Periodic Table of Elements

Group

Period

1 IA	2 IA	3 IIIA	4 IVB	5 VB	6 VIB	7 VIIB	8 VIIIB	9 VIIIB	10 VIIIB	11 IB	12 IIB	13 IIIA	14 IVA	15 VA	16 VIA	17 VIIA	18 VIIIA
1 ● 1 −1 1.008 13.6 1.1 0.7542 **H** Hydrogen $1s^1$																	2 ● 0 4.003 24.59 1.4 Ns **He** Helium $1s^2$
2 3 ⬛ 1 6.94 5.392 1.82 0.618 **Li** Lithium $[He]2s^1$	4 ⬛ 2 9.012 9.323 1.53 Ns **Be** Beryllium $[He]2s^2$											5 ⬛ 3 10.81 8.298 1.92 0.2797 **B** Boron $[He]2s^22p^1$	6 ⬛ 4 3 2 1 0 −1 −2 −3 −4 12.011 11.26 1.7 1.262 **C** Carbon $[He]2s^22p^2$	7 ● 5 4 3 2 −3 14.007 14.53 1.55 Ns **N** Nitrogen $[He]2s^22p^3$	8 ● −1 −2 15.999 13.62 1.52 1.461 **O** Oxygen $[He]2s^22p^4$	9 ● −1 18.998 17.42 1.47 3.401 **F** Fluorine $[He]2s^22p^5$	10 ● 0 20.180 21.56 1.54 Ns **Ne** Neon $[He]2s^22p^6$
3 11 ⬛ 1 22.990 5.139 2.27 0.5479 **Na** Sodium $[Ne]3s^1$	12 ⬛ 2 24.305 7.646 1.73 Ns **Mg** Magnesium $[Ne]3s^2$											13 ⬛ 3 26.982 5.986 1.84 0.4328 **Al** Aluminium $[Ne]3s^23p^1$	14 ⬛ 4 −4 28.085 8.152 2.1 1.389 **Si** Silicon $[Ne]3s^23p^2$	15 ⬛ 5 3 −3 30.974 10.49 1.8 0.7466 **P** Phosphorus $[Ne]3s^23p^3$	16 ⬛ 6 4 2 −2 32.06 10.36 1.8 2.077 **S** Sulfur $[Ne]3s^23p^4$	17 ● 7 5 3 1 −1 35.45 12.97 1.75 3.613 **Cl** Chlorine $[Ne]3s^23p^5$	18 ● 0 39.95 15.76 1.88 Ns **Ar** Argon $[Ne]3s^23p^6$
4 19 ⬛ 1 39.098 4.341 2.75 0.5015 **K** Potassium $[Ar]4s^1$	20 ⬛ 2 40.078 6.113 2.31 0.02455 **Ca** Calcium $[Ar]4s^2$	21 ⬛ 3 44.956 6.561 2.15 0.188 **Sc** Scandium $[Ar]3d^14s^2$	22 ⬛ 4 3 47.867 6.828 2.11 0.079 **Ti** Titanium $[Ar]3d^24s^2$	23 ⬛ 5 4 3 2 0 50.942 6.746 2.07 0.525 **V** Vanadium $[Ar]3d^34s^2$	24 ⬛ 6 3 2 0 51.996 6.766 2.06 0.666 **Cr** Chromium $[Ar]3d^54s^1$	25 ⬛ 7 6 4 3 2 0 −1 54.938 7.434 2.05 Ns **Mn** Manganese $[Ar]3d^54s^2$	26 ⬛ 6 3 2 0 −2 55.845 7.902 2.04 0.151 **Fe** Iron $[Ar]3d^64s^2$	27 ⬛ 3 2 0 −1 58.933 7.881 2.0 0.662 **Co** Cobalt $[Ar]3d^74s^2$	28 ⬛ 3 2 0 58.693 7.64 1.97 1.156 **Ni** Nickel $[Ar]3d^84s^2$	29 ⬛ 2 1 63.546 7.726 1.96 1.235 **Cu** Copper $[Ar]3d^{10}4s^1$	30 ⬛ 2 65.38 9.394 2.01 Ns **Zn** Zinc $[Ar]3d^{10}4s^2$	31 ⬛ 3 69.723 5.999 1.87 0.43 **Ga** Gallium $[Ar]3d^{10}4s^24p^1$	32 ⬛ 4 72.630 7.899 2.11 1.233 **Ge** Germanium $[Ar]3d^{10}4s^24p^2$	33 ⬛ 5 3 −3 74.922 9.788 1.85 0.804 **As** Arsenic $[Ar]3d^{10}4s^24p^3$	34 ⬛ 6 4 −2 78.971 9.752 1.9 2.021 **Se** Selenium $[Ar]3d^{10}4s^24p^4$	35 ▲ 7 5 3 1 −1 79.904 11.81 1.85 3.364 **Br** Bromine $[Ar]3d^{10}4s^24p^5$	36 ● 2 83.798 14.0 2.02 Ns **Kr** Krypton $[Ar]3d^{10}4s^24p^6$
5 37 ⬛ 1 85.468 4.177 3.03 0.4859 **Rb** Rubidium $[Kr]5s^1$	38 ⬛ 2 87.62 5.695 2.49 0.048 **Sr** Strontium $[Kr]5s^2$	39 ⬛ 3 88.906 6.217 2.32 0.307 **Y** Yttrium $[Kr]4d^15s^2$	40 ⬛ 4 91.224 6.634 2.23 0.426 **Zr** Zirconium $[Kr]4d^25s^2$	41 ⬛ 5 3 92.906 6.759 2.18 0.916 **Nb** Niobium $[Kr]4d^45s^1$	42 ⬛ 6 5 4 3 2 0 95.95 7.092 2.17 0.748 **Mo** Molybdenum $[Kr]4d^55s^1$	43 ⬛ ⚗ 7 [98] 7.28 2.16 0.55 **Tc** Technetium $[Kr]4d^55s^2$	44 ⬛ 8 6 4 3 2 0 −2 101.07 7.36 2.13 1.05 **Ru** Ruthenium $[Kr]4d^75s^1$	45 ⬛ 5 4 3 2 1 0 102.906 7.459 2.1 1.137 **Rh** Rhodium $[Kr]4d^85s^1$	46 ⬛ 4 2 0 106.42 8.337 2.1 0.562 **Pd** Palladium $[Kr]4d^{10}$	47 ⬛ 2 1 107.868 7.576 2.11 1.302 **Ag** Silver $[Kr]4d^{10}5s^1$	48 ⬛ 2 112.414 8.994 2.18 Ns **Cd** Cadmium $[Kr]4d^{10}5s^2$	49 ⬛ 3 114.818 5.786 1.93 0.2995 **In** Indium $[Kr]4d^{10}5s^25p^1$	50 ⬛ 4 2 118.710 7.344 2.17 1.112 **Sn** Tin $[Kr]4d^{10}5s^25p^2$	51 ⬛ 5 3 −3 121.760 8.608 2.06 1.046 **Sb** Antimony $[Kr]4d^{10}5s^25p^3$	52 ⬛ 6 4 −2 127.60 9.009 2.06 1.971 **Te** Tellurium $[Kr]4d^{10}5s^25p^4$	53 ⬛ 7 5 1 −1 126.904 10.45 1.98 3.059 **I** Iodine $[Kr]4d^{10}5s^25p^5$	54 ● 6 4 2 131.293 12.13 2.16 Ns **Xe** Xenon $[Kr]4d^{10}5s^25p^6$
6 55 ⬛ 1 132.905 3.894 3.43 0.4716 **Cs** Caesium $[Xe]6s^1$	56 ⬛ 2 137.327 5.212 2.68 0.1446 **Ba** Barium $[Xe]6s^2$	57-71 **La-Lu** Lanthanide	72 ⬛ 4 178.486 6.825 2.23 0.014 **Hf** Hafnium $[Xe]4f^{14}5d^26s^2$	73 ⬛ 5 180.948 7.549 2.22 0.322 **Ta** Tantalum $[Xe]4f^{14}5d^36s^2$	74 ⬛ 6 5 4 3 2 0 183.84 7.864 2.18 0.8162 **W** Tungsten $[Xe]4f^{14}5d^46s^2$	75 ⬛ 7 6 4 2 −1 186.207 7.833 2.16 0.15 **Re** Rhenium $[Xe]4f^{14}5d^56s^2$	76 ⬛ 8 6 4 3 2 0 −2 190.23 8.438 2.16 1.1 **Os** Osmium $[Xe]4f^{14}5d^66s^2$	77 ⬛ 6 4 3 2 1 0 −1 192.217 8.967 2.13 1.564 **Ir** Iridium $[Xe]4f^{14}5d^76s^2$	78 ⬛ 4 2 195.084 8.959 2.13 2.128 **Pt** Platinum $[Xe]4f^{14}5d^96s^1$	79 ⬛ 5 4 3 2 1 −1 196.967 9.225 2.14 2.309 **Au** Gold $[Xe]4f^{14}5d^{10}6s^1$	80 ▲ 2 1 200.592 10.44 2.23 Ns **Hg** Mercury $[Xe]4f^{14}5d^{10}6s^2$	81 ⬛ 3 1 204.38 6.108 1.96 0.377 **Tl** Thallium $[Xe]4f^{14}5d^{10}6s^26p^1$	82 ⬛ 4 2 207.2 7.417 2.02 0.364 **Pb** Lead $[Xe]4f^{14}5d^{10}6s^26p^2$	83 ⬛ 5 3 208.980 7.285 2.07 0.9423 **Bi** Bismuth $[Xe]4f^{14}5d^{10}6s^26p^3$	84 ⬛ 6 4 2 [209] 8.414 1.97 1.9 **Po** Polonium $[Xe]4f^{14}5d^{10}6s^26p^4$	85 ◆ 7 5 3 1 −1 [210] U 2.02 2.8 **At** Astatine $[Xe]4f^{14}5d^{10}6s^26p^5$	86 ● 2 [222] 10.75 2.2 Ns **Rn** Radon $[Xe]4f^{14}5d^{10}6s^26p^6$
7 87 ⬛ 1 [223] 4.073 3.48 0.46 **Fr** Francium $[Rn]7s^1$	88 ⬛ 2 [226] 5.278 2.83 0.1 **Ra** Radium $[Rn]7s^2$	89-103 **Ac-Lr** Actinide	104 ◆ ⚗ U [267] 6.001 U U **Rf** Rutherfordium $[Rn]5f^{14}6d^27s^2$	105 ◆ ⚗ U U [268] U U U U **Db** Dubnium $[Rn]5f^{14}6d^37s^2$	106 ◆ ⚗ U U [269] U U U U **Sg** Seaborgium $[Rn]5f^{14}6d^47s^2$	107 ◆ ⚗ U U [270] U U U U **Bh** Bohrium $[Rn]5f^{14}6d^57s^2$	108 ◆ ⚗ U U [269] U U U U **Hs** Hassium $[Rn]5f^{14}6d^67s^2$	109 ◆ ⚗ U U [278] U U U U **Mt** Meitnerium $[Rn]5f^{14}6d^77s^2$	110 ◆ ⚗ U U [281] U U U U **Ds** Darmstadtium $[Rn]5f^{14}6d^97s^1$	111 ◆ ⚗ U U [280] U U U U **Rg** Roentgenium $[Rn]5f^{14}6d^{10}7s^1$	112 ◆ ⚗ U U [285] U U U U **Cn** Copernicium $[Rn]5f^{14}6d^{10}7s^2$	113 ◆ ⚗ U U [286] U U U U **Nh** Nihonium $[Rn]5f^{14}6d^{10}7s^27p^1$	114 ◆ ⚗ U U [289] U U U U **Fl** Flerovium $[Rn]5f^{14}6d^{10}7s^27p^2$	115 ◆ ⚗ U U [289] U U U U **Mc** Moscovium $[Rn]5f^{14}6d^{10}7s^27p^3$	116 ◆ ⚗ U U [293] U U U U **Lv** Livermorium $[Rn]5f^{14}6d^{10}7s^27p^4$	117 ◆ ⚗ U U [294] U U U U **Ts** Tennessine $[Rn]5f^{14}6d^{10}7s^27p^5$	118 ◆ ☢ U U [294] 0.056 U Ns **Og** Oganesson $[Rn]5f^{14}6d^{10}7s^27p^6$

