PERIODIC CHART OF THE ELEMENTS

1/Ia	2/IIa	3/IIIb	4/IVb	5/Vb	6/VIb	7/VIIb	8/VIIIb	9/VIII	10/VIII	11/Ib	12/IIb	13/IIIa	14/IVa	15/Va	16/VIa	17/VIIa	18/VIIIa/0
+1 **1** **H** 1.00794 1																	0 **2** **He** 4.002602 2
+1 **3** **Li** 6.941 2-1	+2 **4** **Be** 9.012182 2-2											+3 **5** **B** 10.811 2-3	+2 ±4 **6** **C** 12.0107 2-4	±1 +2 +3 +4 +5 **7** **N** 14.0067 2-5	−2 **8** **O** 15.9994 2-6	−1 **9** **F** 18.9984032 2-7	0 **10** **Ne** 20.1797 2-8
+1 **11** **Na** 22.98976928 2-8-1	+2 **12** **Mg** 24.3050 2-8-2											+3 **13** **Al** 26.9815386 2-8-3	+2 ±4 **14** **Si** 28.0855 2-8-4	±3 +5 **15** **P** 30.973762 2-8-5	+4 +6 −2 **16** **S** 32.065 2-8-6	±1 +5 +7 **17** **Cl** 35.453 2-8-7	0 **18** **Ar** 39.948 2-8-8
+1 **19** **K** 39.0983 -8-8-1	+2 **20** **Ca** 40.078 -8-8-2	+3 **21** **Sc** 44.955912 -8-9-2	+2 +3 +4 **22** **Ti** 47.867 -8-10-2	+2 +3 +4 +5 **23** **V** 50.9415 -8-11-2	+2 +3 +6 **24** **Cr** 51.9961 -8-13-1	+2 +3 +4 +7 **25** **Mn** 54.938045 -8-13-2	+2 +3 **26** **Fe** 55.845 -8-14-2	+2 +3 **27** **Co** 58.933195 -8-15-2	+2 +3 **28** **Ni** 58.6934 -8-16-2	+1 +2 **29** **Cu** 63.546 -8-18-1	+2 **30** **Zn** 65.409 -8-18-2	+3 **31** **Ga** 69.723 -8-18-3	+2 +4 **32** **Ge** 72.64 -8-18-4	±3 +5 **33** **As** 74.92160 -8-18-5	+4 +6 −2 **34** **Se** 78.96 -8-18-6	±1 +5 **35** **Br** 79.904 -8-18-7	0 **36** **Kr** 83.798 -8-18-8
+1 **37** **Rb** 85.4678 -18-8-1	+2 **38** **Sr** 87.62 -18-8-2	+3 **39** **Y** 88.90585 -18-9-2	+4 **40** **Zr** 91.224 -18-10-2	+3 +5 **41** **Nb** 92.90638 -18-12-1	+6 **42** **Mo** 95.94 -18-13-1	+4 +6 +7 **43** **Tc** (97.9072) -18-13-2	+3 **44** **Ru** 101.07 -18-15-1	+3 **45** **Rh** 102.90550 -18-16-1	+2 +4 **46** **Pd** 106.42 -18-18-0	+1 **47** **Ag** 107.8682 -18-18-1	+2 **48** **Cd** 112.411 -18-18-2	+3 **49** **In** 114.818 -18-18-3	+2 +4 **50** **Sn** 118.710 -18-18-4	±3 +5 **51** **Sb** 121.760 -18-18-5	+4 +6 −2 **52** **Te** 127.60 -18-18-6	±1 +5 +7 **53** **I** 126.90447 -18-18-7	0 **54** **Xe** 131.293 -18-18-8
+1 **55** **Cs** 132.9054519 -18-8-1	+2 **56** **Ba** 137.327 -18-8-2	**57–71** See Lantha-nides	+4 **72** **Hf** 178.49 -32-10-2	+5 **73** **Ta** 180.94788 -32-11-2	+6 **74** **W** 183.84 -32-12-2	+4 +6 +7 **75** **Re** 186.207 -32-13-2	+3 +4 **76** **Os** 190.23 -32-14-2	+3 +4 **77** **Ir** 192.217 -32-15-2	+2 +4 **78** **Pt** 195.084 -32-16-2	+1 +3 **79** **Au** 196.966569 -32-18-1	+1 +2 **80** **Hg** 200.59 -32-18-2	+1 +3 **81** **Tl** 204.3833 -32-18-3	+2 +4 **82** **Pb** 207.2 -32-18-4	+3 +5 **83** **Bi** 208.98040 -32-18-5	+2 +4 **84** **Po** (208.9824) -32-18-6	±1 +5 +7 **85** **At** (209.9871) -32-18-7	0 **86** **Rn** (222.0176) -32-18-8
+1 **87** **Fr** (223.0197) -18-8-1	+2 **88** **Ra** (226.0254) -18-8-2	**89–103** See Actinides	+4 **104** **Rf** (261.1088) -32-10-2	**105** **Db** (262.1141) -32-11-2	**106** **Sg** (266.1219) -32-12-2	**107** **Bh** (264.12) -32-13-2	**108** **Hs** -32-14-2	**109** **Mt** (268.1388) -32-15-2	**110** **Ds**	**111** **Rg** (272.1535)	**112** ***Uub**		**114** ***Uuq**		**116** ***Uuh**	

