

**M0017791: Periodic Chain showing atomic numbers, electrons in orbits,
and valencies of the elements, 1950: part 1**

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THE PERIODIC CHAIN

Periods	At. No.	Name	Electrons in orbits K.L.M.N.O.P.	Valence or polar numbers
(1)	(2)	(3)	(4)	— (5) +
	1	Hydrogen.....	1	1 H 1*
	2	Helium.....	2.0	He
Ia	3	Lithium.....	2.1	Li 1*
.	4	Beryllium.....	2.2	Be . 2*
.	5	Boron.....	2.3	3 B . . 3*
t	6	Carbon.....	2.4	4 C . . . 4*
.	7	Nitrogen.....	2.5	3* 1 N 1 2 3 4 5
.	8	Oxygen.....	2.6	2* O
Ib	9	Fluorine.....	2.7	1*F
T	10	Neon.....	2.8.0	Ne
IIa	11	Sodium.....	2.8.1	Na 1*
.	12	Magnesium.....	2.8.2	Mg . 2*
.	13	Aluminum.....	2.8.3	Al . . 3*
t	14	Silicon.....	2.8.4	4 Si . . . 4*
.	15	Phosphorus.....	2.8.5	3* P 1 . 3 4 5
.	16	Sulfur.....	2.8.6	2* S . 2 . 4 . 6
IIb	17	Chlorine.....	2.8.7	1*Cl 1 . 3 . 5 . 7
T	18	Argon.....	2.8.8.0	A
IIIa	19	Potassium.....	2.8.8.1	K 1*
.	20	Calcium.....	2.8.8.2	Ca . 2*
.	21	Scandium.....	2.8.8.3	Sc . 2 3*
t	22	Titanium.....	2.8.8.4	Ti . 2 3 4*
.	23	Vanadium.....	2.8.10.3	V . 2 3 4 5
.	24	Chromium.....	2.8.11.3	Cr . 2 3 4 . 6
.	25	Manganese.....	2.8.13.2	Mn . 2 3 4 . 6 7
.	26	Iron.....	2.8.13.3	Fe . 2 3 . . 6 7
III'	27	Cobalt.....	2.8.15.2	Co . 2 3 4
.	28	Nickel.....	2.8.16.2	Ni . 2 3
.	29	Copper.....	2.8.17.2	Cu 1 2*
.	30	Zinc.....	2.8.18.2	Zn . 2*
.	31	Gallium.....	2.8.18.3	Ga . . 3*
t	32	Germanium.....	2.8.18.4	4 Ge . . . 4*
.	33	Arsenic.....	2.8.18.5	3* As 1 . 3 . 5
.	34	Selenium.....	2.8.18.6	2* Se . 2 . 4 . 6
IIIb	35	Bromine.....	2.8.18.7	1*Br 1 . 3 . 5 . 7
T	36	Krypton.....	2.8.18.8.0	Kr
IVa	37	Rubidium.....	2.8.18.8.1	Rb 1*
.	38	Strontium.....	2.8.18.8.2	Sr . 2*
.	39	Yttrium.....	2.8.18.8.3	Y . 2 3*
t	40	Zirconium.....	2.8.18.8.4	Zr . 2 3 4*
.	41	Columbium.....	2.8.18.10.3	Cb . 2 3 4 5
.	42	Molybdenum.....	2.8.18.10.4	Mo . 2 3 4 5 6
.	43	Masurium.....	2.8.18.12.3	Ma . 2 3 4 . 6 7
.	44	Ruthenium.....	2.8.18.12.4	Ru . 2 3 4 . 6 7 8