

# PERIODIC TABLE OF THE ELEMENTS

1 IA																	18 VIIIA						
1 <b>H</b> Hydrogen 1.008 1																	2 <b>He</b> Helium 4.003 2						
2 IIA																	13 IIIA	14 IVA	15 VA	16 VIA	17 VIIA		
3 <b>Li</b> Lithium 6.941 2 1	4 <b>Be</b> Beryllium 9.012 2 2																	5 <b>B</b> Boron 10.811 2 3	6 <b>C</b> Carbon 12.011 2 4	7 <b>N</b> Nitrogen 14.007 2 5	8 <b>O</b> Oxygen 15.999 2 6	9 <b>F</b> Fluorine 18.998 2 7	10 <b>Ne</b> Neon 20.180 2 8
3 IIIB	4 IVB	5 VB	6 VIB	7 VIIB	8 VIII	9 VIII	10 VIII	11 IB	12 IIB									13 IIIA	14 IVA	15 VA	16 VIA	17 VIIA	
3 <b>Na</b> Sodium 22.990 2 8 1	4 <b>Mg</b> Magnesium 24.305 2 8 2																	13 <b>Al</b> Aluminum 26.982 2 8 3	14 <b>Si</b> Silicon 28.086 2 8 4	15 <b>P</b> Phosphorus 30.974 2 8 5	16 <b>S</b> Sulfur 32.066 2 8 6	17 <b>Cl</b> Chlorine 35.453 2 8 7	18 <b>Ar</b> Argon 39.948 2 8 8
4 <b>K</b> Potassium 39.098 2 8 8 1	4 <b>Ca</b> Calcium 40.078 2 8 8 2	5 <b>Sc</b> Scandium 44.956 2 8 9 2	4 <b>Ti</b> Titanium 47.867 2 8 10 2	5 <b>V</b> Vanadium 50.942 2 8 11 2	6 <b>Cr</b> Chromium 51.996 2 8 13 1	7 <b>Mn</b> Manganese 54.938 2 8 13 2	8 <b>Fe</b> Iron 55.845 2 8 14 2	9 <b>Co</b> Cobalt 58.933 2 8 15 2	10 <b>Ni</b> Nickel 58.693 2 8 16 2	11 <b>Cu</b> Copper 63.546 2 8 18 1	12 <b>Zn</b> Zinc 65.38 2 8 18 2	13 <b>Ga</b> Gallium 69.723 2 8 18 3	14 <b>Ge</b> Germanium 72.631 2 8 18 4	15 <b>As</b> Arsenic 74.922 2 8 18 5	16 <b>Se</b> Selenium 78.971 2 8 18 6	17 <b>Br</b> Bromine 79.904 2 8 18 7	18 <b>Kr</b> Krypton 83.798 2 8 18 8						
5 <b>Rb</b> Rubidium 85.468 2 8 18 8 1	5 <b>Sr</b> Strontium 87.62 2 8 18 8 2	5 <b>Y</b> Yttrium 88.906 2 8 18 9 2	5 <b>Zr</b> Zirconium 91.224 2 8 18 10 2	5 <b>Nb</b> Niobium 92.906 2 8 18 12 1	6 <b>Mo</b> Molybdenum 95.95 2 8 18 13 1	7 <b>Tc</b> Technetium 98.907 2 8 18 13 2	8 <b>Ru</b> Ruthenium 101.07 2 8 18 15 1	9 <b>Rh</b> Rhodium 102.906 2 8 18 16 1	10 <b>Pd</b> Palladium 106.42 2 8 18 18	11 <b>Ag</b> Silver 107.868 2 8 18 18 1	12 <b>Cd</b> Cadmium 112.414 2 8 18 18 2	13 <b>In</b> Indium 114.818 2 8 18 18 3	14 <b>Sn</b> Tin 118.711 2 8 18 18 4	15 <b>Sb</b> Antimony 121.760 2 8 18 18 5	16 <b>Te</b> Tellurium 127.6 2 8 18 18 6	17 <b>I</b> Iodine 126.904 2 8 18 18 7	18 <b>Xe</b> Xenon 131.293 2 8 18 18 8						
6 <b>Cs</b> Cesium 132.905 2 8 18 18 8 1	6 <b>Ba</b> Barium 137.328 2 8 18 18 8 2	6 Lanthanoids		6 <b>Hf</b> Hafnium 178.49 2 8 18 32 10 2	7 <b>Ta</b> Tantalum 180.948 2 8 18 32 11 2	8 <b>W</b> Tungsten 183.84 2 8 18 32 12 2	9 <b>Re</b> Rhenium 186.207 2 8 18 32 13 2	10 <b>Os</b> Osmium 190.23 2 8 18 32 14 2	11 <b>Ir</b> Iridium 192.217 2 8 18 32 15 2	12 <b>Pt</b> Platinum 195.085 2 8 18 32 17 1	13 <b>Au</b> Gold 196.967 2 8 18 32 18 1	14 <b>Hg</b> Mercury 200.592 2 8 18 32 18 2	15 <b>Tl</b> Thallium 204.383 2 8 18 32 18 3	16 <b>Pb</b> Lead 207.2 2 8 18 32 18 4	17 <b>Bi</b> Bismuth 208.980 2 8 18 32 18 5	18 <b>Po</b> Polonium [208.982] 2 8 18 32 18 6	19 <b>At</b> Astatine 209.987 2 8 18 32 18 7	20 <b>Rn</b> Radon 222.018 2 8 18 32 18 8					
7 <b>Fr</b> Francium 223.020 2 8 18 32 18 8 1	7 <b>Ra</b> Radium 226.025 2 8 18 32 18 8 2	7 Actinoids		7 <b>Rf</b> Rutherfordium [261] 2 8 18 32 32 10 2	8 <b>Db</b> Dubnium [262] 2 8 18 32 32 11 2	9 <b>Sg</b> Seaborgium [266] 2 8 18 32 32 12 2	10 <b>Bh</b> Bohrium [264] 2 8 18 32 32 13 2	11 <b>Hs</b> Hassium [269] 2 8 18 32 32 14 2	12 <b>Mt</b> Meitnerium [278] 2 8 18 32 32 15 2	13 <b>Ds</b> Darmstadtium [281] 2 8 18 32 32 16 2	14 <b>Rg</b> Roentgenium [280] 2 8 18 32 32 17 2	15 <b>Cn</b> Copernicium [285] 2 8 18 32 32 18 2	16 <b>Nh</b> Nihonium [286] 2 8 18 32 32 18 3	17 <b>Fl</b> Flerovium [289] 2 8 18 32 32 18 4	18 <b>Mc</b> Moscovium [289] 2 8 18 32 32 18 5	19 <b>Lv</b> Livermorium [293] 2 8 18 32 32 18 6	20 <b>Ts</b> Tennessine [294] 2 8 18 32 32 18 7	21 <b>Og</b> Oganesson [294] 2 8 18 32 32 18 8					

