Periodic Table of the Elements

	Group 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	1 2.20 1s **H** hydrogen 1.008																	2 – 1s **He** helium 4.0026
2	3 0.98 2s **Li** lithium 6.9675	4 1.57 2s **Be** beryllium 9.0122											5 2.04 2p **B** boron 10.8135	6 2.55 2p **C** carbon 12.0105	7 3.04 2p **N** nitrogen 14.007	8 3.44 2p **O** oxygen 15.9995	9 3.98 2p **F** fluorine 18.998	10 – 2p **Ne** neon 20.18
3	11 0.93 3s **Na** sodium 22.99	12 1.31 3s **Mg** magnesium 24.3055											13 1.61 3p **Al** aluminium 26.982	14 1.90 3p **Si** silicon 28.085	15 2.19 3p **P** phosphorus 30.974	16 2.58 3p **S** sulfur 32.0675	17 3.16 3p **Cl** chlorine 35.4515	18 – 3p **Ar** argon 39.8775
4	19 0.82 4s **K** potassium 39.098	20 1.00 4s **Ca** calcium 40.078	21 1.36 3d **Sc** scandium 44.956	22 1.54 3d **Ti** titanium 47.867	23 1.63 3d **V** vanadium 50.942	24 1.66 3d* **Cr** chromium 51.996	25 1.55 3d **Mn** manganese 54.938	26 1.83 3d **Fe** iron 55.845	27 1.88 3d **Co** cobalt 58.933	28 1.91 3d **Ni** nickel 58.693	29 1.90 3d* **Cu** copper 63.546	30 1.65 3d **Zn** zinc 65.38	31 1.81 4p **Ga** gallium 69.723	32 2.01 4p **Ge** germanium 72.63	33 2.18 4p **As** arsenic 74.922	34 2.55 4p **Se** selenium 78.971	35 2.96 4p **Br** bromine 79.904	36 – 4p **Kr** krypton 83.798
5	37 0.82 5s **Rb** rubidium 85.468	38 0.95 5s **Sr** strontium 87.62	39 1.22 4d **Y** yttrium 88.906	40 1.33 4d **Zr** zirconium 91.224	41 1.6 4d* **Nb** niobium 92.906	42 2.16 4d* **Mo** molybdenum 95.95	43 1.9 4d **Tc** technetium (97)	44 2.2 4d* **Ru** ruthenium 101.07	45 2.28 4d* **Rh** rhodium 102.91	46 2.20 4d* **Pd** palladium 106.42	47 1.93 4d* **Ag** silver 107.87	48 1.69 4d **Cd** cadmium 112.41	49 1.78 5p **In** indium 114.82	50 1.96 5p **Sn** tin 118.71	51 2.05 5p **Sb** antimony 121.76	52 2.1 5p **Te** tellurium 127.6	53 2.66 5p **I** iodine 126.9	54 2.60 5p **Xe** xenon 131.29
6	55 0.79 6s **Cs** caesium 132.91	56 0.89 6s **Ba** barium 137.33	* lanthanides	72 1.3 5d **Hf** hafnium 178.49	73 1.5 5d **Ta** tantalum 180.95	74 2.36 5d **W** tungsten 183.84	75 1.9 5d **Re** rhenium 186.21	76 2.2 5d **Os** osmium 190.23	77 2.2 5d **Ir** iridium 192.22	78 2.28 5d* **Pt** platinum 195.08	79 2.54 5d* **Au** gold 196.97	80 1.9 5d **Hg** mercury 200.59	81 1.62 6p **Tl** thallium 204.385	82 1.8 6p **Pb** lead 207.2	83 2.02 6p **Bi** bismuth 208.98	84 2.0 6p **Po** polonium (209)	85 2.2 6p **At** astatine (210)	86 – 6p **Rn** radon (222)
7	87 – 7s **Fr** francium (223)	88 0.9 7s **Ra** radium (226)	** actinides	104 – 6d **Rf** rutherfordium (267)	105 – 6d **Db** dubnium (268)	106 – 6d **Sg** seaborgium (269)	107 – 6d **Bh** bohrium (270)	108 – 6d **Hs** hassium (269)	109 – 6d **Mt** meitnerium (278)	110 – 6d **Ds** darmstadtium (281)	111 – 6d **Rg** roentgenium (282)	112 – 6d **Cn** copernicium (285)	113 – 7p **Nh** nihonium (286)	114 – 7p **Fl** flerovium (289)	115 – 7p **Mc** moscovium (290)	116 – 7p **Lv** livermorium (293)	117 – 7p **Ts** tennessine (294)	118 – 7p **Og** oganesson (294)

Z: atomic number
χ: Pauling electronegativity
ss: last occupied subshell
Sy: symbol
element: element name
saw: standard atomic weight†

Z χ ss
Sy
element
saw

*	57 1.1 5d* **La** lanthanum 138.91	58 1.12 4f* **Ce** cerium 140.12	59 1.13 4f **Pr** praseodymium 140.91	60 1.14 4f **Nd** neodymium 144.24	61 – 4f **Pm** promethium (145)	62 1.17 4f **Sm** samarium 150.36	63 – 4f **Eu** europium 151.96	64 1.2 4f* **Gd** gadolinium 157.25	65 – 4f **Tb** terbium 158.93	66 1.22 4f **Dy** dysprosium 162.5	67 1.23 4f **Ho** holmium 164.93	68 1.24 4f **Er** erbium 167.26	69 1.25 4f **Tm** thulium 168.93	70 – 4f **Yb** ytterbium 173.05	71 1.27 4f **Lu** lutetium 174.97
**	89 1.1 6d* **Ac** actinium (227)	90 1.3 5f* **Th** thorium 232.04	91 1.5 5f* **Pa** protactinium 231.04	92 1.38 5f* **U** uranium 238.03	93 1.36 5f* **Np** neptunium (237)	94 1.28 5f **Pu** plutonium (244)	95 – 5f **Am** americium (243)	96 – 5f* **Cm** curium (247)	97 1.3 5f **Bk** berkelium (247)	98 1.3 5f **Cf** californium (251)	99 1.3 5f **Es** einsteinium (252)	100 1.3 5f **Fm** fermium (257)	101 1.3 5f **Md** mendelevium (258)	102 1.3 5f **No** nobelium (259)	103 – 6d **Lr** lawrencium (266)

†Standard atomic weights (average terrestrial atomic weight) taken from the Commission on Isotopic Abundances and Atomic Weights (http://www.ciaaw.org/abridged-atomic-weights.htm). If CIAAW indicates a range for the standard atomic weight of an element, I used the arithmetic mean of the boundaries of the range. Elements with atomic weight in parentheses (e.g., Francium (223)) have no known stable isotopes. Therefore, the mass of a representative isotope is provided.

*Indicates an anomalous (Aufbau rule-breaking) ground state electron configuration.

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