PERIODIC TABLE OF THE ELEMENTS

1 IA	2 IIA	3 IIIB	4 IVB	5 VB	6 VIB	7 VIIB	8	9 VIIIB	10	11 IB	12 IIB	13 IIIA	14 IVA	15 VA	16 VIA	17 VIIA	18 VIIIA
1 +1 -1 **H** Hydrogen 1.0079 1																	2 0 **He** Helium 4.0026 2
3 +1 **Li** Lithium 6.941 2-1	4 +2 **Be** Beryllium 9.0122 2-2											5 +3 **B** Boron 10.811 2-3	6 -4 +2 +4 **C** Carbon 12.011 2-4	7 -3 -2 -1 +1 +2 +3 +4 +5 **N** Nitrogen 14.007 2-5	8 -2 **O** Oxygen 15.999 2-6	9 -1 **F** Fluorine 18.998 2-7	10 0 **Ne** Neon 20.179 2-8
11 +1 **Na** Sodium 22.990 2-8-1	12 +2 **Mg** Magnesium 24.305 2-8-2											13 +3 **Al** Aluminium 26.982 2-8-3	14 -4 +2 +4 **Si** Silicon 28.086 2-8-4	15 -3 +3 +5 **P** Phosphorus 30.974 2-8-5	16 -2 +4 +6 **S** Sulphur 32.065 2-8-6	17 -1 +1 +3 +5 +7 **Cl** Chlorine 35.453 2-8-7	18 0 **Ar** Argon 39.948 2-8-8
19 +1 **K** Potassium 39.098 2-8-8-1	20 +2 **Ca** Calcium 40.078 2-8-8-2	21 +3 **Sc** Scandium 44.956 2-8-9-2	22 +2 +3 +4 **Ti** Titanium 47.867 2-8-10-2	23 +2 +3 +4 +5 **V** Vanadium 50.942 2-8-11-2	24 +2 +3 +6 **Cr** Chromium 51.996 2-8-13-1	25 +2 +3 +4 +7 **Mn** Manganese 54.938 2-8-13-2	26 +2 +3 **Fe** Iron 55.845 2-8-14-2	27 +2 +3 **Co** Cobalt 58.933 2-8-15-2	28 +2 +3 **Ni** Nickel 58.693 2-8-16-2	29 +1 +2 **Cu** Copper 63.546 2-8-18-1	30 +2 **Zn** Zinc 65.39 2-8-18-2	31 +3 **Ga** Gallium 69.723 2-8-18-3	32 -4 +2 +4 **Ge** Germanium 72.64 2-8-18-4	33 -3 +3 +5 **As** Arsenic 74.922 2-8-18-5	34 -2 +2 +6 **Se** Selenium 78.96 2-8-18-6	35 -1 +1 +5 **Br** Bromine 79.904 2-8-18-7	36 0 +2 **Kr** Krypton 83.80 2-8-18-8
37 +1 **Rb** Rubidium 85.468 2-8-18-8-1	38 +2 **Sr** Strontium 87.62 2-8-18-8-2	39 +3 **Y** Yttrium 88.906 2-8-18-9-2	40 +4 **Zr** Zirconium 91.224 2-8-18-10-2	41 +3 +5 **Nb** Niobium 92.906 2-8-18-12-1	42 +3 +6 **Mo** Molybdenum 95.94 2-8-18-13-1	43 +4 +6 +7 **Tc** Technetium (98) 2-8-18-14-1	44 +3 **Ru** Ruthenium 101.07 2-8-18-15-1	45 +3 **Rh** Rhodium 102.91 2-8-18-16-1	46 +2 +4 **Pd** Palladium 106.42 2-8-18-18	47 +1 **Ag** Silver 107.87 2-8-18-18-1	48 +2 **Cd** Cadmium 112.41 2-8-18-18-2	49 +3 **In** Indium 114.82 2-8-18-18-3	50 +2 +4 **Sn** Tin 118.71 2-8-18-18-4	51 -3 +3 +5 **Sb** Antimony 121.76 2-8-18-18-5	52 -2 +4 +6 **Te** Tellurium 127.60 2-8-18-18-6	53 -1 +1 +5 +7 **I** Iodine 126.90 2-8-18-18-7	54 0 +2 +4 +6 **Xe** Xenon 131.29 2-8-18-18-8
55 +1 **Cs** Cesium 132.91 2-8-18-18-8-1	56 +2 **Ba** Barium 137.33 2-8-18-18-8-2	57-71 **La** Lanthanide	72 +4 **Hf** Hafnium 178.49 2-8-18-32-10-2	73 +5 **Ta** Tantalum 180.95 2-8-18-32-11-2	74 +6 **W** Tungsten 183.84 2-8-18-32-12-2	75 +4 +6 +7 **Re** Rhenium 186.21 2-8-18-32-13-2	76 +3 +4 **Os** Osmium 190.23 2-8-18-32-14-2	77 +3 +4 **Ir** Iridium 192.22 2-8-18-32-15-2	78 +2 +4 **Pt** Platinum 195.08 2-8-18-32-17-1	79 +1 +3 **Au** Gold 196.97 2-8-18-32-18-1	80 +1 +2 **Hg** Mercury 200.59 2-8-18-32-18-2	81 +1 +3 **Tl** Thallium 204.38 2-8-18-32-18-3	82 +2 +4 **Pb** Lead 207.2 2-8-18-32-18-4	83 +3 +5 **Bi** Bismuth 208.98 2-8-18-32-18-5	84 +2 +4 **Po** Polonium (209) 2-8-18-32-18-6	85 **At** Astatine (210) 2-8-18-32-18-7	86 0 **Rn** Radon (222) 2-8-18-32-18-8
87 +1 **Fr** Francium (223) -18-32-18-8-1	88 +2 **Ra** Radium (226) -18-32-18-8-2	89-103 **Ac** Actinide	104 **Rf** Rutherfordium (261) -18-32-32-10-2	105 **Db** Dubnium (262) -18-32-32-11-2	106 **Sg** Seaborgium (266) -18-32-32-12-2	107 **Bh** Bohrium (264) -18-32-32-13-2	108 **Hs** Hassium (277) -18-32-32-14-2	109 **Mt** Meitnerium (268) -18-32-32-15-2	110 +2 +4 **Uun** Ununnilium (281) -18-32-32-17-1	111 **Uuu** Unununium (272) -18-32-32-18-1	112 **Uub** Ununbium (285) -18-32-32-18-2	113 **Uut** Ununtrium (284)	114 **Uuq** Ununquadium (289)	115 **Uup** Ununpentium (288)	116 **Uuh** Ununhexium (291)	117 **Uus** Ununseptium	118 **Uuo** Ununoctium (294)

