Electron configurations of the elements

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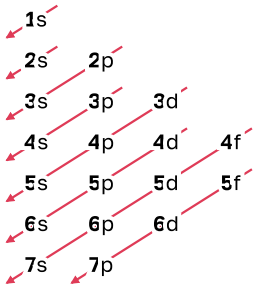
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	1 **H** Hydrogen $1s^1$																	2 **He** Helium $1s^2$
2	3 **Li** Lithium [He] $2s^1$	4 **Be** Beryllium [He] $2s^2$											5 **B** Boron [He] $2s^2\ 2p^1$	6 **C** Carbon [He] $2s^2\ 2p^2$	7 **N** Nitrogen [He] $2s^2\ 2p^3$	8 **O** Oxygen [He] $2s^2\ 2p^4$	9 **F** Fluorine [He] $2s^2\ 2p^5$	10 **Ne** Neon [He] $2s^2\ 2p^6$
3	11 **Na** Sodium [Ne] $3s^1$	12 **Mg** Magnesium [Ne] $3s^2$											13 **Al** Aluminium [Ne] $3s^2\ 3p^1$	14 **Si** Silicon [Ne] $3s^2\ 3p^2$	15 **P** Phosphorus [Ne] $3s^2\ 3p^3$	16 **S** Sulfur [Ne] $3s^2\ 3p^4$	17 **Cl** Chlorine [Ne] $3s^2\ 3p^5$	18 **Ar** Argon [Ne] $3s^2\ 3p^6$
4	19 **K** Potassium [Ar] $4s^1$	20 **Ca** Calcium [Ar] $4s^2$	21 **Sc** Scandium [Ar] $3d^1\ 4s^2$	22 **Ti** Titanium [Ar] $3d^2\ 4s^2$	23 **V** Vanadium [Ar] $3d^3\ 4s^2$	24 **Cr** Chromium [Ar] $3d^5\ 4s^1$	25 **Mn** Manganese [Ar] $3d^5\ 4s^2$	26 **Fe** Iron [Ar] $3d^6\ 4s^2$	27 **Co** Cobalt [Ar] $3d^7\ 4s^2$	28 **Ni** Nickel [Ar] $3d^8\ 4s^2$	29 **Cu** Copper [Ar] $3d^{10}\ 4s^1$	30 **Zn** Zinc [Ar] $3d^{10}\ 4s^2$	31 **Ga** Gallium [Ar] $3d^{10}\ 4s^2\ 4p^1$	32 **Ge** Germanium [Ar] $3d^{10}\ 4s^2\ 4p^2$	33 **As** Arsenic [Ar] $3d^{10}\ 4s^2\ 4p^3$	34 **Se** Selenium [Ar] $3d^{10}\ 4s^2\ 4p^4$	35 **Br** Bromine [Ar] $3d^{10}\ 4s^2\ 4p^5$	36 **Kr** Krypton [Ar] $3d^{10}\ 4s^2\ 4p^6$
5	37 **Rb** Rubidium [Kr] $5s^1$	38 **Sr** Strontium [Kr] $5s^2$	39 **Y** Yttrium [Kr] $4d^1\ 5s^2$	40 **Zr** Zirconium [Kr] $4d^2\ 5s^2$	41 **Nb** Niobium [Kr] $4d^4\ 5s^1$	42 **Mo** Molybdenum [Kr] $4d^5\ 5s^1$	43 **Tc** Technetium [Kr] $4d^5\ 5s^2$	44 **Ru** Ruthenium [Kr] $4d^7\ 5s^1$	45 **Rh** Rhodium [Kr] $4d^8\ 5s^1$	46 **Pd** Palladium [Kr] $4d^{10}$	47 **Ag** Silver [Kr] $4d^{10}\ 5s^1$	48 **Cd** Cadmium [Kr] $4d^{10}\ 5s^2$	49 **In** Indium [Kr] $4d^{10}\ 5s^2\ 5p^1$	50 **Sn** Tin [Kr] $4d^{10}\ 5s^2\ 5p^2$	51 **Sb** Antimony [Kr] $4d^{10}\ 5s^2\ 5p^3$	52 **Te** Tellurium [Kr] $4d^{10}\ 5s^2\ 5p^4$	53 **I** Iodine [Kr] $4d^{10}\ 5s^2\ 5p^5$	54 **Xe** Xenon [Kr] $4d^{10}\ 5s^2\ 5p^6$
6	55 **Cs** Caesium [Xe] $6s^1$	56 **Ba** Barium [Xe] $6s^2$	57–71	72 **Hf** Hafnium [Xe] $4f^{14}\ 5d^2\ 6s^2$	73 **Ta** Tantalum [Xe] $4f^{14}\ 5d^3\ 6s^2$	74 **W** Tungsten [Xe] $4f^{14}\ 5d^4\ 6s^2$	75 **Re** Rhenium [Xe] $4f^{14}\ 5d^5\ 6s^2$	76 **Os** Osmium [Xe] $4f^{14}\ 5d^6\ 6s^2$	77 **Ir** Iridium [Xe] $4f^{14}\ 5d^7\ 6s^2$	78 **Pt** Platinum [Xe] $4f^{14}\ 5d^9\ 6s^1$	79 **Au** Gold [Xe] $4f^{14}\ 5d^{10}\ 6s^1$	80 **Hg** Mercury [Xe] $4f^{14}\ 5d^{10}\ 6s^2$	81 **Tl** Thallium [Xe] $4f^{14}\ 5d^{10}\ 6s^2\ 6p^1$	82 **Pb** Lead [Xe] $4f^{14}\ 5d^{10}\ 6s^2\ 6p^2$	83 **Bi** Bismuth [Xe] $4f^{14}\ 5d^{10}\ 6s^2\ 6p^3$	84 **Po** Polonium [Xe] $4f^{14}\ 5d^{10}\ 6s^2\ 6p^4$	85 **At** Astatine [Xe] $4f^{14}\ 5d^{10}\ 6s^2\ 6p^5$	86 **Rn** Radon [Xe] $4f^{14}\ 5d^{10}\ 6s^2\ 6p^6$
7	87 **Fr** Francium [Rn] $7s^1$	88 **Ra** Radium [Rn] $7s^2$	89–103	104 **Rf** Rutherfordium [Rn] $5f^{14}\ 6d^2\ 7s^2$	105 **Db** Dubnium [Rn] $5f^{14}\ 6d^3\ 7s^2$	106 **Sg** Seaborgium [Rn] $5f^{14}\ 6d^4\ 7s^2$	107 **Bh** Bohrium [Rn] $5f^{14}\ 6d^5\ 7s^2$	108 **Hs** Hassium [Rn] $5f^{14}\ 6d^6\ 7s^2$	109 **Mt** Meitnerium [Rn] $5f^{14}\ 6d^7\ 7s^2$	110 **Ds** Darmstadtium [Rn] $5f^{14}\ 6d^8\ 7s^2$	111 **Rg** Roentgenium [Rn] $5f^{14}\ 6d^9\ 7s^2$	112 **Cn** Copernicium [Rn] $5f^{14}\ 6d^{10}\ 7s^2$	113 **Nh** Nihonium [Rn] $5f^{14}\ 6d^{10}\ 7s^2\ 7p^1$*	114 **Fl** Flerovium [Rn] $5f^{14}\ 6d^{10}\ 7s^2\ 7p^2$*	115 **Mc** Moscovium [Rn] $5f^{14}\ 6d^{10}\ 7s^2\ 7p^3$*	116 **Lv** Livermorium [Rn] $5f^{14}\ 6d^{10}\ 7s^2\ 7p^4$*	117 **Ts** Tennessine [Rn] $5f^{14}\ 6d^{10}\ 7s^2\ 7p^5$*	118 **Og** Oganesson [Rn] $5f^{14}\ 6d^{10}\ 7s^2\ 7p^6$*

