# Periodic Table of the Elements

Atomic Number

Number of electrons in each shell

6 C 2 4

Symbol

Carbon

Name

12.01115

Atomic Mass

METALS

TRANSITION ELEMENTS

NONMETALS

NOBLE GASES

INNER TRANSITION ELEMENTS

✶ SYNTHETIC

◆ RADIOATHETIC

( ) Indicates atomic weight of most stable isotope

1/1A New designation

1A Original designation

| PERIOD | 1/1A | 2/2A | 3/3B | 4/4B | 5/5B | 6/6B | 7/7B | 8/8B | 9/8B | 10/8B | 11/1B | 12/2B | 13/3A | 14/4A | 15/5A | 16/6A | 17/7A | 18/8A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 H 1 Hydrogen 1.00797 | | | | | | | | | | | | | | | | | 2 He 2 Helium 4.0026 |
| 2 | 3 Li 2 1 Lithium 6.941 | 4 Be 2 2 Beryllium 9.0122 | | | | | | | | | | | 5 B 2 3 Boron 10.811 | 6 C 2 4 Carbon 12.01115 | 7 N 2 5 Nitrogen 14.0067 | 8 O 2 6 Oxygen 15.9994 | 9 F 2 7 Fluorine 18.9984 | 10 Ne 2 8 Neon 20.179 |
| 3 | 11 Na 2 8 1 Sodium 22.9898 | 12 Mg 2 8 2 Magnesium 24.305 | | | | | | | | | | | 13 Al 2 8 3 Aluminum 26.9815 | 14 Si 2 8 4 Silicon 28.086 | 15 P 2 8 5 Phosphorus 30.9738 | 16 S 2 8 6 Sulfur 32.064 | 17 Cl 2 8 7 Chlorine 35.453 | 18 Ar 2 8 8 Argon 39.948 |
| 4 | 19 K 2 8 8 1 Potassium 39.0983 | 20 Ca 2 8 8 2 Calcium 40.08 | 21 Sc 2 8 9 2 Scandium 44.956 | 22 Ti 2 8 10 2 Titanium 47.88 | 23 V 2 8 11 2 Vanadium 50.942 | 24 Cr 2 8 13 1 Chromium 51.996 | 25 Mn 2 8 13 2 Manganese 54.9380 | 26 Fe 2 8 14 2 Iron 55.847 | 27 Co 2 8 15 2 Cobalt 58.9332 | 28 Ni 2 8 16 2 Nickel 58.69 | 29 Cu 2 8 18 1 Copper 63.54 | 30 Zn 2 8 18 2 Zinc 65.37 | 31 Ga 2 8 18 3 Gallium 69.72 | 32 Ge 2 8 18 4 Germanium 72.59 | 33 As 2 8 18 5 Arsenic 74.9216 | 34 Se 2 8 18 6 Selenium 78.96 | 35 Br 2 8 18 7 Bromine 79.904 | 36 Kr 2 8 18 8 Krypton 83.80 |
| 5 | 37 Rb 2 8 18 8 1 Rubidium 85.4678 | 38 Sr 2 8 18 8 2 Strontium 87.62 | 39 Y 2 8 18 9 2 Yttrium 88.905 | 40 Zr 2 8 18 10 2 Zirconium 91.22 | 41 Nb 2 8 18 12 1 Niobium 92.906 | 42 Mo 2 8 18 13 1 Molybdenum 95.94 | 43 Tc ◆ ✶ Technetium (98) | 44 Ru 2 8 18 15 1 Ruthenium 101.07 | 45 Rh 2 8 18 16 1 Rhodium 102.905 | 46 Pd 2 8 18 18 0 Palladium 106.4 | 47 Ag 2 8 18 18 1 Silver 107.868 | 48 Cd 2 8 18 18 2 Cadmium 112.40 | 49 In 2 8 18 18 3 Indium 114.82 | 50 Sn 2 8 18 18 4 Tin 118.69 | 51 Sb 2 8 18 18 5 Antimony 121.75 | 52 Te 2 8 18 18 6 Tellurium 127.60 | 53 I 2 8 18 18 7 Iodine 126.9044 | 54 Xe 2 8 18 18 8 Xenon 131.29 |
