Week 2 Worksheet

1. Label the following.

   ![Element Al]
   
   13  26.98
   
   Aluminum

2. Classify the following ions either as a cation or an anion.

   Mg$^{2+}$:
   
   OH$^{-}$:

3. Find the formal charge of each atom.

   ![Formal charge diagram]
   
   [O - N - O]
4. Draw the skeletal structure for the following molecules.

5. Draw a resonance structure for each structure below. Label which structure is the major resonance contributor, and explain your reasoning.
6. Determine the hybridization of all the non-hydrogen atoms of each structure. Identify the orbitals used to form each bond.