Periodic table of elements

Mendeleev's table

1 IA																	18 VIIIA
1 2.20 1s H Hydrogen 1.00784–1.00811	2 IIA											13 IIIA	14 IVA	15 VA	16 VIA	17 VIIA	$\mathop{\rm He}_{\stackrel{\rm Helium}{_{4.002602(2)}}}^{1s}$
3 0.98 2s Li Lithium 6.938-6.997	4 1.57 2s Be Beryllium 9.0121831(5)		$\begin{bmatrix} Z & \chi & ss \\ & \mathbf{S}\mathbf{y} \\ & Name \\ & saw \end{bmatrix}$	χ: electronega ss: subshell Sy: symbol Name: elemen	ativity nt name							5 2.04 2p B Boron 10.806-10.821	6 2.55 2p C Carbon 12.0096–12.0116	7 3.04 2p Nitrogen 14.00643- 14.00728	8 3.44 2 <i>p</i> O Oxygen 15.99903- 15.99977	9 3.98 2p F Fluorine 18.998403163(6)	${\rm Ne} \\ {\rm Neon} \\ {\rm Neon} \\ {\rm 20.1797(6)}$
${f Na} \ {f Na} \ {f Sodium} \ {f 22.98976928(2)}$	12 1.31 3s Mg Mg Magnesium 24.304-24.307	3 IIIA	4 IVB	5 VB	6 VIB	7 VIIB	8 VIIIB	9 VIIIB	10 VIIIB	11 IB	12 IIB	13 1.61 3p Al Aluminium 26.9815385(7)	14 1.90 3 <i>p</i> Si Silicon 28.084–28.086	15 2.19 3p Phosphorus 30.973761998(5)	16 2.58 3p S Sulfur 32.059–32.076	17 3.16 3 <i>p</i> Cl Chlorine 35.446-35.457	18 3p Ar Argon 39.948(1)
$egin{array}{ccc} 19 & 0.82 & 4s \ K & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & \\ & & & & \\ & & \\ & & & \\ & & & \\ & & \\ & & & \\ & & & \\ & & & \\ & & & \\$	20 1.00 4s Ca Calcium 40.078(4)	21 1.36 3 <i>d</i> Sc Scandium 44.955908(5)	22 1.54 3 <i>d</i> Ti Titanium 47.867(1)	23 1.63 3 <i>d</i> V Vanadium 50.9415(1)	24 1.66 3 <i>d*</i> Cr Chromium 51.9961(6)	$\begin{array}{ccc} 25 & 1.55 & 3d \\ \hline Mn \\ \text{Manganese} \\ & 54.938044(3) \end{array}$	26 1.83 3 <i>d</i> Fe Iron 55.845(2)	27 1.88 3 <i>d</i> Co Cobalt 58.933194(4)	28 1.91 3 <i>d</i> Ni Nickel 58.6934(4)	29 1.90 3 <i>d*</i> Cu Copper 63.546(3)	30 1.65 3 <i>d</i> 2n Zinc 65.38(2)	31 1.81 4p Ga Gallium 69.723(1)	32 2.01 4p Ge Germanium 72.630(8)	33 2.18 4p As Arsenic 74.921595(6)	34 2.55 4 <i>p</i> Se Selenium 78.971(8)	35 2.96 4p Br Bromine 79.901-79.907	36 3.00 4p Kr Krypton 83.798(2)
37 0.82 5s Rb Rubidium 85.4678(3)	38 0.95 5s Sr Strontium 87.62(1)	39 1.22 4 <i>d</i> Y Yttrium 88.90584(2)	40 1.33 4 <i>d</i> 2r Zirconium 91.224(2)	41 1.6 4 <i>d*</i> Nb Niobium 92.90637(2)	$\begin{array}{ccc} 42 & 2.16 & 4d* \\ & \mathbf{Mo} \\ & \text{Molybdenum} \\ & 95.95(1) \end{array}$	$\begin{array}{ccc} 43 & 1.9 & 4d \\ & Tc \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ \end{array}$	44 2.2 4 <i>d*</i> Ru Ruthenium 101.07(2)	45 2.28 4 <i>d*</i> Rh Rhodium 102.90550(2)	46 2.20 4 <i>d*</i> Pd Palladium 106.42(1)	47 1.93 4 <i>d*</i> Ag Silver 107.8682(2)	48 1.69 4 <i>d</i> Cd Cadmium 112.414(4)	49 1.78 5 <i>p</i> In Indium 114.818(1)	50 1.96 5 <i>p</i> Sn Tin 118.710(7)	51 2.05 5 <i>p</i> Sb Antimony 121.760(1)	52 2.1 5 <i>p</i> Te Tellurium 127.60(3)	53 2.66 5 <i>p</i> I Iodine 126.90447(3)	$\begin{array}{ccc} 54 & 2.60 & 5\rho \\ & \mathbf{Xe} \\ & \mathbf{Xenon} \\ & & \\$
55 0.79 6s CS Cesium 132.90545196(6)	56 0.89 6s Ba Barium 137.327(7)	* Lanthanides	72 1.3 5 <i>d</i> Hf Hafnium 178.49(2)	73 1.5 5 <i>d</i> Ta Tantalum 180.94788(2)	74 2.36 5 <i>d</i> W Tungsten 183.84(1)	75 1.9 5 <i>d</i> Re Rhenium 186.207(1)	76 2.2 5 <i>d</i> OS Osmium 190.23(3)	77 2.20 5 <i>d</i> Ir Iridium 192.217(3)	78 2.28 5 <i>d*</i> Pt Platinum 195.084(9)	79 2.54 5 <i>d</i> * Au Gold 196.966569(5)	80 2.00 5 <i>d</i> Hg Mercury 200.592(3)	81 1.62 6p Tl Thallium 204.382-204.385	82 1.87 6 <i>p</i> Pb Lead 207.2(1)	83 2.02 6 <i>p</i> Bi Bismuth 208.98040(1)	84 2.0 6 <i>p</i> Po Polonium (209)	85 2.2 6 <i>p</i> At Astatine (210)	86 2.2 6p Rn Radon (222)