| 6 | 55 Cs 2 8 18 18 8 1 Cesium 132.905 | 56 Ba 2 8 18 18 8 2 Barium 137.33 | | 72 Hf 2 8 18 32 10 2 Hafnium 178.49 | 73 Ta 2 8 18 32 11 2 Tantalum 180.948 | 74 W 2 8 18 32 12 2 Tungsten 183.85 | 75 Re 2 8 18 32 13 2 Rhenium 186.2 | 76 Os 2 8 18 32 14 2 Osmium 190.2 | 77 Ir 2 8 18 32 15 2 Iridium 192.2 | 78 Pt 2 8 18 32 17 1 Platinum 195.09 | 79 Au 2 8 18 32 18 1 Gold 196.967 | 80 Hg 2 8 18 32 18 2 Mercury 200.59 | 81 Tl 2 8 18 32 18 3 Thallium 204.383 | 82 Pb 2 8 18 32 18 4 Lead 207.19 | 83 Bi 2 8 18 32 18 5 Bismuth 208.980 | 84 Po ◆ Polonium (209) | 85 At ◆ Astatine (210) | 86 Rn ◆ Radon (222) |
| 7 | 87 Fr ◆ Francium (223) | 88 Ra ◆ Radium (226.0254) | | 104 Unq ◆ ✶ Unnilquadium (261) | 105 Unp ◆ ✶ Unnilpentium (262) | 106 Unh ◆ ✶ Unnilhexium (263) | 107 Uns ◆ ✶ Unnilseptium (262) | 108 Uno ◆ ✶ Unniloctium (265) | 109 Une ◆ ✶ Unnilennium (266) | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 57 La 2 8 18 18 9 2 Lanthanum 138.91 | 58 Ce 2 8 18 19 9 2 Cerium 140.12 | 59 Pr 2 8 18 21 8 2 Praseodymium 140.907 | 60 Nd 2 8 18 22 8 2 Neodymium 144.24 | 61 Pm ◆ ✶ Promethium (145) | 62 Sm 2 8 18 24 8 2 Samarium 150.35 | 63 Eu 2 8 18 25 8 2 Europium 151.96 | 64 Gd 2 8 18 25 9 2 Gadolinium 157.25 | 65 Tb 2 8 18 27 8 2 Terbium 158.9254 | 66 Dy 2 8 18 28 8 2 Dysprosium 162.50 | 67 Ho 2 8 18 29 8 2 Holmium 164.930 | 68 Er 2 8 18 30 8 2 Erbium 167.26 | 69 Tm 2 8 18 31 8 2 Thulium 168.934 | 70 Yb 2 8 18 32 8 2 Ytterbium 173.04 | 71 Lu 2 8 18 32 9 2 Lutetium 174.97 |
| 7 | 89 Ac ◆ Actinium (227.0278) | 90 Th ◆ Thorium 232.038 | 91 Pa ◆ Protactinium (231.0359) | 92 U ◆ Uranium 238.03 | 93 Np ◆ ✶ Neptunium (237.0482) | 94 Pu ◆ ✶ Plutonium (244) | 95 Am ◆ ✶ Americium (243) | 96 Cm ◆ ✶ Curium (247) | 97 Bk ◆ ✶ Berkelium (247) | 98 Cf ◆ ✶ Californium (251) | 99 Es ◆ ✶ Einsteinium (252) | 100 Fm ◆ ✶ Fermium (257) | 101 Md ◆ ✶ Mendelevium (258) | 102 No ◆ ✶ Nobelium (259) | 103 Lr ◆ ✶ Lawrencium (260) |