

Common Ions and their Charge			
+1	+2	+3	+4
ammonium, NH_4^+ copper (I) Cu^+ potassium, K^+ silver, Ag^+ sodium, Na^+ Lithium, Li^+ Hydronium H_3O^+ Nitronium, NO_2^+	barium, Ba^{2+} Calcium, Ca^{2+} Copper (II), Cu^{2+} iron (II), Fe^{2+} lead (II), Pb^{2+} magnesium, Mg^{2+} mercury(I), Hg_2^+ mercury (II), Hg^{2+} nickel(II), Ni^{2+} zinc, Zn^{2+}	aluminum, Al^{3+} chromium(III), Cr^{3+} iron(III), Fe^{3+} antimony, Sb^{3+}	titanium, Ti^{4+}
-1	-2	-3	
acetate, $\text{C}_2\text{H}_3\text{O}_2^-$ bromide, Br^- chlorate, ClO_3^- chloride, Cl^- fluoride, F^- hydrogen carbonate, HCO_3^- hydrogen sulfate, HSO_4^- hydroxide, OH^- iodide, I^- nitrate, NO_3^- nitrite, NO_2^- hydride, H^- cyanide, CN^-	carbonate, CO_3^{2-} chromate, CrO_4^{2-} dichromate, $\text{Cr}_2\text{O}_7^{2-}$ oxide, O^{2-} peroxide, O_2^{2-} sulfate, SO_4^{2-} sulfide, S^{2-} sulfite, SO_3^{2-}	phosphate, PO_4^{3-}	

Summary of oxidation-number rules

- 1) The oxidation number of an atom of a free element is zero
- 2) The oxidation number of a monoatomic ion is equal to its charge
- 3) The algebraic sum of the oxidation numbers of the atoms in the formula of a compound is zero
- 4) In compounds, the oxidation number of hydrogen is +1, except in metallic hydrides, where it's oxidation number is -1
- 5) In compounds, the oxidation number of oxygen is -2, except in peroxides, where it's oxidation number is -1. In compounds with fluorine, oxygen is the less electronegative element and has a positive oxidation number, +2
- 6) In combinations involving nonmetals, the oxidation number of the less electronegative element is positive, and that of the more electronegative element is negative
- 7) The algebraic sum of the oxidation numbers of the atoms in the formula of a polyatomic ion is equal to its charge.