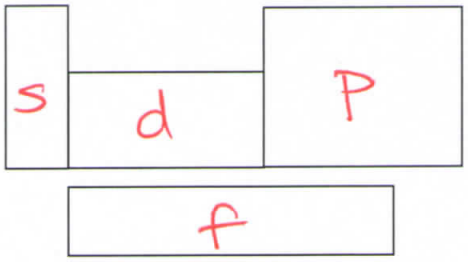
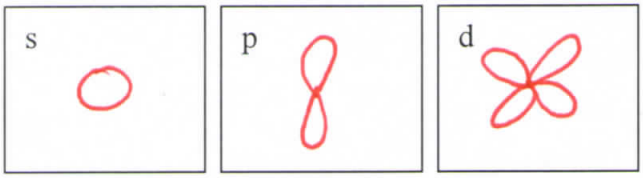
Reg: **Electron Configuration Practice #1** Name: _____

Label the s,p,d,f sections of the periodic table:



Sketch the sublevels:



Continue writing in the electron configuration pattern in the following blanks:

$1s^2$, $2s^2$, $2p^6$, $3s^2$, $3p^6$, $4s^2$

Write the electron configuration:

Helium: $1s^2$

Beryllium: $1s^2 2s^2$

Lithium: $1s^2 2s^1$

Nitrogen: $1s^2 2s^2 2p^3$

Sodium: $1s^2 2s^2 2p^6 3s^1$

Carbon: $1s^2 2s^2 2p^2$

Silicon: $1s^2 2s^2 2p^6 3s^2 3p^2$

Argon: $1s^2 2s^2 2p^6 3s^2 3p^6$

Write the noble gas configuration:

Magnesium: $[Ne]\,3s^2$

Calcium: $[Ar]\,4s^2$

Aluminum: $[Ne]\,3s^2 3p^1$

Phosphorus: $[Ne]\,3s^2 3p^3$

Nitrogen: $[He]\,2s^2 2p^3$

Lithium: $[He]\,2s^1$

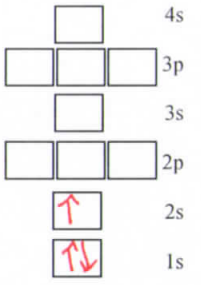
Summarize what the following scientists are known for:

1) Plank: energy is quantized (e⁻ is limited to certain energy levels & positions)
2) Heisenberg: Uncertainty principle = position & velocity of the electron cannot be known at the same time
3) What was wrong with Bohr's model of the atom?
   - it put the electron in specific positions
   - we are not allowed to know that much info about the electron's location
4) What model of the atom do we use today? Quantum Mechanical Model
5) How is our current model of the atom different from Bohr's model?
   It shows the probability of the electron's position (less exact than Bohr's model b/c of Heisenberg's Uncertainty Principle)
6) Draw the order of the electromagnetic spectrum from longest to shortest wavelength:

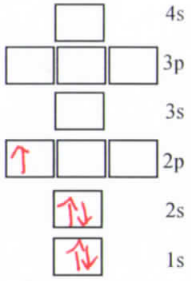
Radio Microwave Infrared Visible UV Xray Gamma

Reg: Electron Configuration Practice #1

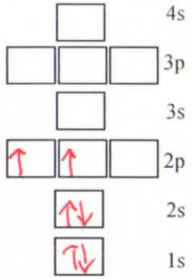
Name: _____



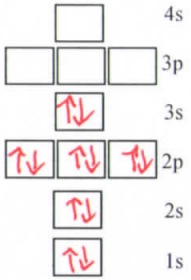
Li= $1s^2 2s^1$



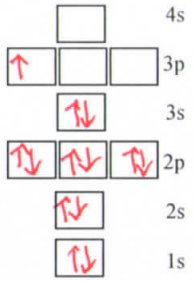
B= $1s^2 2s^2 2p^1$



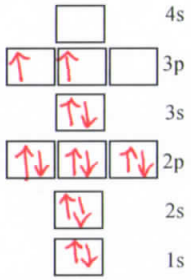
C= $1s^2 2s^2 2p^2$



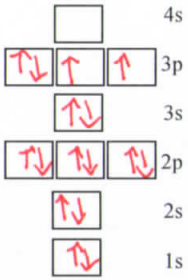
Mg= $1s^2 2s^2 2p^6 3s^2$



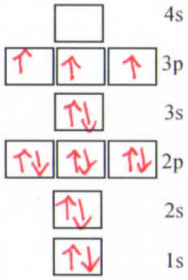
Al= $1s^2 2s^2 2p^6 3s^2 3p^1$



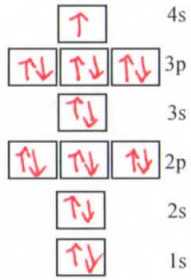
Si= $1s^2 2s^2 2p^6 3s^2 3p^2$



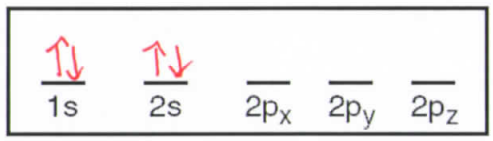
S= $1s^2 2s^2 2p^6 3s^2 3p^4$



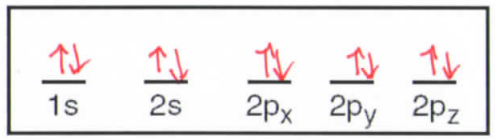
P= $1s^2 2s^2 2p^6 3s^2 3p^3$



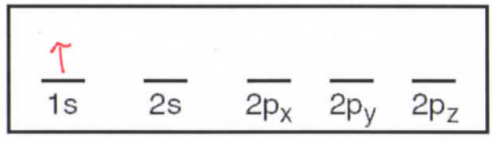
K= $1s^2 2s^2 2p^6 3s^2 3p^6 4s^1$



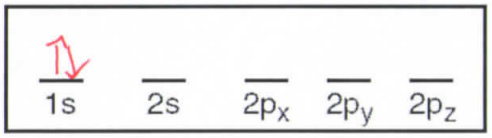
Be= $1s^2 2s^2$



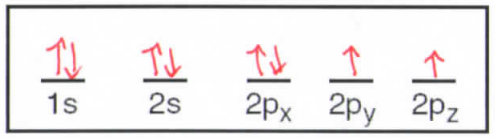
Ne= $1s^2 2s^2 2p^6$



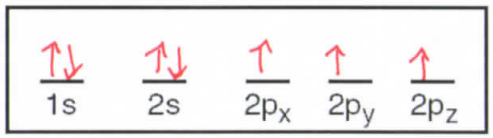
H= $1s^1$



He= $1s^2$



O= $1s^2 2s^2 2p^4$



N= $1s^2 2s^2 2p^3$