**Group (IUPAC)** — 11  
**Group (CAS)** — IB

**Atomic Number** — 79  
**Symbol** — Au  
**Name** — Gold  
**Atomic Mass** — 196.967

**Oxidation States** — +3, +1

**Electron Shell Configuration** — 2 8 18 32 18 1

**ELECTRON SHELLS**

Energy Level	1	2	3	4	5	6	7	8
Shell Name	K	L	M	N	O	P	Q	R
Max. Electrons	2	8	18	32	32	18	8	2
s	2	2	2	2	2	2	2	2
p		6	6	6	6	6		
d			10	10	10	10		
f				14	14			

Lanthanoids

57 <b>La</b> Lanthanum 138.905 2 8 18 18 9 2	58 <b>Ce</b> Cerium 140.116 2 8 18 19 9 2	59 <b>Pr</b> Praseodymium 140.908 2 8 18 21 8 2	60 <b>Nd</b> Neodymium 144.243 2 8 18 22 8 2	61 <b>Pm</b> Promethium 144.913 2 8 18 23 8 2	62 <b>Sm</b> Samarium 150.36 2 8 18 24 8 2	63 <b>Eu</b> Europium 151.964 2 8 18 25 8 2	64 <b>Gd</b> Gadolinium 157.25 2 8 18 25 9 2	65 <b>Tb</b> Terbium 158.925 2 8 18 27 8 2	66 <b>Dy</b> Dysprosium 162.500 2 8 18 28 8 2	67 <b>Ho</b> Holmium 164.930 2 8 18 29 8 2	68 <b>Er</b> Erbium 167.259 2 8 18 30 8 2	69 <b>Tm</b> Thulium 168.934 2 8 18 31 8 2	70 <b>Yb</b> Ytterbium 173.055 2 8 18 32 8 2	71 <b>Lu</b> Lutetium 174.967 2 8 18 32 9 2
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Actinoids

89 <b>Ac</b> Actinium 227.028 2 8 18 32 18 9 2	90 <b>Th</b> Thorium 232.038 2 8 18 32 18 10 2	91 <b>Pa</b> Protactinium 231.036 2 8 18 32 20 9 2	92 <b>U</b> Uranium 238.029 2 8 18 32 21 9 2	93 <b>Np</b> Neptunium 237.048 2 8 18 32 22 9 2	94 <b>Pu</b> Plutonium 244.064 2 8 18 32 24 8 2	95 <b>Am</b> Americium 243.061 2 8 18 32 25 8 2	96 <b>Cm</b> Curium 247.070 2 8 18 32 25 9 2	97 <b>Bk</b> Berkelium 247.070 2 8 18 32 27 8 2	98 <b>Cf</b> Californium 251.080 2 8 18 32 28 8 2	99 <b>Es</b> Einsteinium [254] 2 8 18 32 29 8 2	100 <b>Fm</b> Fermium 257.095 2 8 18 32 30 8 2	101 <b>Md</b> Mendelevium 258.1 2 8 18 32 31 8 2	102 <b>No</b> Nobelium 259.101 2 8 18 32 32 8 2	103 <b>Lr</b> Lawrencium [262] 2 8 18 32 32 8 3
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