**Ions to Memorize**

(for AP Chemistry)

**Positive ions:**

ammonium, NH4+

silver, Ag+

cadmium, Cd+2

zinc, Zn+2

aluminum, Al+3

Know ALL **alkali metal** (group 1) ions have a +1 charge.

Know ALL **alkaline earth metal** (group 2) ions have a +2 charge.

Know the following element symbols for ions with more than one charge.

antimony, Sb iron, Fe

arsenic, As lead, Pb

cobalt, Co manganese, Mn

chromium, Cr mercury, Hg

copper, Cu tin, Sn

nickel, Ni

(For instance, chromium (III) would be Cr+3)

**Negative ions:**
acetate C2H3O2– carbonate CO3–2

chlorate ClO3– chromate CrO4–2

cyanide CN– dichromate Cr2O7–2

hydrogen carbonate HCO3– oxalate C2O4-2

hydroxide OH– oxide O–2

hypochlorite ClO– peroxide O2–2

nitrate NO3– sulfate SO4–2

perchlorate ClO4– sulfide S–2

permanganate MnO4– sulfite SO3–2

thiocyanate SCN– nitride N–3

phosphate PO4–3

Know ALL **halide** (group 17) ions have a -1 charge.