1. Circle the one of each pair in (a) and (b) which has the highest dipole moment.

(a) Cl

(b) Cl

2. What is the strongest base that can exist in liquid ammonia, NH₃ (no water)? What is the strongest acid? In your answer label which is the acid and which is the base.

3. Draw the electron-pushing arrows that would give the resonance structure shown. Put in the lone pairs for both resonance structures.

4. Give the products that the following electron-pushing arrows indicate is formed.

5. Name the following alkenes. Don't forget E/Z where needed.

(a) 

(b) 

6. (a) What is the major product of the following reaction?

(b) Draw the intermediate in this reaction