KEY

Common Oxidation States → +1 +3 **79** ← Atomic Number

Au ← Atomic Symbol

Atomic Weight → 196.966569

Electron Configuration of Outer Shells → -32-18-1

Transition Elements

Noble Gases

Lanthanides	+3 **57** **La** 138.90547 -18-9-2	+3 +4 **58** **Ce** 140.116 -20-8-2	+3 **59** **Pr** 140.90765 -21-8-2	+3 **60** **Nd** 144.242 -22-8-2	+3 **61** **Pm** (144.9127) -23-8-2	+2 +3 **62** **Sm** 150.36 -24-8-2	+2 +3 **63** **Eu** 151.964 -25-8-2	+3 **64** **Gd** 157.25 -25-9-2	+3 **65** **Tb** 158.92535 -27-8-2	+3 **66** **Dy** 162.500 -28-8-2	+3 **67** **Ho** 164.93032 -29-8-2	+3 **68** **Er** 167.259 -30-8-2	+3 **69** **Tm** 168.93421 -31-8-2	+2 +3 **70** **Yb** 173.04 -32-8-2	+3 **71** **Lu** 174.967 -32-9-2
Actinides	+3 **89** **Ac** (227.0277) -18-9-2	+4 **90** **Th** 232.03806 -18-10-2	+4 +5 **91** **Pa** (231.03588) -20-9-2	+3 +4 +5 +6 **92** **U** 238.02891 -21-9-2	+3 +4 +5 +6 **93** **Np** (237.0482) -22-9-2	+3 +4 +5 +6 **94** **Pu** (244.0642) -24-8-2	+3 +4 +5 +6 **95** **Am** (243.0614) -25-8-2	+3 **96** **Cm** (247.0704) -25-9-2	+3 +4 **97** **Bk** (247.0703) -27-8-2	+3 **98** **Cf** (251.0796) -28-8-2	+3 **99** **Es** (252.0830) -29-8-2	+3 **100** **Fm** (257.0951) -30-8-2	+2 +3 **101** **Md** (258.0984) -31-8-2	+2 +3 **102** **No** (259.1010) -32-8-2	+3 **103** **Lr** (262.1097) -32-9-2

Note: Atomic weights are based on the 2001 IUPAC Atomic Weights of the Elements and the 2005 Revised IUPAC Periodic Table of the Elements. Values in parenthesis are used for certain radioactive elements; this value is the relative atomic mass of the isotope of that element of longest known half life.

Note: Elements with atomic numbers 112 and above have been reported but not fully authenticated.

* Symbols based on IUPAC systematic names.