

Groups \downarrow = Family - elements react similarly - G# = # of valence electrons
 Periods \leftrightarrow = elements in the same period/row have the same # of orbitals/energy levels

The Periodic Table of the Elements

Group #
 P1
 P2
 P3
 P4
 P5
 P6
 P7
 Alkali metals
 Alkaline earth metals
 Transition metals
 Other metals
 Metalloids (semi-metal)
 Nonmetals
 Halogens
 Noble gases
 Reactivity increases as you go down a group

Halogens - most reactive nonmetals
 Noble gases
 least reactive group

- Alkali metals
- Alkaline earth metals
- Transition metals
- Other metals
- Metalloids (semi-metal)
- Nonmetals
- Halogens
- Noble gases

Element name → Mercury
 Atomic # → 80
 Symbol → Hg
 Round Avg. Mass → 200.59
 Atomic # = # of protons
 # of electrons
 Atomic # = # of neutrons

Reactivity Decrease from G1-G12

Reactivity increases from G13-G17

Transition metals (G3-G12)

1 H 1.01	2 He 4.00											10 Ne 20.18	11 Na 22.99	12 Mg 24.31	13 Al 26.98	14 Si 28.09	15 P 30.97	16 S 32.07	17 Cl 35.45	18 Ar 36.95																	
3 Li 6.94	4 Be 9.01											19 K 39.10	20 Ca 40.08											35 Br 79.90	36 Kr 83.80												
5 B 10.81	6 C 12.01	7 N 14.01	8 O 16.00	9 F 19.00											21 Sc 44.96	22 Ti 47.88	23 V 50.94	24 Cr 52.00	25 Mn 54.94	26 Fe 55.85	27 Co 58.93	28 Ni 58.69	29 Cu 63.55	30 Zn 65.39	31 Ga 69.72	32 Ge 72.61	33 As 74.92	34 Se 78.96	35 Br 79.90	36 Kr 83.80							
												37 Rb 85.47	38 Sr 87.62											41 Nb 92.91	42 Mo 95.94	43 Tc (98)	44 Ru 101.07	45 Rh 102.91	46 Pd 106.42	47 Ag 107.87	48 Cd 112.41	49 In 114.82	50 Sn 118.71	51 Sb 121.76	52 Te 127.60	53 I 126.90	54 Xe 131.29
												55 Cs 132.91	56 Ba 137.33	57-70 *	71 Lu 174.97	72 Hf 178.49	73 Ta 180.95	74 W 183.84	75 Re 186.21	76 Os 190.23	77 Ir 192.22	78 Pt 195.06	79 Au 196.97	80 Hg 200.59	81 Tl 204.38	82 Pb 207.20	83 Bi 208.98	84 Po (209)	85 At (210)	86 Rn (222)							
												87 Fr (223)	88 Ra (226)	89-102 **	103 Lr (262)	104 Rf (267)	105 Db (268)	106 Sg (271)	107 Bh (272)	108 Hs (270)	109 Mt (276)	110 Ds (281)	111 Rg (280)	112 Cn (285)	113 Nh (284)	114 Fl (289)	115 Mc (288)	116 Lv (293)	117 Ts (294)	118 Og (294)							

P6 *lanthanides

Lanthanum 57 La 138.91	Cerium 58 Ce 140.12	Praseodymium 59 Pr 140.91	Neodymium 60 Nd 144.24	Promethium 61 Pm (145)	Samarium 62 Sm 150.36	Europium 63 Eu 151.97	Gadolinium 64 Gd 157.25	Terbium 65 Tb 158.93	Dysprosium 66 Dy 162.50	Holmium 67 Ho 164.93	Erbium 68 Er 167.26	Thulium 69 Tm 168.93	Ytterbium 70 Yb 173.04
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**actinides

Actinium 89 Ac (227)	Thorium 90 Th 232.04	Protactinium 91 Pa 231.04	Uranium 92 U 238.03	Neptunium 93 Np (237)	Plutonium 94 Pu (244)	Americium 95 Am (243)	Curium 96 Cm (247)	Berkelium 97 Bk (247)	Californium 98 Cf (251)	Einsteinium 99 Es (252)	Fermium 100 Fm (257)	Mendelevium 101 Md (258)	Nobelium 102 No (259)
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(A=P-E M-A=N)