

# Periodic Table of the Elements

	<b>+1</b>	<b>+2</b>											<b>+3</b>	<b>n/a</b>	<b>-3</b>	<b>-2</b>	<b>-1</b>	<b>0</b>
	1A	2A											3A	4A	5A	6A	7A	8A
	1	2											13	14	15	16	17	18
1	Hydrogen 1 <b>H</b> 1.0																	Helium 2 <b>He</b> 4.0
2	Lithium 3 <b>Li</b> 6.9	Beryllium 4 <b>Be</b> 9.0											Boron 5 <b>B</b> 10.8	Carbon 6 <b>C</b> 12.0	Nitrogen 7 <b>N</b> 14.0	Oxygen 8 <b>O</b> 16.0	Fluorine 9 <b>F</b> 19.0	Neon 10 <b>Ne</b> 20.2
3	Sodium 11 <b>Na</b> 23.0	Magnesium 12 <b>Mg</b> 24.3	3B	4B	5B	6B	7B	8B			1B	2B	Aluminum 13 <b>Al</b> 27.0	Silicon 14 <b>Si</b> 28.1	Phosphorus 15 <b>P</b> 31.0	Sulfur 16 <b>S</b> 32.1	Chlorine 17 <b>Cl</b> 35.5	Argon 18 <b>Ar</b> 39.9
4	Potassium 19 <b>K</b> 39.1	Calcium 20 <b>Ca</b> 40.1	Scandium 21 <b>Sc</b> 45.0	Titanium 22 <b>Ti</b> 47.9	Vanadium 23 <b>V</b> 50.9	Chromium 24 <b>Cr</b> 52.0	Manganese 25 <b>Mn</b> 54.9	Iron 26 <b>Fe</b> 55.8	Cobalt 27 <b>Co</b> 58.9	Nickel 28 <b>Ni</b> 58.7	Copper 29 <b>Cu</b> 63.5	Zinc 30 <b>Zn</b> 65.4	Gallium 31 <b>Ga</b> 69.7	Germanium 32 <b>Ge</b> 72.6	Arsenic 33 <b>As</b> 74.9	Selenium 34 <b>Se</b> 79.0	Bromine 35 <b>Br</b> 79.9	Krypton 36 <b>Kr</b> 83.8
5	Rubidium 37 <b>Rb</b> 85.5	Strontium 38 <b>Sr</b> 87.6	Yttrium 39 <b>Y</b> 88.9	Zirconium 40 <b>Zr</b> 91.2	Niobium 41 <b>Nb</b> 92.9	Molybdenum 42 <b>Mo</b> 95.9	Technetium 43 <b>Tc</b> (98)	Ruthenium 44 <b>Ru</b> 101.1	Rhodium 45 <b>Rh</b> 102.9	Palladium 46 <b>Pd</b> 106.4	Silver 47 <b>Ag</b> 107.9	Cadmium 48 <b>Cd</b> 112.4	Indium 49 <b>In</b> 114.8	Tin 50 <b>Sn</b> 118.7	Antimony 51 <b>Sb</b> 121.8	Tellurium 52 <b>Te</b> 127.6	Iodine 53 <b>I</b> 126.9	Xenon 54 <b>Xe</b> 131.3
6	Cesium 55 <b>Cs</b> 132.9	Barium 56 <b>Ba</b> 137.3	Lanthanum 57 <b>La</b> 138.9	Hafnium 72 <b>Hf</b> 178.5	Tantalum 73 <b>Ta</b> 180.9	Tungsten 74 <b>W</b> 183.9	Rhenium 75 <b>Re</b> 186.2	Osmium 76 <b>Os</b> 190.2	Iridium 77 <b>Ir</b> 192.2	Platinum 78 <b>Pt</b> 195.1	Gold 79 <b>Au</b> 197.0	Mercury 80 <b>Hg</b> 200.6	Thallium 81 <b>Tl</b> 204.4	Lead 82 <b>Pb</b> 207.2	Bismuth 83 <b>Bi</b> 209.0	Polonium 84 <b>Po</b> (209)	Astatine 85 <b>At</b> (210)	Radon 86 <b>Rn</b> (222)
7	Francium 87 <b>Fr</b> (223)	Radium 88 <b>Ra</b> (226)	Actinium 89 <b>Ac</b> (227)	Rutherfordium 104 <b>Rf</b> (261)	Dubnium 105 <b>Db</b> (262)	Seaborgium 106 <b>Sg</b> (263)	Bohrium 107 <b>Bh</b> (262)	Hassium 108 <b>Hs</b> (265)	Meitnerium 109 <b>Mt</b> (266)	Darmstadtium 110 <b>Ds</b> (281)	Roentgenium 111 <b>Rg</b> (272)	Copernicium 112 <b>Cn</b> (285)	<i>Ununtrium</i> 113 <i>Uut</i> (284)	Flerovium 114 <b>Fl</b> (289)	<i>Ununpentium</i> 115 <i>Uup</i> (288)	Livermorium 116 <b>Lv</b> (291)	<i>Ununseptium</i> 117 <i>Uus</i> (294)	<i>Ununoctium</i> 118 <i>Uuo</i> (294)

