Symmetry in Nature
Applications of Symmetry

Homework Assignment Week 3

1. Complete the following table.

Formula of ionic compound	**anion**	**cation**	**cation name**	**anion name**	**name of ionic compound**
NaCl	Na^+	Cl^-	sodium ion	chloride ion	sodium chloride
Na_2S					
					calcium chloride
AlH_3					
					tin(iv) fluoride
CaO					
					rubidium iodide
$MgBr_2$					
					aluminum fluoride
PbI_2					
					gallium sulfide

2. Draw Lewis dot structures of the following molecules.

- water (H_2O)
- methane (CH_4)
- ammonia (NH_3)
- oxygen gas (O_2)
- nitrogen gas (N_2)
- hydrogen bromide (HBr)
- carbon tetrachloride (CCl_4)

3. Anions are formed by _____ elements. Cations are formed by _____elements.

4. Ionic compounds are formed by the _____ between an _____ and a _____.

5. Covalent compounds are formed by the _____ of electrons between _____ atoms.

6. Compare the sizes of the following atoms.

   Example: Na > Li

   - B Be
   - C Ge
   - N P
   - Mg Cl
   - Ca Ba
   - Al Tl
   - S Cl
   - N F