co^{+2}	cobalt
Cu^{+1}	copper I (cuprous)
Cu^{+2}	copper II (cupric)
Au^{+1}	gold I (aurous)
H^{+1}	hydrogen
H_3O^{+1}	hydronium
Fe^{+2}	iron II (ferrous)
Fe^{+3}	iron III (ferric)
Pb^{+2}	lead II (plumbous)
Pb^{+4}	lead IV (plumbic)
Li^{+1}	lithium
Mg^{+2}	magnesium
Mn^{+2}	manganese II (manganous)
Mn^{+3}	manganese III (manganic)
Hg_2^{+2}	mercury I (mercurous)
Hg^{+2}	mercury II (mercuric)
Ni^{+2}	nickel
K^{+1}	potassium
Ag^{+1}	silver
Na^{+1}	sodium
Sr^{+2}	strontium
Sn^{+2}	tin II (stannous)
Sn^{+4}	tin IV (stannic)
Zn^{+2}	zinc

Anions (monoatomic)

Br^{-1}	bromide
Cl^{-1}	chloride
F^{-1}	fluoride
H^{-1}	hydride
I^{-1}	iodide
N^{-3}	nitride
O^{-2}	oxide
P^{-3}	phosphide
S^{-2}	sulfide

Anions (polyatomic)

$\text{C}_2\text{H}_3\text{O}_2^{-1}$	acetate
AsO_4^{-3}	arsenate
HCO_3^{-1}	bicarbonate
HSO_4^{-1}	bisulfate
HSO_3^{-1}	bisulfite
BO_3^{-3}	borate
BrO_3^{-1}	bromate
BrO_2^{-1}	bromite
CO_3^{-2}	carbonate
ClO_3^{-1}	chlorate
ClO_2^{-1}	chlorite
CrO_4^{-2}	chromate
CN^{-1}	cyanide
OCN^{-1}	cyanate
$\text{Cr}_2\text{O}_7^{-2}$	dichromate
OH^{-1}	hydroxide
BrO^{-1}	hypobromite
ClO^{-1}	hypochlorite
NO_3^{-1}	nitrate
NO_2^{-1}	nitrite
$\text{C}_2\text{O}_4^{-2}$	oxalate
ClO_4^{-1}	perchlorate
MnO_4^{-1}	permanganate
O_2^{-2}	peroxide
PO_4^{-3}	phosphate
SiO_3^{-2}	silicate
SO_4^{-2}	sulfate
SO_3^{-2}	sulfite
SCN^{-1}	thiocyanate
$\text{S}_2\text{O}_3^{-2}$	thiosulfate

