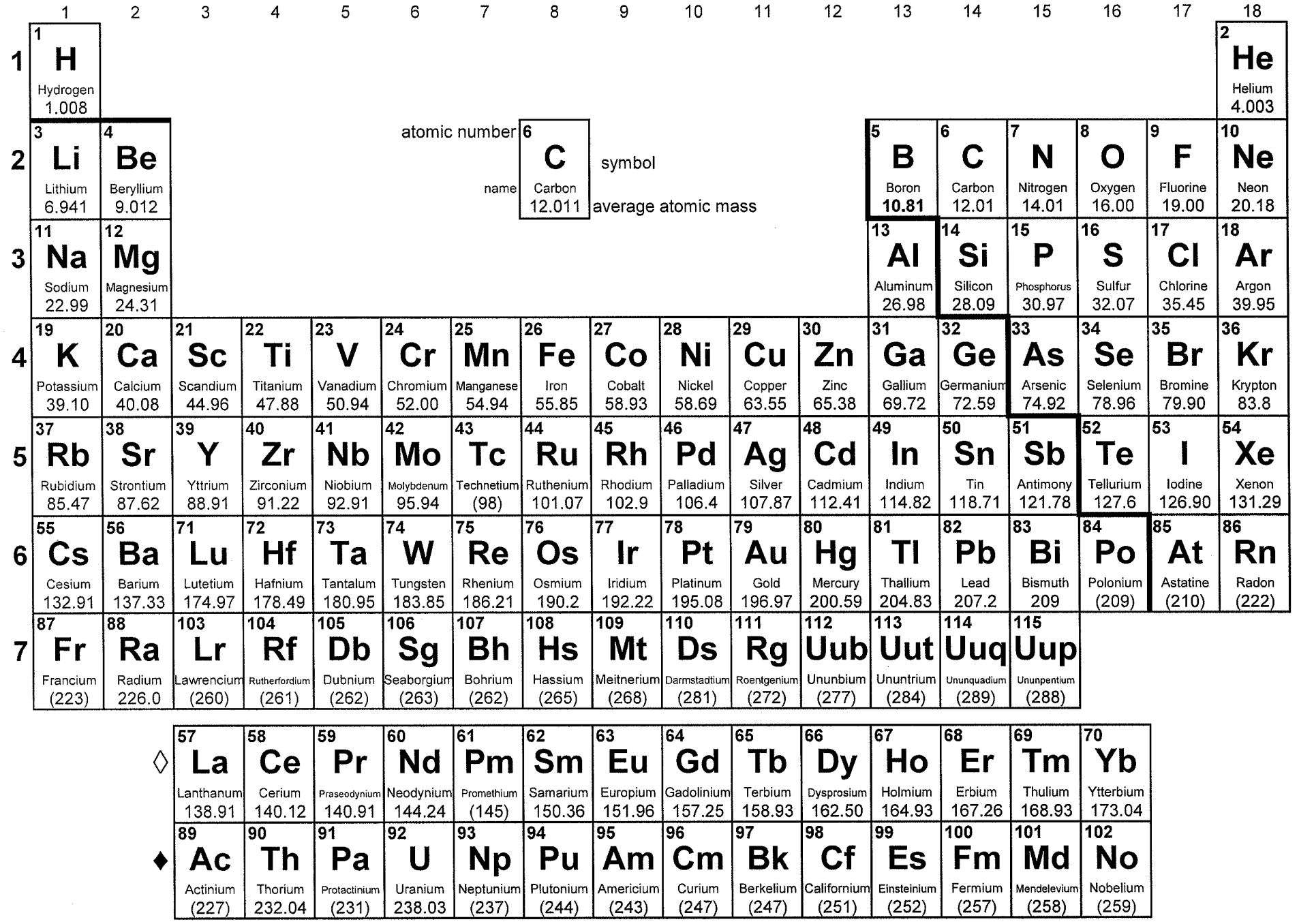
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
1 H Hydrogen 1.008
2 He Helium 4.003
3 Li Lithium 6.941
4 Be Beryllium 9.012
atomic number 6
C
name Carbon 12.011
symbol
average atomic mass
5 B Boron 10.81
6 C Carbon 12.01
7 N Nitrogen 14.01
8 O Oxygen 16.00
9 F Fluorine 19.00
10 Ne Neon 20.18
11 Na Sodium 22.99
12 Mg Magnesium 24.31
13 Al Aluminum 26.98
14 Si Silicon 28.09
15 P Phosphorus 30.97
16 S Sulfur 32.07
17 Cl Chlorine 35.45
18 Ar Argon 39.95
19 K Potassium 39.10
20 Ca Calcium 40.08
21 Sc Scandium 44.96
22 Ti Titanium 47.88
23 V Vanadium 50.94
24 Cr Chromium 52.00
25 Mn Manganese 54.94
26 Fe Iron 55.85
27 Co Cobalt 58.93
28 Ni Nickel 58.69
29 Cu Copper 63.55
30 Zn Zinc 65.38
31 Ga Gallium 69.72
32 Ge Germanium 72.59
33 As Arsenic 74.92
34 Se Selenium 78.96
35 Br Bromine 79.90
36 Kr Krypton 83.8
37 Rb Rubidium 85.47
38 Sr Strontium 87.62
39 Y Yttrium 88.91
40 Zr Zirconium 91.22
41 Nb Niobium 92.91
42 Mo Molybdenum 95.94
43 Tc Technetium (98)
44 Ru Ruthenium 101.07
45 Rh Rhodium 102.9
46 Pd Palladium 106.4
47 Ag Silver 107.87
48 Cd Cadmium 112.41
49 In Indium 114.82
50 Sn Tin 118.71
51 Sb Antimony 121.78
52 Te Tellurium 127.6
53 I Iodine 126.90
54 Xe Xenon 131.29
55 Cs Cesium 132.91
56 Ba Barium 137.33
71 Lu Lutetium 174.97
72 Hf Hafnium 178.49
73 Ta Tantalum 180.95
74 W Tungsten 183.85
75 Re Rhenium 186.21
76 Os Osmium 190.2
77 Ir Iridium 192.22
78 Pt Platinum 195.08
79 Au Gold 196.97
80 Hg Mercury 200.59
81 Tl Thallium 204.83
82 Pb Lead 207.2
83 Bi Bismuth 209
84 Po Polonium (209)
85 At Astatine (210)
86 Rn Radon (222)
87 Fr Francium (223)
88 Ra Radium 226.0
103 Lr Lawrencium (260)
104 Rf Rutherfordium (261)
105 Db Dubnium (262)
106 Sg Seaborgium (263)
107 Bh Bohrium (262)
108 Hs Hassium (265)
109 Mt Meitnerium (268)
110 Ds Darmstadtium (281)
111 Rg Roentgenium (272)
112 Uub Ununbium (277)
113 Uut Ununtrium (284)
114 Uuq Ununquadium (289)
115 Uup Ununpentium (288)
◊ 57 La Lanthanum 138.91
58 Ce Cerium 140.12
59 Pr Praseodynium 140.91
60 Nd Neodynium 144.24
61 Pm Promethium (145)
62 Sm Samarium 150.36
63 Eu Europium 151.96
64 Gd Gadolinium 157.25
65 Tb Terbium 158.93
66 Dy Dysprosium 162.50
67 Ho Holmium 164.93
68 Er Erbium 167.26
69 Tm Thulium 168.93
70 Yb Ytterbium 173.04
♦ 89 Ac Actinium (227)
90 Th Thorium 232.04
91 Pa Protactinium (231)
92 U Uranium 238.03
93 Np Neptunium (237)
94 Pu Plutonium (244)
95 Am Americium (243)
96 Cm Curium (247)
97 Bk Berkelium (247)
98 Cf Californium (251)
99 Es Einsteinium (252)
100 Fm Fermium (257)
101 Md Mendelevium (258)
102 No Nobelium (259)

