Assignment 5-2d (Diagramming Atoms) and 5-3 (Forces Within the Atom)

Name _____

Class Period _____

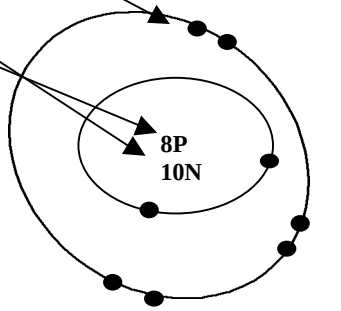
Date _____

Hint: For this exercise you will have to know…

- the maximum number of electrons for the **1st** energy level in any atom
- the maximum number of electrons for the **2nd** energy level in any atom
- the maximum number of electrons for the **outside** energy level in any atom

Element Name (isotope)	Atomic Number	Number of Protons	Number of Neutrons	Number of Electrons
^{18}oxygen	8	8	10	8
^{7}lithium	3			
^{11}boron	5			
^{12}carbon	6			
^{14}nitrogen	7			
^{19}fluorine	9			
^{20}neon	10			
^{23}sodium	11			
^{24}magnesium	12			

Example Diagram



Instructions:

1. **Fill in the squares above with the correct numbers.**
2. **Using the numbers for each element make diagrams of each element like the one shown as an example.**

Please continue on the other side.

1. **Which of the forces within the atom keeps the electrons in orbit around the nucleus?**

2. **Which of the forces within the atom is the weakest force?**

3. **Which of the forces within the atom keeps the protons from repelling each other?**

4. **Which of the forces within the atom is responsible for the decay of neutrons into protons and electrons?**

5. **Explain how the electromagnetic force works.**

6. **What happens during radioactive decay?**

7. **When does the strong force work?**