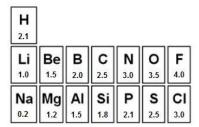
1.) Based on the electronegativity chart provided below, choose two atoms that will form a polar covalent bond. Write the atoms and their electronegativity values, and indicate the difference in their electronegativity values. Explain how polar covalent bonds are different from the other bond types in terms of their molecular structure.



- 2.) Explain why elements in the d-block of the periodic table are called Transition elements.
- 3.) Explain why the oxidation number for Group 13 is different than the oxidation number for Group 15. Which subatomic particles are involved? Give an example from each group by showing the electron configuration for the atom and the ion.

4.) Draw the Lewis dot structures for the following atoms:

Ne S Cl Mg Si Ga N

- 5.) Explain how ionic bonding occurs. Which subatomic particles are involved? Use Lewis dots to show how atoms on the periodic table form an ionic bond. Label the cation and the anion formed
- 6.) Explain how covalent bonding occurs. Which subatomic particles are involved? Use Lewis dots to show how atoms on the periodic table form a covalent bond.

7.) Fill in	the chemical names for the	e following compounds an	d molecules.	
	CCI <sub>4</sub>	<u>.</u>	PCl <sub>3</sub>	
	LiC <sub>2</sub> H <sub>3</sub> O <sub>2</sub>	<u>-</u>	HNO <sub>3</sub>	
	SiBr <sub>4</sub>		Ca(ClO <sub>4</sub> ) <sub>2</sub>	
	Ti <sub>3</sub> P		(NH <sub>4</sub> ) <sub>3</sub> N	
	Ga <sub>2</sub> O <sub>3</sub>		FeF <sub>2</sub>	
8.) Fill in	the chemical formulas for t	the following compounds	and molecules.	
	boron trihydride		magnesium sulfite	
	lead II chromate		sodium hydroxide	
	sodium peroxide		dichlorine monoxide	
	water		iron III cyanide	
	hydrofluoric acid		dinitrogen pentasulfide	
9) Indica	te the number of atoms for	r each element in potassiu	ım permanganate.	