Common Polyatomic Ions

+1 Charge

Ammonium	NH_4^{+1}

-1 Charge

Nitrite	NO_2^{-1}
Nitrate	NO_3^{-1}
Cyanide	CN^{-1}
Hydroxide	OH^{-1}
Bisulfate	HSO_4^{-1}
Cyanide	CN^{-1}
Cyanate	OCN^{-1}
Thiocyanate	SCN^{-1}
Acetate	$C_2H_3O_2^{-1}$
Permanganate	MnO_4^{-1}
Hydrogen Carbonate or Bicarbonate	HCO_3^{-1}
Monobasic Phosphate or Dihydrogen Phosphate	$H_2PO_4^{-1}$

Hypochlorite	ClO^{-1}
Chlorite	ClO_2^{-1}
Chlorate	ClO_3^{-1}
Perchlorate	ClO_4^{-1}

(Fluorine, Bromine, and Iodine follow a similar pattern as Chlorine)

-2 Charge

Carbonate	CO_3^{-2}
Chromate	CrO_4^{-2}
Dichromate	$Cr_2O_7^{-2}$
Thiosulfate	$S_2O_3^{-2}$
Sulfite	SO_3^{-2}
Sulfate	SO_4^{-2}
Peroxide	O_2^{-2}
Oxalate	$C_2O_4^{-2}$
Tartarate	$C_4H_4O_6^{-2}$
Silicate	SiO_3^{-2}
Dibasic Phosphate or Hydrogen Phosphate	HPO_4^{-2}
selenate	SeO_4^{-2}

- 3 Charge

Ferricyanide	$Fe(CN)_6^{-3}$
Citrate	$C_6H_5O_7^{-3}$
Aluminate	AlO_3^{-3}
Arsenate	AsO_4^{-3}
Arsenite	AsO_3^{-3}
Borate	BO_3^{-3}
Phosphite	PO_3^{-3}
Phosphate	PO_4^{-3}

Compounds containing the following ions are generally soluble

1. alkali metal ions and ammonium ions
2. acetate ion
3. nitrate ion
4. anions of the halogens (Pb, Ag, and Hg salts are exceptions)
5. sulfate ion (Sr, Ba, and Pb are exceptions)

Compounds containing the following ions are generally insoluble

6. carbonate ion (Rule 1 exceptions)
7. chromate ion (Rule 1 exceptions)
8. phosphate ion (Rule 1 exceptions)
9. sulfide ion (Ca, Sr, Ba, and Rule 1 exceptions)
10. hydroxide ion (Ca, Sr. Ba and Rule 1 exceptions)