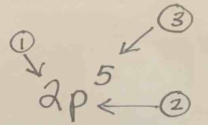


s-block

CLASS COPY!  
DO NOT TAKE!

p-block



- ① energy level
- ② orbital type
- ③ # e<sup>-</sup> in the orbital set

	# of orbitals in a "set"	# of e <sup>-</sup> in the set
s	1	2
p	3	6
d	5	10
f	7	14

IONS

Atom wants to look like a "noble gas", it wants a "full shell" it will make an ion to fill its shell!

Cations    Anions  
lost e<sup>-</sup>    gain e<sup>-</sup>  
p<sup>+</sup>e<sup>-</sup>    p<sup>-</sup>e<sup>-</sup>  
↓            ↓  
+ charge    - charge

★ +1 +2

1	1A 1 H 1.01	2 He 4.00
2	3 Li 6.94	4 Be 9.01
3	11 Na 22.99	12 Mg 24.31
4	19 K 39.10	20 Ca 40.08
5	37 Rb 85.47	38 Sr 87.62
6	55 Cs 132.91	56 Ba 137.33
7	87 Fr (223)	88 Ra (226)

d-block  
multiple charges possible

+3 +4 -3 -2 -1

3A	4A	5A	6A	7A	8A
5 B 10.81	6 C 12.01	7 N 14.01	8 O 16.00	9 F 19.00	10 Ne 20.18
13 Al 26.98	14 Si 28.09	15 P 30.97	16 S 32.07	17 Cl 35.45	18 Ar 39.95
31 Ga 69.72	32 Ge 72.61	33 As 74.92	34 Se 78.96	35 Br 79.90	36 Kr 83.80
49 In 114.82	50 Sn 118.71	51 Sb 121.76	52 Te 127.60	53 I 126.90	54 Xe 131.29
81 Tl 204.38	82 Pb 207.20	83 Bi 208.98	84 Po (209)	85 At (210)	86 Rn (222)
113 Nh (286)	114 Fl (289)	115 Mc (289)	116 Lv (293)	117 Ts (294)	118 Og (294)

3B	4B	5B	6B	7B	8B	9B	10B	11B	12B
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
39 Y 88.91	40 Zr 91.22	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
57 La 138.91	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 195.08	79 Au 196.97	80 Hg 200.59
89 Ac (227)	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)

\*lanthanides  
\*\*actinides

57 La 138.91	58 Ce 140.12	59 Pr 140.91	60 Nd 144.24	61 Pm (145)	62 Sm 150.36	63 Eu 151.97	64 Gd 157.25	65 Tb 158.93	66 Dy 162.50	67 Ho 164.93	68 Er 167.26	69 Tm 168.93	70 Yb 173.04	71 Lu 174.97
89 Ac (227)	90 Th 232.04	91 Pa 231.04	92 U 238.03	93 Np (237)	94 Pu (244)	95 Am (243)	96 Cm (247)	97 Bk (247)	98 Cf (251)	99 Es (252)	100 Fm (257)	101 Md (258)	102 No (259)	103 Lr (262)

go back to d-block!

f-block