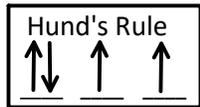
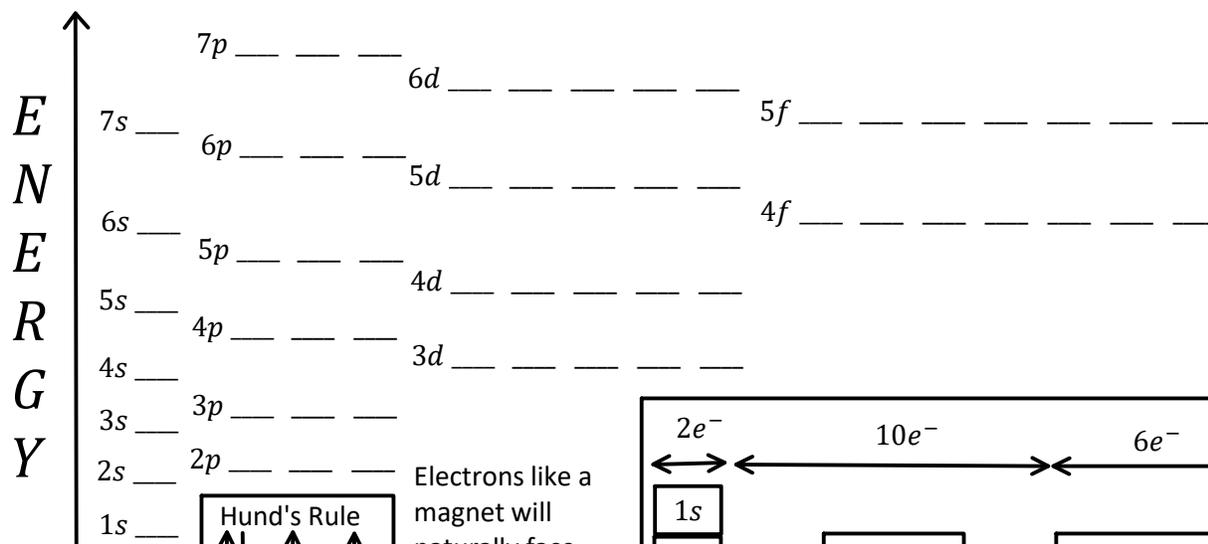


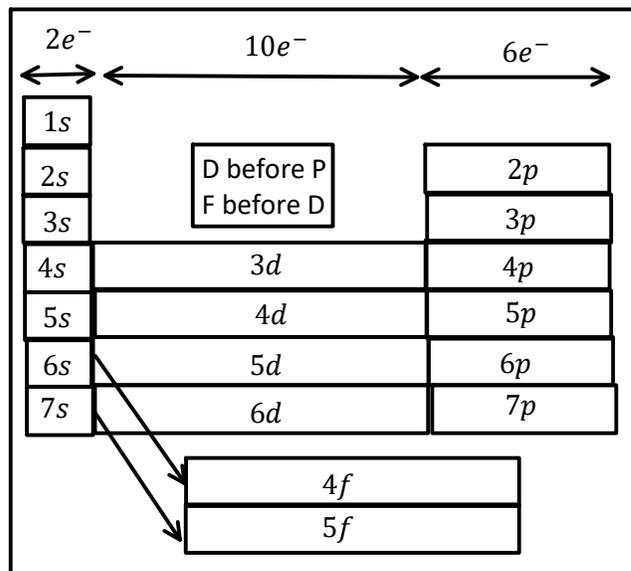
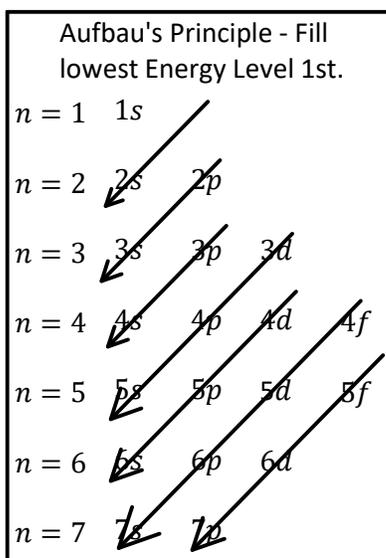
C11 - 5.2 - Energy Level Table Notes

Each blank holds two electrons



Electrons like a magnet will naturally face the same direction.

Electrons naturally fill up lower energy levels first.



Photon - Elementary particle in a quantum of the electromagnetic field. (Massless)

Quantum - Minimum amount of any physical entity in an interaction.

Quantum Theory - Wave-Particle Duality. Properties of both.

Wave Function - Probability an Electron found in a region of Space or possess a range of momenta.

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.