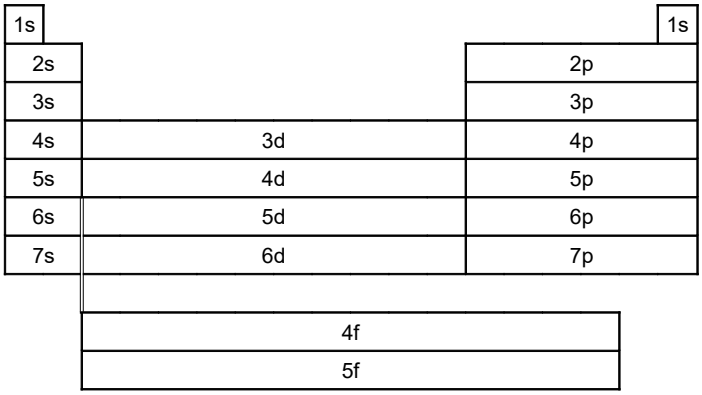
Electron Configuration Patterns

1 H																	2 He
3 Li	4 Be											5 B	6 C	7 N	8 O	9 F	10 Ne
11 Na	12 Mg											13 Al	14 Si	15 P	16 S	17 Cl	18 Ar
19 K	20 Ca	21 Sc	22 Ti	23 V	**24** Cr	25 Mn	26 Fe	27 Co	28 Ni	**29** Cu	30 Zn	31 Ga	32 Ge	33 As	34 Se	35 Br	36 Kr
37 Rb	38 Sr	39 Y	40 Zr	**41** Nb	**42** Mo	43 Tc	**44** Ru	**45** Rh	**46** Pd	**47** Ag	48 Cd	49 In	50 Sn	51 Sb	52 Te	53 I	54 Xe
55 Cs	56 Ba	71 Lu	72 Hf	73 Ta	74 W	75 Re	76 Os	77 Ir	**78** Pt	**79** Au	80 Hg	81 Tl	82 Pb	83 Bi	84 Po	85 At	86 Rn
87 Fr	88 Ra	103 **Lr**	104 Rf	105 Db	106 Sg	107 Bh	108 Hs	109 Mt	**110** Ds	**111** Rg	112 Cn	113 Nh	114 Fl	115 Mc	116 Lv	117 Ts	118 Og

57 **La**	58 **Ce**	59 Pr	60 Nd	61 Pm	62 Sm	63 Eu	64 **Gd**	65 Tb	66 Dy	67 Ho	68 Er	69 Tm	70 Yb
89 **Ac**	90 **Th**	91 **Pa**	92 **U**	93 **Np**	94 Pu	95 Am	96 **Cm**	97 Bk	98 Cf	99 Es	100 Fm	101 Md	102 No



A **bold atomic number** indicates that an electron predicted to be in the *s* sublevel for the previous *s* section of the periodic table is actually in the *d* sublevel of the current section of the periodic table. If the bold number is also underlined, then two electrons predicted to be in the previous *s* sublevel are in the current *d* sublevel.

Corrections to predictions indicated in the above table: $4s \rightarrow 3d$, $5s \rightarrow 4d$, $6s \rightarrow 5d$, $7s \rightarrow 6d$.

E.g., the electron configuration for Cr is $1s^2\,2s^2\,2p^6\,3s^2\,3p^6\,4s^1\,3d^5$.

A **bold symbol** indicates that an electron predicted to be in the sublevel for the current section of the periodic table is actually in the sublevel for the next section in the table. If the bold symbol is also underlined, then two electrons predicted to be in the sublevel for the current section are in the next sublevel.

Corrections to predictions indicated in the above table: $4f \rightarrow 5d$, $5f \rightarrow 6d$, $6d \rightarrow 7p$.

E.g., the electron configuration for Pa is $1s^2\,2s^2\,2p^6\,3s^2\,3p^6\,4s^2\,3d^{10}\,4p^6\,5s^2\,4d^{10}\,5p^6\,6s^2\,4f^{14}\,5d^{10}\,6p^6\,7s^2\,5f^2\,6d^1$.

There are disagreements at Tc and Lr. How accurate are the ones starting with Lr?