

	alkali metals I A															noble gases 0		
Period 1	1 <b>H</b> 1.01 Hydrogen	alkaline earth metals II A									nonmetals					2 <b>He</b> 4.00 Helium		
Period 2	3 <b>Li</b> 6.94 Lithium	4 <b>Be</b> 9.01 Beryllium											5 <b>B</b> 10.81 Boron	6 <b>C</b> 12.01 Carbon	7 <b>N</b> 14.01 Nitrogen	8 <b>O</b> 16.00 Oxygen	9 <b>F</b> 19.00 Fluorine	10 <b>Ne</b> 20.18 Neon
Period 3	11 <b>Na</b> 22.99 Sodium	12 <b>Mg</b> 24.31 Magnesium	transition metals										13 <b>Al</b> 26.98 Aluminum	14 <b>Si</b> 28.09 Silicon	15 <b>P</b> 30.97 Phosphorus	16 <b>S</b> 32.07 Sulfur	17 <b>Cl</b> 35.45 Chlorine	18 <b>Ar</b> 39.95 Argon
			III B	IV B	V B	VI B	VII B	VIII			IB	II B						
Period 4	19 <b>K</b> 39.10 Potassium	20 <b>Ca</b> 40.08 Calcium	21 <b>Sc</b> 44.96 Scandium	22 <b>Ti</b> 47.88 Titanium	23 <b>V</b> 50.94 Vanadium	24 <b>Cr</b> 52.00 Chromium	25 <b>Mn</b> 54.95 Manganese	26 <b>Fe</b> 55.85 Iron	27 <b>Co</b> 58.93 Cobalt	28 <b>Ni</b> 58.70 Nickel	29 <b>Cu</b> 63.55 Copper	30 <b>Zn</b> 65.39 Zinc	31 <b>Ga</b> 69.72 Gallium	32 <b>Ge</b> 72.61 Germanium	33 <b>As</b> 74.92 Arsenic	34 <b>Se</b> 78.96 Selenium	35 <b>Br</b> 79.90 Bromine	36 <b>Kr</b> 83.80 Krypton
Period 5	37 <b>Rb</b> 85.47 Rubidium	38 <b>Sr</b> 87.62 Strontium	39 <b>Y</b> 88.91 Yttrium	40 <b>Zr</b> 91.22 Zirconium	41 <b>Nb</b> 92.91 Niobium	42 <b>Mo</b> 95.94 Molybdenum	43 <b>Tc</b> (98) Technetium	44 <b>Ru</b> 101.07 Ruthenium	45 <b>Rh</b> 102.91 Rhodium	46 <b>Pd</b> 106.4 Palladium	47 <b>Ag</b> 107.87 Silver	48 <b>Cd</b> 112.41 Cadmium	49 <b>In</b> 114.82 Indium	50 <b>Sn</b> 118.71 Tin	51 <b>Sb</b> 121.74 Antimony	52 <b>Te</b> 127.60 Tellurium	53 <b>I</b> 126.90 Iodine	54 <b>Xe</b> 131.29 Xenon
Period 6	55 <b>Cs</b> 132.91 Cesium	56 <b>Ba</b> 137.33 Barium	Lanthanide series (see below)	72 <b>Hf</b> 178.49 Hafnium	73 <b>Ta</b> 180.94 Tantalum	74 <b>W</b> 183.85 Tungsten	75 <b>Re</b> 186.21 Rhenium	76 <b>Os</b> 190.23 Osmium	77 <b>Ir</b> 192.22 Iridium	78 <b>Pt</b> 195.08 Platinum	79 <b>Au</b> 196.97 Gold	80 <b>Hg</b> 200.59 Mercury	81 <b>Tl</b> 204.38 Thallium	82 <b>Pb</b> 207.2 Lead	83 <b>Bi</b> 208.98 Bismuth	84 <b>Po</b> (209) Polonium	85 <b>At</b> (210) Astatine	86 <b>Rn</b> (222) Radon
Period 7	87 <b>Fr</b> (223) Francium	88 <b>Ra</b> 226.03 Radium	Actinide series (see below)	104 <b>Rf</b> (261) Rutherfordium	105 <b>Db</b> (262) Dubnium	106 <b>Sg</b> (263) Seaborgium	107 <b>Bh</b> (262) Bohrium	108 <b>Hs</b> (265) Hassium	109 <b>Mt</b> (266) Meitnerium	110 (269) Darmstadtium	111 (272) Roentgenium	112 (277) Copernicium	114 (281) Flerovium	116 (289) Livermorium	118 (293) Oganesson			

rare earth elements—Lanthanide series	57 <b>La</b> 138.91 Lanthanum	58 <b>Ce</b> 140.12 Cerium	59 <b>Pr</b> 140.91 Praseodymium	60 <b>Nd</b> 144.24 Neodymium	61 <b>Pm</b> (145) Promethium	62 <b>Sm</b> 150.4 Samarium	63 <b>Eu</b> 151.96 Europium	64 <b>Gd</b> 157.25 Gadolinium	65 <b>Tb</b> 158.93 Terbium	66 <b>Dy</b> 162.50 Dysprosium	67 <b>Ho</b> 164.93 Holmium	68 <b>Er</b> 167.26 Erbium	69 <b>Tm</b> 168.93 Thulium	70 <b>Yb</b> 173.04 Ytterbium	71 <b>Lu</b> 174.97 Lutetium
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Actinide series	89 <b>Ac</b> 227.03 Actinium	90 <b>Th</b> 232.04 Thorium	91 <b>Pa</b> 231.04 Protactinium	92 <b>U</b> 238.03 Uranium	93 <b>Np</b> 237.05 Neptunium	94 <b>Pu</b> (244) Plutonium	95 <b>Am</b> (243) Americium	96 <b>Cm</b> (247) Curium	97 <b>Bk</b> (247) Berkelium	98 <b>Cf</b> (251) Californium	99 <b>Es</b> (252) Einsteinium	100 <b>Fm</b> (257) Fermium	101 <b>Md</b> (258) Mendelevium	102 <b>No</b> (259) Nobelium	103 <b>Lr</b> (260) Lawrencium
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