

Periodic Table of the Elements

1
IA
1A

2
IIA
2A

13
IIIA
3A

14
IVA
4A

15
VA
5A

16
VIA
6A

17
VIIA
7A

18
VIIIA
8A

1
H
Hydrogen
1.008
-1, +1

3
Li
Lithium
6.941
+1

11
Na
Sodium
22.990
+1

19
K
Potassium
39.098
+1

37
Rb
Rubidium
85.468
+1

55
Cs
Cesium
132.905
+1

87
Fr
Francium
223.020
+1

4
Be
Beryllium
9.012
+2

12
Mg
Magnesium
24.305
+2

20
Ca
Calcium
40.078
+2

38
Sr
Strontium
87.62
+2

56
Ba
Barium
137.328
+2

88
Ra
Radium
226.025
+2

5
B
Boron
10.811
+3

13
Al
Aluminum
26.982
+3

31
Ga
Gallium
69.723
+3

49
In
Indium
114.818
+3

67
Tl
Thallium
204.383
+3,+1

81
Nh
Nihonium
[286]
+3

6
C
Carbon
12.011
+4,+3,+2,+1
-4,-3
-2,-1

14
Si
Silicon
28.086
+4,-4

32
Ge
Germanium
72.631
+4,+2,-4

50
Sn
Tin
118.711
+4,+2,-4

68
Pb
Lead
207.2
+4,+2

82
Fl
Flerovium
[289]
+4,+2

7
N
Nitrogen
14.007
+5,+3,-3

15
P
Phosphorus
30.974
+5,+3,-3

33
As
Arsenic
74.922
+5,+3,-3

51
Sb
Antimony
121.760
+5,+3,-3

83
Bi
Bismuth
208.980
+3

8
O
Oxygen
15.999
-2

16
S
Sulfur
32.066
+6,+4,+2,-2

34
Se
Selenium
78.971
+6,+4,+2,-2

52
Te
Tellurium
127.6
+6,+4,+2,-2

84
Po
Polonium
[208.982]
+4,+2,-2

9
F
Fluorine
18.998
-1

17
Cl
Chlorine
35.453
+7,+5,+3,+1
-1

35
Br
Bromine
79.904
+5,+3,+1,-1

53
I
Iodine
126.904
+7,+5,+3,+1
-1

85
At
Astatine
209.987
+1,-1

10
Ne
Neon
20.180
0

18
Ar
Argon
39.948
0

36
Kr
Krypton
84.798
+2,0

54
Xe
Xenon
131.294
+6,+4,+2,0

86
Rn
Radon
222.018
+2,0

118
Og
Oganesson
[294]
+2,0

21
Sc
Scandium
44.956
+3

22
Ti
Titanium
47.88
+4

23
V
Vanadium
50.942
+5

24
Cr
Chromium
51.996
+6,+3

25
Mn
Manganese
54.938
+7,+4,+2

26
Fe
Iron
55.845
+6,+3,+2

27
Co
Cobalt
58.933
+3,+2

28
Ni
Nickel
58.693
+2

29
Cu
Copper
63.546
+2

30
Zn
Zinc
65.38
+2

39
Y
Yttrium
88.906
+3

40
Zr
Zirconium
91.224
+4

41
Nb
Niobium
92.906
+5

42
Mo
Molybdenum
95.95
+6,+4

43
Tc
Technetium
98.907
+7,+4

44
Ru
Ruthenium
101.07
+4,+3

45
Rh
Rhodium
102.906
+3

46
Pd
Palladium
106.42
+4,+2

47
Ag
Silver
107.868
+1

48
Cd
Cadmium
112.414
+2

71
Lanthanide Series

72
Hf
Hafnium
178.49
+4

73
Ta
Tantalum
180.948
+5

74
W
Tungsten
183.85
+6,+4

75
Re
Rhenium
186.207
+4

76
Os
Osmium
190.23
+4

77
Ir
Iridium
192.22
+4,+3

78
Pt
Platinum
195.08
+4,+2

79
Au
Gold
196.967
+3

80
Hg
Mercury
200.59
+2,+1

103
Actinide Series

104
Rf
Rutherfordium
[261]
+4

105
Db
Dubnium
[262]
+5

106
Sg
Seaborgium
[266]
+6

107
Bh
Bohrium
[264]
+7

108
Hs
Hassium
[269]
+8

109
Mt
Meitnerium
[278]
+7

110
Ds
Darmstadtium
[281]
+8

111
Rg
Roentgenium
[280]
+9

112
Cn
Copernicium
[285]
+2

113
Nh
Nihonium
[286]
+3

114
Fl
Flerovium
[289]
+4

115
Mc
Moscovium
[289]
+3

116
Lv
Livermorium
[293]
+4

117
Ts
Tennessine
[294]
+5

118
Og
Oganesson
[294]
+6

Atomic Number

Valence

Symbol

Name

Atomic Mass

8
VIII
8

9
VIII
8

10
VIII
8

Lanthanide Series	57 La Lanthanum 138.905 +3	58 Ce Cerium 140.116 +4,+3	59 Pr Praseodymium 140.908 +3	60 Nd Neodymium 144.243 +3	61 Pm Promethium 144.913 +3	62 Sm Samarium 150.36 +3	63 Eu Europium 151.964 +3,+2	64 Gd Gadolinium 157.25 +3	65 Tb Terbium 158.925 +3	66 Dy Dysprosium 162.500 +3	67 Ho Holmium 164.930 +3	68 Er Erbium 167.259 +3	69 Tm Thulium 168.934 +3	70 Yb Ytterbium 173.055 +3	71 Lu Lutetium 174.967 +3
Actinide Series	89 Ac Actinium 227.028 +3	90 Th Thorium 232.038 +4	91 Pa Protactinium 231.036 +5	92 U Uranium 238.029 +6	93 Np Neptunium 237.048 +5	94 Pu Plutonium 244.064 +4	95 Am Americium 243.061 +3	96 Cm Curium 247.070 +3	97 Bk Berkelium 247.070 +3	98 Cf Californium 251.080 +3	99 Es Einsteinium [254] +3	100 Fm Fermium 257.095 +3	101 Md Mendelevium 258.1 +3	102 No Nobelium 259.101 +2	103 Lr Lawrencium [262] +3