Fr Francium (223)	$egin{array}{ccc} 88 & 0.9 & 7s \\ & \mathbf{Ra} \\ & & \mathrm{Radium} \\ & & & (226) \\ \end{array}$	** Actinides	$ \begin{array}{cc} 104 & 6d \\ \mathbf{Rf} \\ \text{Rutherfordium} \\ ^{(261)} \end{array} $	105 6 <i>d</i> Db Dubnium (268)	$\begin{array}{cc} 106 & 6d \\ \mathbf{Sg} \\ \mathrm{Seaborgium} \\ \mathrm{_{(269)}} \end{array}$	$ \begin{array}{cc} 107 & 6d \\ \mathbf{Bh} \\ \text{Bohrium} \\ (270) \end{array} $	108 6 <i>d</i> Hs Hassium (269)	${f Mt} \ {f Mt} \ {f Meitnerium} \ {f (278)}$	Ds	Rg	$ \begin{array}{c} $	Nh Nihonium (286)	$\begin{array}{cc} 114 & 7\rho \\ \hline Fl \\ {\rm Flerovium} \\ {}_{(289)} \end{array}$	Mc Moscovium (289)	\mathbf{Lv} Livermorium (293)	$\frac{117}{\text{Ts}}$	Og Oganesson (294)
A11-1: 3.5 ·	.1			FO. 1.12	50 150 15	60 144 16		60 1.7 15	62 12 16		CF 1.5 1.5	66 162 16	67 160 16	60 161	60 167 16	70 11 16	71 107 10
Alkaline Ea Metal Metalloid		*	Lanthanum 138.90547(7)	58 1.12 4 <i>f</i> * Ce Cerium 140.116(1)	\Pr^{59} 1.13 4f \Pr Praseodymium 140.90766(2)	Nd	$\Pr^{61 1.13 4f} \\ \mathbf{Pm} \\ \Pr^{\text{promethium}}_{(145)}$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Europium 151.964(1)	$\begin{array}{c} \text{64} & \text{1.2} & \text{4}\textit{f*} \\ & \textbf{Gd} \\ & \text{Gadolinium} \\ & \text{157.25(3)} \end{array}$	$\begin{array}{c cccc} 65 & 1.1 & 4f \\ & Tb \\ & & \\ &$	$\begin{array}{c} 66 1.22 4f \\ \textbf{Dy} \\ \textbf{Dysprosium} \\ 162.500(1) \end{array}$	67 1.23 4f Ho Holmium 164.93033(2)	68 1.24 4f Er Erbium 167.259(3)	69 1.25 4f Tm Thulium 168.93422(2)	$\begin{array}{ccc} 70 & 1.1 & 4f \\ \textbf{Yb} & \\ \textbf{Ytterbium} & \\ 173.045(10) & \end{array}$	71 1.27 4f Lu Lutetium 174.9668(1)
Halogen Noble Gas	/Actinide	**	89 1.1 6 <i>d*</i> Ac Actinium (227)	90 1.3 5 <i>f</i> * Th Thorium 232.0377(4)	91 1.5 5 <i>f*</i> Pa Protactinium 231.03588(2)	92 1.38 5f* U Uranium 238.02891(3)	93 1.36 5 <i>f</i> * Np Neptunium (237)	94 1.28 5 <i>f</i> Pu Plutonium (244)	95 1.13 5 <i>f</i>	96 1.28 5 <i>f</i> * Cm Curium (247)	$\begin{array}{ccc} 97 & 1.3 & 5f \\ & \mathbf{Bk} \\ & & \\ \text{Berkelium} \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ \end{array}$	$\begin{array}{ccc} 98 & 1.3 & 5f \\ \hline \textbf{Cf} \\ \text{Californium} \\ \text{\tiny (251)} \end{array}$	99 1.3 5 <i>f</i> Es Einsteinium (252)	100 1.3 5 <i>f</i> Fm Fermium (257)	$\begin{array}{ccc} 101 & 1.3 & 5f \\ \hline \mathbf{Md} \\ \mathrm{Mendelevium} \\ \mathrm{_{(258)}} \end{array}$	$\begin{array}{ccc} 102 & 1.3 & 5f \\ \hline \textbf{No} \\ \text{Nobelium} \\ \text{\tiny (259)} \end{array}$	103 1.3 5 <i>f</i> Lr Lawrencium (266)
	1 2.20 1s H Hydrogen 1.00784-1.00811 3 0.98 2s Li Lithium 6.938-6.997 11 0.93 3s Na Sodium 22.98976928(2) 19 0.82 4s K Potassium 39.0983(1) 37 0.82 5s Rb Rubidium 85.4678(3) 55 0.79 6s CS Cesium 132.90545196(6) 37 0.7 7s Fr Francium (223) Alkali Meta Alkaline Ea Metal Metal Mon-metal Halogen Noble Gas	Hydrogen 1,00784-1,00811 1	1 2.20 1s	1	1	1	1	1	1	1	1	1	1	1	1	2 230 1	2 2 2 1 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1

Standard atomic weights taken from the Commission on Isotopic Abundances and Atomic Weights (ciaaw.org/atomic-weights.htm). An asterisk (*) next to a subshell indicates an anomalous (Aufbau rule-breaking) ground state electron configuration.