Complete the following in your class notebook with the heading: <u>Covalent compounds (part 2)</u>

1. Draw Lewis structures for the following compounds and label all pi and sigma bonds.

a. CH_2O b. C_2H_2 c. CF_4

2. Use Lewis structures and arrows to show the formation of a coordinate covalent bond between ammonia (NH_3) and a hydrogen ion (H^+).

3. Show how each of the following elements form hybridized orbitals (label the orbitals both before and after hybridization takes place):

a. Beryllium b. Boron c. Carbon

4. Draw Lewis structures for the following compounds and label the hybridized bonding as sp, sp², or sp³.

a. CCl₄ b. BBr₃ c. BeF₂