Periodic table of elements

Mendeleev's table

1 IA

18 VIIIA 2.20 1sΗ He Hydrogen Helium 2 IIA 13 IIIA 14 IVA 15 VA 16 VIA 17 VIIA 1.00784-1.00811 4.002602(2) $2p \mid \mathbf{9}$ 3.04 3.44 2s 4 1.573.98 0.98 2s2.55 2p 10 2.04 2pχ N 0 Li Be В \mathbf{C} F Ne $Z = atomic number; \chi = electronegativity; ss = subshell;$ SyNitrogen Oxygen Sv = symbol; Name = element name; saw = standard atomic weight Lithium Beryllium Boron Carbon Fluorine Neon Name 14.00643-15.99903-9.0121831(5) 6.938-6.997 10.806-10.821 12.0096-12.0116 18.998403163(6) 20.1797(6) saw 14.00728 15.99977 3p 15 0.93 3s 12 1.31 3s **13** <u>1.61</u> 3p 14 1.90 2.1916 2.583.16 Si Na MgAl Р \mathbf{S} Cl Ar Sodium Magnesium Aluminium Silicon Phosphorus Sulfur Chlorine Argon 3 IIIA 4 IVB 5 VB 6 VIB 7 VIIB 8 VIIIB 9 VIIIB 10 VIIIB 11 IB 12 IIB 22.98976928(2) 24.304-24.307 26.9815385(7) 28.084-28.086 30.973761998(5) 32.059-32.076 35.446-35.457 39.948(1) 4p 36 19 0.82 4s 20 1.00 4s 21 1.36 3d 22 1.54 3d 23 1.63 3d 24 1.66 3d* 25 1.55 3d **26** 1.83 3d 27 1.88 3d 28 1.91 3d 29 1.90 3d* 30 1.65 1.81 4p | 322.01 4p 33 2.184p 34 2.554p 35 2.96 3.00 4p \mathbf{K} Sc \mathbf{V} Ge Se Ca Ti Cr Fe Co Ni $\mathbf{Z}\mathbf{n}$ Ga $\mathbf{A}\mathbf{s}$ Kr Mn Cu BrPotassium Calcium Scandium Vanadium Chromium Manganese Cobalt Nickel Gallium Germanium Arsenic Selenium Krypton Titanium Iron Copper Zinc Bromine 39.0983(1) 40.078(4) 44.955908(5) 50.9415(1) 54.938044(3) 58.933194(4) 58.6934(4) 65.38(2) 69.723(1) 72.630(8) 74.921595(6) 78.971(8) 47.867(1)51.9961(6) 55.845(2) 63.546(3) 79.901-79.907 83.798(2) 37 $0.82 ext{ } 5s ext{ } 38$ 0.95 5s 391.22 4d 40 1.33 4d 41 1.6 4d 42 2.16 4d* 43 1.9 4d 44 2.2 4d* 45 2.28 4d* 2.20 4d* 47 1.93 4d* 48 1.69 4d 49 1.78 5p **50** 1.96 2.05 5p **52** 2.1 5p **53** 2.66 5p 54 $2.60 5 \tau$ 5p | 51Te SbRb SrY $\mathbf{A}\mathbf{g}$ Sn Xe ZrNbTc Ru Rh Pd CdIn Mo Rubidium Strontium Yttrium Zirconium Molybdenum Technetium Ruthenium Rhodium Palladium Cadmium Indium Tin Antimony Tellurium Iodine Xenon Niobium Silver 87.62(1) 114.818(1) 118.710(7) 121.760(1) 127.60(3) 126.90447(3) 131.293(6) 85.4678(3) 88.90584(2) 91.224(2) 92.90637(2) 95.95(1) 101.07(2) 102.90550(2) 106.42(1) 107.8682(2) 112.414(4) (98)2.02 0.79 6s 56 0.89 57-71 72 1.3 5d 73 1.5 2.36 5d 75 1.9 5d 76 2.2 2.20 2.28 $5d^{3}$ 2.54 5d* 2.00 1.62 1.87 2.0 2.2 2.2 5d 77 5d5d 81 Hf Bi W Pb * Ta Re Hg Po $\mathbf{C}\mathbf{s}$ Ba Os \mathbf{Ir} PtΑu T1 \mathbf{At} Rn Cesium Barium Hafnium Tantalum Tungsten Rhenium Osmium Iridium Platinum Gold Mercury Thallium Lead Bismuth Polonium Astatine Radon Lanthanides 137.327(7) 180.94788(2) 200.592(3) 208.98040(1) (209)132.90545196(6) 178.49(2) 183.84(1) 186.207(1) 190.23(3) 192.217(3) 195.084(9) 196.966569(5) 207.2(1)(210)(222)204.382-204.385 0.7 7s 88 0.9 7s 89-103 6d 105 6d 106 6d 107 6d 108 6d 109 6d 110 6d 111 6d 112 6d 113 7p 114 7p 115 7p 116 7p 117 7p 118 104 SgRg \mathbf{Fl} Og Fr Ra ** Rf Db Bh HsMtDsCnNh McLvTsSeaborgium Radium Rutherfordium Dubnium Bohrium Hassium Meitnerium Darmstadtium Roentgenium Copernicium Nihonium Flerovium Moscovium Livermorium Tennessine Francium Actinides Oganesson (226)(286)(289)(289)(293)(261)(268)(269)(270)(269)(278)(281)(282)(285)(294)(294)Alkali Metal 1.1 $5d^{3}$ 1.12 4f* 59 1.13 4f 60 1.14 1.13 1.17 4f 63 1.2 1.2 4f* 1.1 4f 66 1.22 1.23 1.24 69 1.25 70 1.1 1.27 4f Alkaline Earth Metal Ce Pr NdPmSmEu Gd Tb Dv Ho \mathbf{Er} TmYb La Lu * Metal Cerium Promethium Lanthanum Praseodymium Neodymium Samarium Europium Gadolinium Terbium Dysprosium Holmium Erbium Thulium Ytterbium Lutetium 138.90547(7) 140.116(1) 140.90766(2) 144.242(3) (145)150.36(2) 158.92535(2) 162.500(1) 164.93033(2) 167.259(3) 168.93422(2) 174.9668(1) Metalloid 151.964(1) 157.25(3) 173.045(10) Non-metal 100 101 Halogen 1.1 1.3 $5f^2$ 1.5 5f* 1.38 $1.36 5f^3$ 1.28 95 1.13 1.28 5f 1.3 1.3 1.3 1.3 1.3 102 <u>1.3</u> 103 1.3 5f ThPa Np BkCf Es Noble Gas U Pu AcCmFmMdNo Lr Am** ___ Lanthanide/Actinide Plutonium Curium Berkelium Californium Einsteinium Fermium Mendelevium Nobelium Actinium Thorium Protactinium Uranium Neptunium Americium Lawrencium (227)232.0377(4) 231.03588(2) 238.02891(3) (237)(244)(243)(247)(247)(251)(252)(257)(258)(259)(266)

> 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.