57 ⬛ 3 138.905 5.577 2.43 0.47 **La** Lanthanum $[Xe]5d^16s^2$	58 ⬛ 4 3 140.116 5.539 2.42 0.65 **Ce** Cerium $[Xe]4f^15d^16s^2$	59 ⬛ 4 3 140.908 5.473 2.4 0.962 **Pr** Praseodymium $[Xe]4f^36s^2$	60 ⬛ 3 144.242 5.525 2.39 U **Nd** Neodymium $[Xe]4f^46s^2$	61 ⬛ 3 [145] 5.582 2.38 U **Pm** Promethium $[Xe]4f^56s^2$	62 ⬛ 3 2 150.36 5.644 2.36 U **Sm** Samarium $[Xe]4f^66s^2$	63 ⬛ 3 2 151.964 5.67 2.35 0.864 **Eu** Europium $[Xe]4f^76s^2$	64 ⬛ 3 157.25 6.15 2.34 U **Gd** Gadolinium $[Xe]4f^75d^16s^2$	65 ⬛ 4 3 158.925 5.864 2.33 U **Tb** Terbium $[Xe]4f^96s^2$	66 ⬛ 3 162.500 5.939 2.31 U **Dy** Dysprosium $[Xe]4f^{10}6s^2$	67 ⬛ 3 164.930 6.021 2.3 U **Ho** Holmium $[Xe]4f^{11}6s^2$	68 ⬛ 3 167.259 6.108 2.29 U **Er** Erbium $[Xe]4f^{12}6s^2$	69 ⬛ 3 2 168.934 6.184 2.27 1.029 **Tm** Thulium $[Xe]4f^{13}6s^2$	70 ⬛ 3 2 173.045 6.254 2.26 −0.02 **Yb** Ytterbium $[Xe]4f^{14}6s^2$	71 ⬛ 3 174.967 5.426 2.24 0.34 **Lu** Lutetium $[Xe]4f^{14}5d^16s^2$
89 ⬛ 3 [227] 5.17 2.47 0.35 **Ac** Actinium $[Rn]6d^17s^2$	90 ⬛ 4 232.038 6.307 2.45 U **Th** Thorium $[Rn]6d^27s^2$	91 ⬛ 5 4 231.036 5.89 2.43 U **Pa** Protactinium $[Rn]5f^26d^17s^2$	92 ⬛ 6 5 4 3 238.029 6.194 2.41 U **U** Uranium $[Rn]5f^36d^17s^2$	93 ⬛ ⚗ 6 5 4 3 [237] 6.266 2.39 U **Np** Neptunium $[Rn]5f^46d^17s^2$	94 ⬛ ⚗ 6 5 4 3 [244] 6.026 2.43 U **Pu** Plutonium $[Rn]5f^67s^2$	95 ⬛ ⚗ 6 5 4 3 [243] 5.974 2.44 U **Am** Americium $[Rn]5f^77s^2$	96 ⬛ ⚗ 4 3 [247] 5.991 2.45 U **Cm** Curium $[Rn]5f^76d^17s^2$	97 ⬛ ⚗ 4 3 [247] 6.198 2.44 U **Bk** Berkelium $[Rn]5f^97s^2$	98 ⬛ ⚗ 4 3 [251] 6.282 2.45 U **Cf** Californium $[Rn]5f^{10}7s^2$	99 ⬛ ⚗ 3 [252] 6.42 2.45 U **Es** Einsteinium $[Rn]5f^{11}7s^2$	100 ⬛ ⚗ 3 [257] 6.5 2.45 U **Fm** Fermium $[Rn]5f^{12}7s^2$	101 ⬛ ⚗ 3 [258] 6.58 2.46 U **Md** Mendelevium $[Rn]5f^{13}7s^2$	102 ⬛ ⚗ 3 2 [259] 6.65 2.46 U **No** Nobelium $[Rn]5f^{14}7s^2$	103 ⬛ ⚗ 3 [262] 4.9 2.46 U **Lr** Lawrencium $[Rn]5f^{14}7s^27p^1$

atomic number
relative atomic mass[Da]
atomic radius[Å]

43 ⬛ ⚗ ☢ 7
[98] 7.1194
2.16 0.55
Tc
Technetium
$[Kr]4d^55s^2$

oxidation states
1st ionisation energy[eV]
affinity[eV]
symbol
name
ground state configuration

⬛ solid@273K
● gas@273K
▲ liquid@273K
◆ unknown

☢ radioactive
⚗ lab made

Alkali Metal
Transi-tional Metal
Non metal
Lan-thanide
Alkaline Earth Metal
Post Trans Metal
Halogen
Actinide
Metalloid
Noble gas
Unknown properties

more info https://www.rsc.org/periodic-table
source and raw data at https://gitlab.com/drFaustroll/periodic