SOLUBILITY RULES

Soluble compounds	**Exceptions**
Salts of group I metals (Li^+, Na^+, K^+, Rb^+, Cs^+) and ammonium (NH_4^+) salts	
Inorganic acids (H^+)	
Nitrates (NO_3^-), acetates ($C_2H_3O_2^-$), bicarbonates (HCO_3^-), & chlorates (ClO_3^-)	
Halides (F^-, Cl^-, Br^-, I^-)	Halides of Ag^+, Hg^{2+}, Pb^{2+}
Most sulfates (SO_4^{2-})	Sulfates of Ag^+, Ca^{2+}, Sr^{2+}, Ba^{2+}, Hg^{2+}, Pb^{2+}

Insoluble compounds	**Exceptions**
Carbonates (CO_3^{2-}), chromates (CrO_4^{2-}), phosphates (PO_4^{3-}), & sulfides (S^{2-})	Salts of group I metals and ammonium (NH_4^+)
Hydroxides (OH^-)	Salts of group I metals, ammonium (NH_4^+), and barium (Ba^{2+})

OXIDATION NUMBERS

(Oxidation numbers are pretended valences, arrived at by following the formal rules listed below. The rules are listed in priority order.)

1. An uncombined element has an oxidation number of zero.
2. All the oxidation numbers in a neutral compound must total zero.
3. All the oxidation numbers in a charged ion must add up to the charge.
4. Fluorine, in its compounds, always has oxidation number -1.
5. Oxygen, in its compounds, has oxidation number -2 (except -1 in peroxides and +2 in the compound OF_2).
6. Hydrogen usually has oxidation number +1 in compounds (except -1 when it forms hydrides with group I metals)
7. Halogens usually have oxidation number -1 in compounds (except that, in compounds of two different halogens, the one with lower electronegativity follows rule #2 above).
8. All other elements have whatever number is needed to satisfy rule #2 above.