2.2 Orbitals & Electron Configuration Notes

What the atom does NOT look like: What the atom does look like:

**Quantum Numbers**

Purpose:

Analogy: Quantum Numbers are like a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ because

**Electron Configuration**

Purpose: Writes out the arrangement of all electrons in a single atom.

# of Electrons

Energy Level

1s22s22p63s23p5

Orbital Shape

S

Rules:

Pauli exclusion principle--

Aufbau principle--

Hund’s rule--

Examples

Hydrogen - Helium -

Lithium - Beryllium -

Boron - Nitrogen -

Neon - Sodium -

Aluminum - Calcium -

Iron -

Antimony -

Neodymium -

4 Quantum #’s of this electron?

n=

m=

ℓ=

spin=

**Orbital Diagrams**

Iron:

\_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_

1s 2s 2p 3s 3p 4s 3d