Charges of some Common Monatomic ions

H 1+ 1-																	
Li 1+	Be 2+												N 3-	O 2-	F 1-		
Na 1+	Mg 2+											Al 3+				Cl 1-	
K 1+	Ca 2+	Sc 3+	Ti 3+ 4+	V 3+ 4+	Cr 2+ 3+	Mn 2+ 3+	Fe 2+ 3+	Co 2+ 3+	Ni 2+ 4+	Cu 1+ 2+	Zn 2+					Br 1-	
Rb 1+	Sr 2+								Pd 2+ 4+	Ag 1+	Cd 2+		Sn 2+ 4+			I 1-	
Cs 1+	Ba 2+								Pt 2+ 4+	Au 1+ 3+	Hg 2+ *		Pb 2+ 4+				
Fr 1+	Ra 2+																

Please note that many of the metals shown here can have more possibilities that I can show here. Vanadium, for example, can be 2+, 3+, 4+ or 5+. I have only shown the more common charges.
*Mercury can be 1+ in the polyatomic ion Hg_2^{2+}.

Electronegativity Values of Selected Elements

Metallic Elements			Nonmetallic Elements			
Li (1.0)	**Be** (1.5)	**H** (2.1)	**C** (2.5)	**N** (3.0)	**O** (3.5)	**F** (4.0)
Na (1.0)	**Mg** (1.2)	**Al** (1.5)		**P** (2.1)	**S** (2.5)	**Cl** (3.0)
K (0.9)	**Ca** (1.0)	**Sc** (1.3)			**Se** (2.4)	**Br** (2.8)

Electronegativity

Difference	Bond type
0-0.4 (non-metals)	Non polar covalent
0.5 or more (non metals)	Polar Covalent
Metal + non-metal	Ionic

Table Prefixes used to show the presence of one to ten carbons in an unbranched chain.

Prefix	Number of Carbon atoms	Prefix	Number of Carbon atoms
meth-	1	hex-	6
eth-	2	hept-	7
prop-	3	oct-	8
but-	4	non-	9
pent-	5	dec-	10

Table 12.1

Name	Formula	Condensed formula
methane	CH_4	CH_4
ethane	C_2H_6	CH_3CH_3
propane	C_3H_8	$CH_3CH_2CH_3$
butane	C_4H_{10}	$CH_3CH_2CH_2CH_3$
pentane	C_5H_{12}	$CH_3\ CH_2CH_2CH_2CH_3$
hexane	C_6H_{14}	$CH_3CH_2CH_2CH_2CH_2CH_3$
heptane	C_7H_{16}	$CH_3CH_2CH_2CH_2CH_2CH_2CH_3$

Table 12.2 Some common alkyl groups

# of Cs	Structure	name
1	CH_3-	methyl
2	CH_3CH_2-	ethyl
3	$CH_3\ CH_2CH_2$-	propyl
4	$CH_3\ CH_2\ CH_2CH_2$-	butyl
5	$CH_3\ CH_2\ CH_2\ CH_2CH_2$-	pentyl
6	$CH_3\ CH_2\ CH_2\ CH_2\ CH_2CH_2$-	hexy