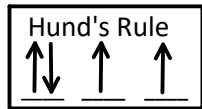
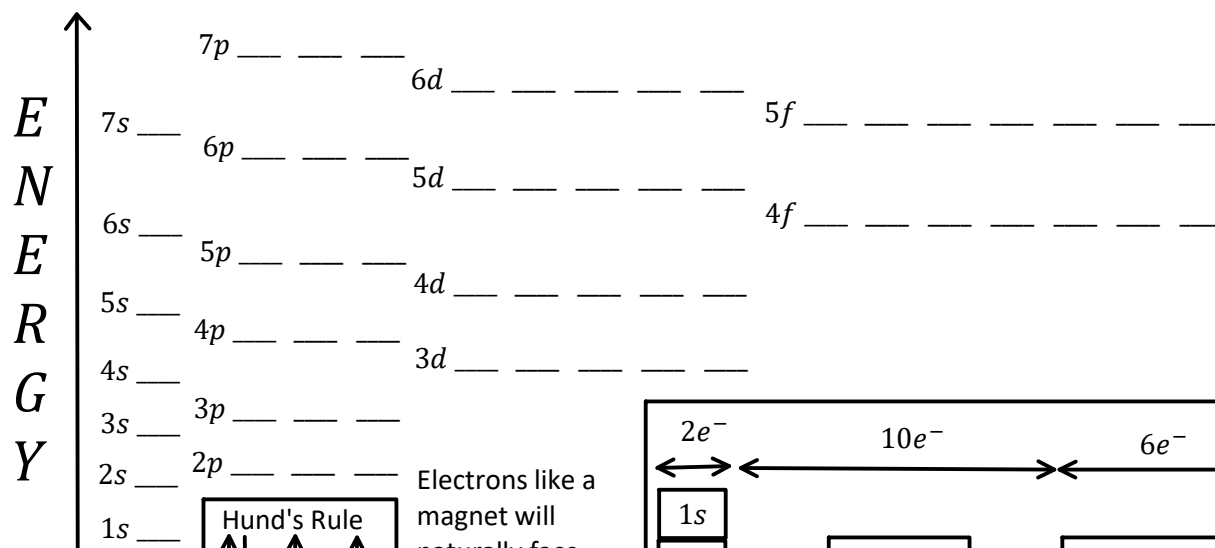


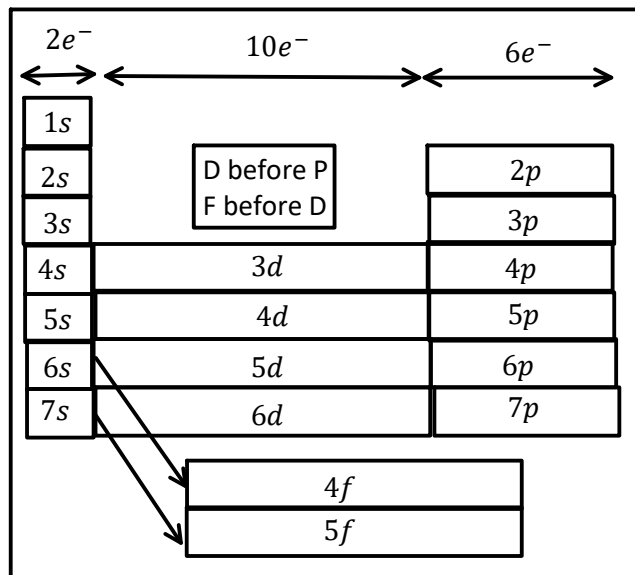
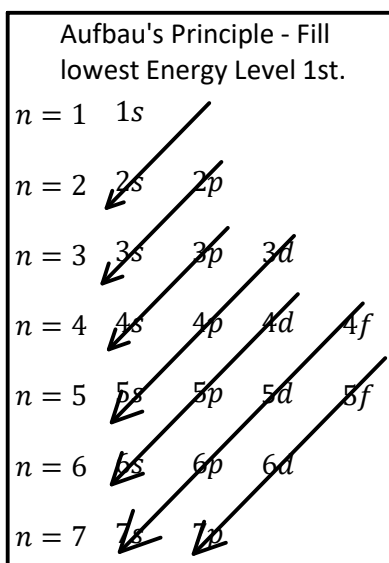
# C11 - 5.2 - Energy Level Table Notes

Each blank holds two electrons



Electrons like a magnet will naturally face the same direction.

Electrons naturally fill up lower energy levels first.



Pauli Exclusion Principle - No two electrons have the same 4 quantum numbers.

Ground State - Minimal Energy  
Excited State - Higher Energy

Quantum Numbers - Describe electron movement and trajectories.  
 -Principle ( $n$ ) - # of nodes  
 -Orbital Angular Momentum ( $l$ ) - # anglar nodes  
 $l = 0$  (s-type orbital)  $l = 1$  (p-type)  $l = 2$  (d-type)  $l = 3$  (f-type)  
 -Magnetic ( $m_l$ ) - Orientation of orbital  
 -Electron Spin ( $m_s$ ) - Spin Up/Down

Combination of all quantum numbers of all electrons in an atom is described by a wave function that complies with Schrodinger's equation.