2.1-2.3 Hand In Assignment /38

1. Describe **the difference** between at atom and an ion in regards to their substaomic particles. (1)

2. Draw the Lewis Dot Diagram for the following atoms and ions:
    a. Aluminum (atom and ion) (2)

    b. Chlorine (atom and ion) (2)

3. In terms of potential energy, state why atoms tend to bond in nature (1).

4. Which member of each of the following pairs would you expect to have the higher melting point? **Explain your reasoning.** (1 each)
    a. CaO or RbI

    b. LiF or NaCl

    c. CH_4 or CH_3Cl

5. Using H2O as your example, illustrate the difference between intermolecular and intramolecular forces (be specific as to what types of forces/bonds are being observed in water) (4).

6. Explain, two differences **between the properties** of ionic and covalent (molecular) compounds. (4)

7. How is it possible for a molecule to be nonpolar if it contains polar bonds? Use an example to support your explanation (2).

8. In column A, record the electronegativity difference in each molecule. In column B, intramolecular force contained in each molecule. In column C, tell me the intermolecular force acting between molecules. (3)

Molecule	Column A	Column B	Column C
1. NaF			
2. NI3			

9. Complete the following table (4 each)

Molecule DRAW LEWIS STRUCTURE HERE	**Molecular Geometry (VSEPR shape)**	**VSEPR Drawing**	**Polar/Non polar/ charged?**
BCl_3			
ClF_3			
XeF_2			
$[NH_4]^+$			