Atomic Number ⇒ 6 ⇒ Symbol ⇒ C ⇒ Name ⇒ Carbon ⇒ Atomic Mass 12.011 ⇒ Electron Configuration 2-4

14 ⇐ Group IUPAC; IVA ⇐ Group CAS; -4 +2 +4 ⇐ Selected Oxidation States

Alkali Metals · Alkaline Earth Metals · Transition Metals · Metals · Metaloides · Nonmetals · Halogens · Noble Gases

Gas · Liquid · Solid · at 25C · Synthetic

Electron Shells

			S	P	D	F
1	K	2	2			
2	L	8	2	6		
3	M	18	2	6	10	
4	N	32	2	6	10	14
5	O	32	2	6	10	14
6	P	18	2	6	10	
7	Q	8	2	6		
8	R	2	2			

Lanthanide

57 +3	58 +3 +4	59 +3	60 +3	61 +3	62 +2 +3	63 +2 +3	64 +3	65 +3	66 +3	67 +3	68 +3	69 +3	70 +2 +3	71 +3
La	**Ce**	**Pr**	**Nd**	**Pm**	**Sm**	**Eu**	**Gd**	**Tb**	**Dy**	**Ho**	**Er**	**Tm**	**Yb**	**Lu**
Lanthanium	Cerium	Praseodymium	Neodymium	Promethium	Samarium	Europium	Gadolinium	Terbium	Dysprosium	Holmium	Erbium	Thulium	Ytterbium	Lutetium
138.91	140.12	140.91	144.24	(145)	150.36	151.96	157.25	158.93	162.50	164.93	167.26	168.93	173.04	174.97
2-8-18-18-9-2	2-8-18-20-8-2	2-8-18-21-8-2	2-8-18-22-8-2	2-8-18-23-8-2	2-8-18-24-8-2	2-8-18-25-8-2	2-8-18-25-9-2	2-8-18-27-8-2	2-8-18-28-8-2	2-8-18-29-8-2	2-8-18-30-8-2	2-8-18-31-8-2	2-8-18-32-8-2	2-8-18-32-9-2

Actinide

89 +3	90 +4	91 +4 +5	92 +3 +4 +5 +6	93 +3 +4 +5 +6	94 +3 +4 +5 +6	95 +3 +4 +5 +6	96 +3	97 +3 +4	98 +3	99	100	101	102	103
Ac	**Th**	**Pa**	**U**	**Np**	**Pu**	**Am**	**Cm**	**Bk**	**Cf**	**Es**	**Fm**	**Md**	**No**	**Lr**
Actinium	Thorium	Protactinium	Uranium	Neptunium	Plutonium	Americium	Curium	Berkelium	Californium	Einsteinium	Fermium	Mendelevium	Nobelium	Lawrencium
(227)	232.04	231.04	238.03	(237)	(244)	(243)	(247)	(247)	(251)	(252)	(257)	(258)	(259)	(262)
-18-32-18-9-2	-18-32-18-10-2	-18-32-20-9-2	-18-32-21-9-2	-18-32-23-8-2	-18-32-24-8-2	-18-32-25-8-2	-18-32-25-9-2	-18-32-27-8-2	-18-32-28-8-2	-18-32-29-8-2	-18-32-30-8-2	-18-32-31-8-2	-18-32-32-8-2	-18-32-32-9-2