

Construct an orbital diagram for any element in the 3rd period of the periodic table.

What is the electron configuration of the element you chose above?

What is the electron configuration of potassium?

What are the rules for assigning each quantum number to specify an orbital? (n , l , m_l)

What does the fourth quantum number (not shown above) for an electron specify?

What happens to the difference in energy (or distance) between orbitals as n increases?

Sketch out the Bohr model for hydrogen out to $n=5$.

Draw the Lewis Structure for the following compounds,
drawing formal charges and all possible resonance
structures:



What shapes should these adopt based on VSEPR theory?

Which are polar, which are nonpolar?

What are the bond angles for each?