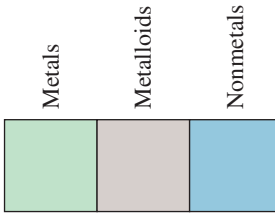


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1	H Hydrogen 1.008	3	Li Lithium 6.941	11	Na Sodium 22.99	19	K Potassium 39.10	37	Rb Rubidium 85.47	55	Cs Cesium 132.9	87	Fr Francium (223)	10	Ne Neon 20.18	18	Ar Argon 39.95	36	Kr Krypton 83.80	54	Xe Xenon 131.3	86	Rn Radon (222)	118		10	Ne Neon 20.18	18	Ar Argon 39.95	36	Kr Krypton 83.80	54	Xe Xenon 131.3	86	Rn Radon (222)	118																																																																																																																																																																	
2	He Helium 4.003	4	Be Beryllium 9.012	12	Mg Magnesium 24.31	20	Ca Calcium 40.08	38	Sr Strontium 87.62	56	Ba Barium 137.3	88	Ra Radium (226)	118		13	Al Aluminum 26.98	14	Si Silicon 28.09	15	P Phosphorus 30.97	16	S Sulfur 32.07	17	Cl Chlorine 35.45	18	Ar Argon 39.95	19	K Potassium 39.10	20	Ca Calcium 40.08	21	Sc Scandium 44.96	22	Ti Titanium 47.88	23	V Vanadium 50.94	24	Cr Chromium 52.00	25	Mn Manganese 54.94	26	Fe Iron 55.85	27	Co Cobalt 58.93	28	Ni Nickel 58.69	29	Cu Copper 63.55	30	Zn Zinc 65.39	31	Ga Gallium 69.72	32	Ge Germanium 72.59	33	As Arsenic 74.92	34	Se Selenium 78.96	35	Br Bromine 79.90	36	Kr Krypton 83.80	37	Rb Rubidium 85.47	38	Sr Strontium 87.62	39	Y Yttrium 88.91	40	Zr Zirconium 91.22	41	Nb Niobium 92.91	42	Mo Molybdenum 95.94	43	Tc Technetium (98)	44	Ru Ruthenium 101.1	45	Rh Rhodium 102.9	46	Pd Palladium 106.4	47	Ag Silver 107.9	48	Cd Cadmium 112.4	49	In Indium 114.8	50	Sn Tin 118.7	51	Sb Antimony 121.8	52	Te Tellurium 127.6	53	I Iodine 126.9	54	Xe Xenon 131.3	55	Cs Cesium 132.9	56	Ba Barium 137.3	57	La Lanthanum 138.9	58	Ce Cerium 140.1	59	Pr Praseodymium 140.9	60	Nd Neodymium 144.2	61	Pm Promethium (147)	62	Sm Samarium 150.4	63	Eu Europium 152.0	64	Gd Gadolinium 157.3	65	Tb Terbium 158.9	66	Dy Dysprosium 162.5	67	Ho Holmium 164.9	68	Er Erbium 167.3	69	Tm Thulium 168.9	70	Yb Ytterbium 173.0	71	Lu Lutetium 175.0	72	Hf Hafnium 178.5	73	Ta Tantalum 180.9	74	W Tungsten 183.9	75	Re Rhenium 186.2	76	Os Osmium 190.2	77	Ir Iridium 192.2	78	Pt Platinum 195.1	79	Au Gold 197.0	80	Hg Mercury 200.6	81	Tl Thallium 204.4	82	Pb Lead 207.2	83	Bi Bismuth 209.0	84	Po Polonium (210)	85	At Astatine (210)	86	Rn Radon (222)	87	Fr Francium (223)	88	Ra Radium (226)	89	Ac Actinium (227)	90	Th Thorium 232.0	91	Pa Protactinium (231)	92	U Uranium 238.0	93	Np Neptunium (237)	94	Pu Plutonium (242)	95	Am Americium (243)	96	Cm Curium (247)	97	Bk Berkelium (247)	98	Cf Californium (249)	99	Es Einsteinium (254)	100	Fm Fermium (253)	101	Md Mendelevium (256)	102	No Nobelium (254)	103	Lr Lawrencium (257)



The 1–18 group designation has been recommended by the International Union of Pure and Applied Chemistry (IUPAC) but is not yet in wide use. In this text we use the standard U.S. notation for group numbers (1A–8A and 1B–8B). No names have been assigned for elements 112–116 and 118. Element 117 has not yet been synthesized.