

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
															Pnictogens Chalcogens Halogens			
1	1 <b>H</b> Hydrogen 2.20																	2 <b>He</b> Helium
2	3 <b>Li</b> Lithium 0.98	4 <b>Be</b> Beryllium 1.57																
3	11 <b>Na</b> Sodium 0.93	12 <b>Mg</b> Magnesium 1.31																
4	19 <b>K</b> Potassium 0.82	20 <b>Ca</b> Calcium 1.0	21 <b>Sc</b> Scandium 1.36	22 <b>Ti</b> Titanium 1.54	23 <b>V</b> Vanadium 1.63	24 <b>Cr</b> Chromium 1.66	25 <b>Mn</b> Manganese 1.55	26 <b>Fe</b> Iron 1.83	27 <b>Co</b> Cobalt 1.88	28 <b>Ni</b> Nickel 1.91	29 <b>Cu</b> Copper 1.90	30 <b>Zn</b> Zinc 1.65	31 <b>Ga</b> Gallium 1.81	32 <b>Ge</b> Germanium 2.01	33 <b>As</b> Arsenic 2.18	34 <b>Se</b> Selenium 2.55	35 <b>Br</b> Bromine 2.96	36 <b>Kr</b> Krypton 3.0
5	37 <b>Rb</b> Rubidium 0.82	38 <b>Sr</b> Strontium 0.95	39 <b>Y</b> Yttrium 1.22	40 <b>Zr</b> Zirconium 1.33	41 <b>Nb</b> Niobium 1.6	42 <b>Mo</b> Molybdenum 2.16	43 <b>Tc</b> Technetium 1.9	44 <b>Ru</b> Ruthenium 2.2	45 <b>Rh</b> Rhodium 2.28	46 <b>Pd</b> Palladium 2.20	47 <b>Ag</b> Silver 1.93	48 <b>Cd</b> Cadmium 1.69	49 <b>In</b> Indium 1.78	50 <b>Sn</b> Tin 1.96	51 <b>Sb</b> Antimony 2.05	52 <b>Te</b> Tellurium 2.1	53 <b>I</b> Iodine 2.66	54 <b>Xe</b> Xenon 2.6
6	55 <b>Cs</b> Caesium 0.79	56 <b>Ba</b> Barium 0.89	57–71	72 <b>Hf</b> Hafnium 1.3	73 <b>Ta</b> Tantalum 1.5	74 <b>W</b> Tungsten 2.36	75 <b>Re</b> Rhenium 1.9	76 <b>Os</b> Osmium 2.2	77 <b>Ir</b> Iridium 2.20	78 <b>Pt</b> Platinum 2.28	79 <b>Au</b> Gold 2.54	80 <b>Hg</b> Mercury 2.0	81 <b>Tl</b> Thallium 1.62	82 <b>Pb</b> Lead 2.33	83 <b>Bi</b> Bismuth 2.02	84 <b>Po</b> Polonium 2.0	85 <b>At</b> Astatine 2.2	86 <b>Rn</b> Radon
7	87 <b>Fr</b> Francium 0.7	88 <b>Ra</b> Radium 0.9	89–103	104 <b>Rf</b> Rutherfordium	105 <b>Db</b> Dubnium	106 <b>Sg</b> Seaborgium	107 <b>Bh</b> Bohrium	108 <b>Hs</b> Hassium	109 <b>Mt</b> Meitnerium	110 <b>Ds</b> Darmstadtium	111 <b>Rg</b> Roentgenium	112 <b>Cn</b> Copernicium	113 <b>Nh</b> Nihonium	114 <b>Fl</b> Flerovium	115 <b>Mc</b> Moscovium	116 <b>Lv</b> Livermorium	117 <b>Ts</b> Tennessine	118 <b>Og</b> Oganesson

9

F

Fluorine

18.998

2

7

[He] 2s<sup>2</sup> 2p<sup>5</sup>

Series.....Halogen  
 State at 273 K....Gas  
 Melting Point.....53.5 K  
 Boiling Point.....85.03 K  
 Electronegativity, 3.98  
 Electron Affinity, 328 kJ/mol  
 Valence.....1  
 Ionization.....1681.0 kJ/mol

Radius.....42 pm  
 Hardness.....Unknown  
 Modulus.....Unknown  
 Density.....1.696 kg/m<sup>3</sup>  
 Conductivity, 0.0277 W/mK  
 Heat.....824 J/kgK  
 Abundance...0.000040%  
 Discovered...1886

Electronegativity values range from a low of 0.7 (yellow) to 3.98 (red).