	57 **La** Lanthanum [Xe] $5d^1\ 6s^2$	58 **Ce** Cerium [Xe] $4f^1\ 5d^1\ 6s^2$	59 **Pr** Praseodymium [Xe] $4f^3\ 6s^2$	60 **Nd** Neodymium [Xe] $4f^4\ 6s^2$	61 **Pm** Promethium [Xe] $4f^5\ 6s^2$	62 **Sm** Samarium [Xe] $4f^6\ 6s^2$	63 **Eu** Europium [Xe] $4f^7\ 6s^2$	64 **Gd** Gadolinium [Xe] $4f^7\ 5d^1\ 6s^2$	65 **Tb** Terbium [Xe] $4f^9\ 6s^2$	66 **Dy** Dysprosium [Xe] $4f^{10}\ 6s^2$	67 **Ho** Holmium [Xe] $4f^{11}\ 6s^2$	68 **Er** Erbium [Xe] $4f^{12}\ 6s^2$	69 **Tm** Thulium [Xe] $4f^{13}\ 6s^2$	70 **Yb** Ytterbium [Xe] $4f^{14}\ 6s^2$	71 **Lu** Lutetium [Xe] $4f^{14}\ 5d^1\ 6s^2$
	89 **Ac** Actinium [Rn] $6d^1\ 7s^2$	90 **Th** Thorium [Rn] $6d^2\ 7s^2$	91 **Pa** Protactinium [Rn] $5f^2\ 6d^1\ 7s^2$	92 **U** Uranium [Rn] $5f^3\ 6d^1\ 7s^2$	93 **Np** Neptunium [Rn] $5f^4\ 6d^1\ 7s^2$	94 **Pu** Plutonium [Rn] $5f^6\ 7s^2$	95 **Am** Americium [Rn] $5f^7\ 7s^2$	96 **Cm** Curium [Rn] $5f^7\ 6d^1\ 7s^2$	97 **Bk** Berkelium [Rn] $5f^9\ 7s^2$	98 **Cf** Californium [Rn] $5f^{10}\ 7s^2$	99 **Es** Einsteinium [Rn] $5f^{11}\ 7s^2$	100 **Fm** Fermium [Rn] $5f^{12}\ 7s^2$	101 **Md** Mendelevium [Rn] $5f^{13}\ 7s^2$	102 **No** Nobelium [Rn] $5f^{14}\ 7s^2$	103 **Lr** Lawrencium [Rn] $5f^{14}\ 7s^2\ 7p^1$*

26
Fe
Iron
[Ar] $3d^6\ 4s^2$

Atomic number
Symbol
Name
Electron configuration

Order in which subshells fill



s-block
p-block
d-block
f-block

How electrons are arranged in subshells. The bracket stands for the previous noble gas; the superscript is the number of electrons in a subshell.

* predicted

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