6	Cerium 58 <b>Ce</b> 140.1	Praseodymium 59 <b>Pr</b> 140.9	Neodymium 60 <b>Nd</b> 144.2	Promethium 61 <b>Pm</b> (145)	Samarium 62 <b>Sm</b> 150.4	Europium 63 <b>Eu</b> 152.0	Gadolinium 64 <b>Gd</b> 157.3	Terbium 65 <b>Tb</b> 158.9	Dysprosium 66 <b>Dy</b> 162.5	Holmium 67 <b>Ho</b> 164.9	Erbium 68 <b>Er</b> 167.3	Thulium 69 <b>Tm</b> 168.9	Ytterbium 70 <b>Yb</b> 173.1	Lutetium 71 <b>Lu</b> 175.0
7	Thorium 90 <b>Th</b> 232.0	Protactinium 91 <b>Pa</b> 231.0	Uranium 92 <b>U</b> 238.0	Neptunium 93 <b>Np</b> (237)	Plutonium 94 <b>Pu</b> (244)	Americium 95 <b>Am</b> (243)	Curium 96 <b>Cm</b> (247)	Berkelium 97 <b>Bk</b> (247)	Californium 98 <b>Cf</b> (251)	Einsteinium 99 <b>Es</b> (252)	Fermium 100 <b>Fm</b> (257)	Mendelevium 101 <b>Md</b> (258)	Nobelium 102 <b>No</b> (259)	Lawrencium 103 <b>Lr</b> (262)

## Common Ion Table

Cations				Anions			
Ammonium	$\text{NH}_4^+$	Mercury (I)	$\text{Hg}_2^{2+}$	Acetate	$\text{C}_2\text{H}_3\text{O}_2^-$	Nitrate	$\text{NO}_3^-$
Antimony (III)	$\text{Sb}^{3+}$	Mercury (II)	$\text{Hg}^{2+}$	Borate	$\text{BO}_3^{3-}$	Nitrite	$\text{NO}_2^-$
Antimony (V)	$\text{Sb}^{5+}$	Nickel	$\text{Ni}^{2+}$	Bromate	$\text{BrO}_3^-$	Oxalate	$\text{C}_2\text{O}_4^{2-}$
Arsenic (III)	$\text{As}^{3+}$	Scandium	$\text{Sc}^{2+}$	Carbonate	$\text{CO}_3^{2-}$	Perchlorate	$\text{ClO}_4^-$
Arsenic (V)	$\text{As}^{5+}$	Silver	$\text{Ag}^+$	Chlorate	$\text{ClO}_3^-$	Permanganate	$\text{MnO}_4^-$
Bismuth (III)	$\text{Bi}^{3+}$	Strontium	$\text{Sr}^{2+}$	Chlorite	$\text{ClO}_2^-$	Peroxide	$\text{O}_2^{2-}$
Bismuth (V)	$\text{Bi}^{5+}$	Tin (II)	$\text{Sn}^{2+}$	Chromate	$\text{CrO}_4^{2-}$	Phosphate	$\text{PO}_4^{3-}$
Cadmium	$\text{Cd}^{2+}$	Tin (IV)	$\text{Sn}^{4+}$	Cyanamide	$\text{CN}_2^{2-}$	Phosphite	$\text{PO}_3^{3-}$
Chromium (II)	$\text{Cr}^{2+}$	Zinc	$\text{Zn}^{2+}$	Cyanide	$\text{CN}^-$	Selenate	$\text{SeO}_4^{2-}$
Chromium (III)	$\text{Cr}^{3+}$			Dichromate	$\text{Cr}_2\text{O}_7^{2-}$	Silicate	$\text{SiO}_4^{4-}$
Cobalt (II)	$\text{Co}^{2+}$			Dihydrogen phosphate	$\text{H}_2\text{PO}_4^-$	Stannate	$\text{SnO}_3^{2-}$
Cobalt (III)	$\text{Co}^{3+}$			Ferricyanide	$\text{Fe}(\text{CN})_6^{3-}$	Stannite	$\text{SnO}_2^{2-}$
Copper (I)	$\text{Cu}^+$			Ferrocyanide	$\text{Fe}(\text{CN})_6^{4-}$	Sulfate	$\text{SO}_4^{2-}$
Copper (II)	$\text{Cu}^{2+}$			Fluoride	$\text{F}^-$	Sulfite	$\text{SO}_3^{2-}$
Hydronium	$\text{H}_3\text{O}^+$			Hydrogen carbonate	$\text{HCO}_3^-$	Tartrate	$\text{C}_4\text{H}_4\text{O}_6^{2-}$
Iron (II)	$\text{Fe}^{2+}$			Hydrogen phosphate	$\text{HPO}_4^{2-}$	Thiocyanate	$\text{SCN}^-$
Iron (III)	$\text{Fe}^{3+}$			Hydrogen sulfate	$\text{HSO}_4^-$	Thiosulfate	$\text{S}_2\text{O}_3^{2-}$
Lead (II)	$\text{Pb}^{2+}$			Hydrogen sulfide	$\text{HS}^-$		
Lead (IV)	$\text{Pb}^{4+}$			Hydrogen sulfite	$\text{HSO}_3^-$		
Manganese (II)	$\text{Mn}^{2+}$			Hydride	$\text{H}^-$		
Manganese (IV)	$\text{Mn}^{4+}$			Hydroxide	$\text{OH}^-$		
				Hypochlorite	$\text{ClO}^-$		
				Iodate	$\text{IO}_3^-$		