

1 Hydro- gen H 1.0													2 Helium He 4.0				
3 Lithium Li 6.9	4 Beryl- lium Be 9.0												10 Neon Ne 20.2				
11 Sodium Na 23.0	12 Magne- sium Mg 24.3												18 Argon Ar 39.9				
19 Potas- sium K 39.1	20 Calc- ium Ca 40.1	21 Scan- dium Sc 45.0	22 Titan- ium Ti 47.9	23 Vana- dium V 50.9	24 Chrom- ium Cr 52.0	25 Manga- nese Mn 54.9	26 Iron Fe 55.8	27 Cobalt Co 58.9	28 Nickel Ni 58.7	29 Copper Cu 63.5	30 Zinc Zn 65.4	31 Gall- ium Ga 69.7	32 Germa- nium Ge 72.6	34 Selene- nium Se 79.0	35 Bromo- ine Br 79.9	36 Kryp- ton Kr 83.8	
37 Rubid- ium Rb 85.5	38 Stron- tium Sr 87.6	39 Yttrium Y 88.9	40 Zirco- nium Zr 91.2	41 Niob- ium Nb 92.9	42 Molyb- denum Mo 95.9	43 Tech- netium Tc (98)	44 Ruthe- nium Ru 101.1	45 Rhod- ium Rh 102.9	46 Rhod- ium Pd 106.4	47 Silver Ag 107.9	48 Palla- dium Cd 112.4	49 Indium In 114.8	50 Tin Sn 118.7	51 Anti- mony Sb 121.8	52 Tellur- ium Te 127.6	53 Iodine I 126.9	54 Xenon Xe 131.3
55 Cesium Cs 132.9	56 Barium Ba 137.3	57* Lanth- anum La 138.9	72 Hafn- ium Hf 178.5	73 Tanta- lum Ta 180.9	74 Tung- sten W 183.8	75 Rhen- ium Re 186.2	76 Osm- ium Os 190.2	77 Iridium Ir 192.2	78 Plati- num Pt 195.1	79 Gold Au 197.0	80 Mercury Hg 200.6	81 Thall- ium Tl 204.4	82 Lead Pb 207.2	83 Bismuth Bi 208.9	84 Poloni- um Po (209)	85 Astat- ine At (210)	86 Radon Rn (222)
87 Fran- cium Fr (223)	88 Radium Ra (226)	89** Actin- ium Ac (227)	104 Ruther- fordium Rf (261)	105 Dub- nium Db (262)	106 Seabor- gium Sg (263)	107 Bohr- ium Bh (262)	108 Hass- ium Hs (265)	109 Metner- ium Mt (266)	110 Ununn- ilium Uun (269)	111 Ununu- nium Uuu (272)	112 Copern- icium Cp (277)	113 Unun- trium Uuh (?)	114 Unun- etrium Uuq (289)	115 Unun- penium Uuh (?)	116 Unun- hexium Uuo (?)	117 Unun- heptium Uuo (?)	118 Ununo- ctium Uuo (?)

58* Cerium Ce 140.1	59 Prase- odym Pr 140.9	60 Neody- mium Nb 144.2	61 Prometh- ium Pm (147)	62 Samar- ium Sm 150.4	63 Euro- pium Eu 152.0	64 Gado- linium Gd 157.2	65 Terb- ium Tb 158.9	66 Dyspr- osium Dy 162.5	67 Hol- mium Ho 164.9	68 Erbium Er 167.3	69 Thul- ium Tm 168.9	70 Ytter- bium Yb 173.0	71 Lutet- ium Lu 175.0
90** Thor- ium Th 232.0	91 Prota- ctin Pa (231)	92 Uran- ium U (238)	93 Neptu- nium Np (237)	94 Pluto- nium Pu (244)	95 Americ- ium Am (243)	96 Curium Cm (247)	97 Berke- lium Bk (247)	98 Calif- ornium Cf (251)	99 Einst- einum Es (252)	100 Ferm- ium Fm (257)	101 Mende- levium Md (258)	102 Nobel- ium No (259)	103 Lawre- ncium Lr (262)