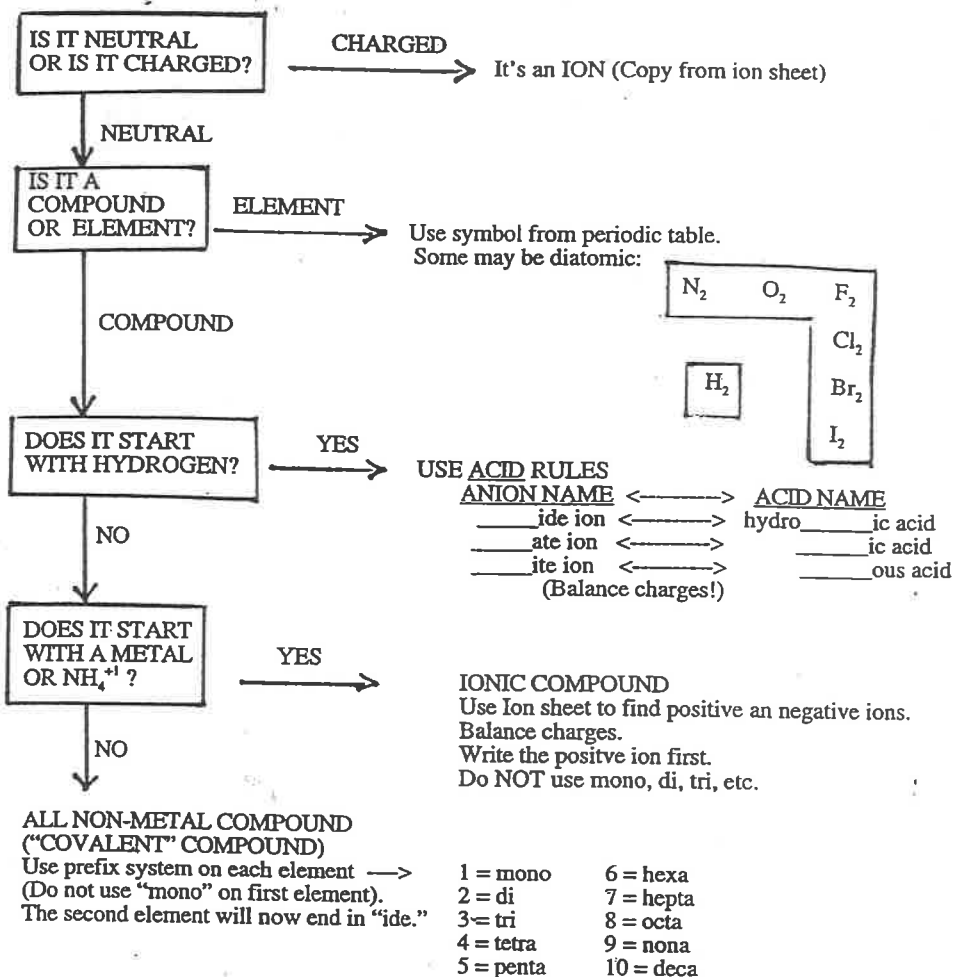


Solubility of Common Compounds in Water

Negative Ions (Anions)	Positive Ions (Cations)	Compounds with the Solubility:
Essentially all	Alkali ions (Li ⁺ , Na ⁺ , K ⁺ , Rb ⁺ , Cs ⁺ , Fr ⁺)	soluble
Essentially all	hydrogen ion [H ⁺ (aq)]	soluble
Essentially all	ammonium ion (NH ₄ ⁺)	soluble
Nitrate, NO ₃ ⁻	essentially all	soluble
Acetate, CH ₃ COO ⁻ / C ₂ H ₃ O ₂ ⁻¹	essentially all	soluble
Chloride, Cl ⁻ Bromide, Br ⁻ Iodide, I ⁻	Ag ⁺ , Pb ²⁺ , Hg ₂ ²⁺ , Cu ⁺ Tl ⁺	NOT soluble
	all others (including Cu ⁺²)	soluble
Sulfate, SO ₄ ²⁻	Ca ²⁺ , Sr ²⁺ , Ba ²⁺ , Pb ²⁺ Ra ²⁺	NOT soluble
	all others	soluble
Sulfide, S ²⁻	alkali ions, H ⁺ (aq), NH ₄ ⁺ , Be ²⁺ , Mg ²⁺ , Ca ²⁺ , Sr ²⁺ , Ba ²⁺ , Ra ²⁺	soluble
	all others	NOT soluble
Hydroxide, OH ⁻	alkali ions, H ⁺ (aq), NH ₄ ⁺ Sr ²⁺ , Ba ²⁺ , Ra ²⁺ , Tl ⁺	soluble
	all others	NOT soluble
Phosphate, PO ₄ ³⁻ Carbonate, CO ₃ ²⁻ Sulfite, SO ₃ ²⁻	alkali ions, H ⁺ (aq), NH ₄ ⁺	soluble
	all others	NOT soluble

* "Soluble" means that at least 0.10 mole of compound can dissolve per liter of solution.

FORMULA WRITING FLOW CHART!



IF YOUR COMPOUND NAME HAS MORE THAN 2 WORDS IT IS PROBABLY WRONG!!!!

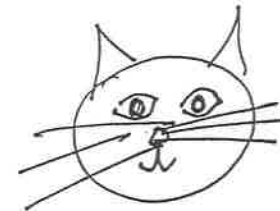
And Remember:

CATS ARE GOOD.

Therefore, CATIONS are positive.

ANIONS are negative.

And there are no DOG IONS.



Li
K
Ba
Sr
Ca
Na
Mg
Al
H(H₂O)
Zn
Cr
Fe
Co
Ni
Sn
Pb
H(acid)
Cu
Ag
Hg
Pt
Au