Some Common Ions

CATIONS	+1	+2	+3, +4 to +7
hydrogen	H ⁺		
lithium	Li ⁺		
sodium	Na ⁺	Mg ²⁺	B ³⁺
potassium	K ⁺	Ca ²⁺	Al ³⁺
rubidium	Rb ⁺	Sr ²⁺	Ga ³⁺
cesium	Cs ⁺	barium	In ³⁺
silver	Ag ⁺	zinc	Tl ³⁺
		titanium(II) Ti ²⁺	titanium (IV) Ti ⁴⁺
		chromium (II) Cr ²⁺	chromium (VI) Cr ⁶⁺
		manganese (III) Mn ³⁺	manganese (VII) Mn ⁷⁺
copper (I)	Cu ⁺	iron (II) Fe ²⁺	iron (III) Fe ³⁺
		copper (II) Cu ²⁺	zirconium (III) Zr ³⁺
		zirconium (II) Zr ²⁺	molybdenum Mo ³⁺
		molybdenum Mo ²⁺	tin (IV) Sn ⁴⁺
		tin (II) Sn ²⁺	lead (IV) Pb ⁴⁺
mercury (I)	Hg ₂ ²⁺	mercury (II) Hg ²⁺	
ammonium	NH ₄ ⁺	lead (II) Pb ²⁺	
ANIONS	-1	-2	-3, -4
Hydride*	H ⁻	oxide O ²⁻	carbide C ⁴⁻
fluoride	F ⁻	sulfide S ²⁻	nitride N ³⁻
chloride	Cl ⁻		phosphide P ³⁻
bromide	Br ⁻		
iodide	I ⁻	oxalate C ₂ O ₄ ²⁻	
		thiosulfate S ₂ O ₃ ²⁻	
		chromate CrO ₄ ²⁻	
		dichromate Cr ₂ O ₇ ²⁻	
<u>perfluorate</u>	FO ₄ ⁻	hydrogen carbonate HCO ₃ ⁻	carbonate CO ₃ ²⁻
<u>chlorate</u>	ClO ₃ ⁻	dihydrogen phosphite H ₂ PO ₃ ⁻	hydrogen phosphite HPO ₃ ²⁻
<u>bromite</u>	BrO ₃ ⁻	hydrogen sulfite HSO ₃ ⁻	hydrogen phosphate HPO ₄ ²⁻
<u>hypochlorite</u>	IO ⁻	hydrogen sulfate HSO ₄ ⁻	sulfite SO ₃ ²⁻
hydroxide	OH ⁻	dihydrogen arsenite H ₂ AsO ₃ ⁻	sulfate SO ₄ ²⁻
nitrite	NO ₂ ⁻	dihydrogen arsenite H ₂ AsO ₃ ⁻	hydrogen arsenite HASO ₃ ²⁻
nitrate	NO ₃ ⁻	dihydrogen arsenate H ₂ AsO ₄ ⁻	hydrogen arsenate HASO ₄ ²⁻
acetate	C ₂ H ₃ O ₂ ⁻	thiocyanate SCN ⁻	arsenite AsO ₃ ³⁻
permanganate	MnO ₄ ⁻	cyanide CN ⁻	arsenate AsO ₄ ³⁻
thiocyanate		isocyanide NC ⁻	

*metals only

Prefixes for
non-metal
Compounds

1 – mono
2 – di
3 – tri
4 – tetra
5 – penta
6 – hexa
7 – hepta
8 – octa
9 – nona
10 – deca

titanium (IV) Ti⁴⁺
chromium (VI) Cr⁶⁺
manganese (VII) Mn⁷⁺
zirconium (IV) Zr⁴⁺
molybdenum Mo⁶⁺