

## Chapter 1

## Chem 30A- Week 2

### Concepts

Heteroatoms  
Formal Charges  
VSEPR

Lewis Structures  
Resonance structures  
3D molecular shapes

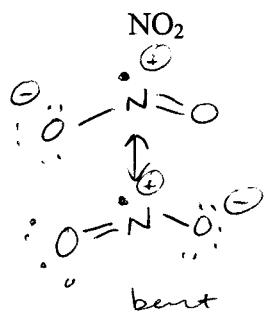
Dipole Moments  
electronegativity  
line formula

### Class Problems

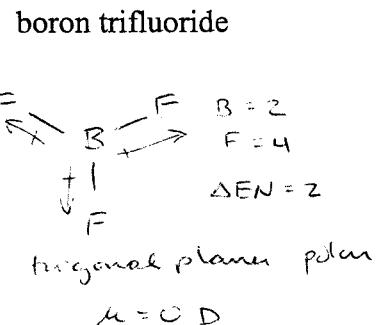
1. For each compound-

1. Draw the structure as the Lewis and line structure.
2. Identify the molecular shape
3. Identify type of bond for each bond
4. Assign partial charges for each atom when applicable

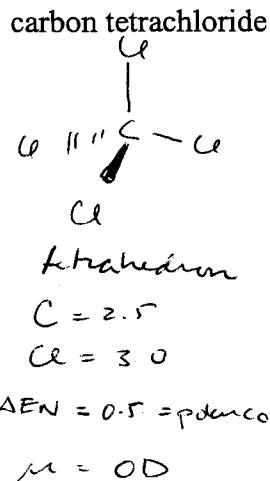
a.



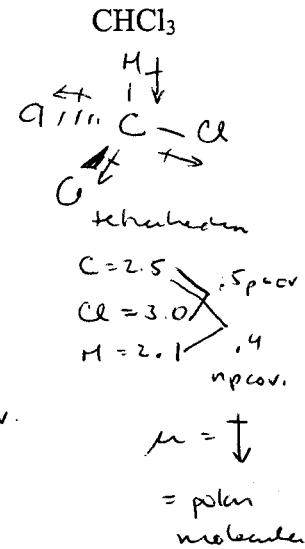
b.



c.



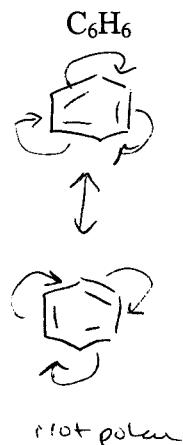
d.



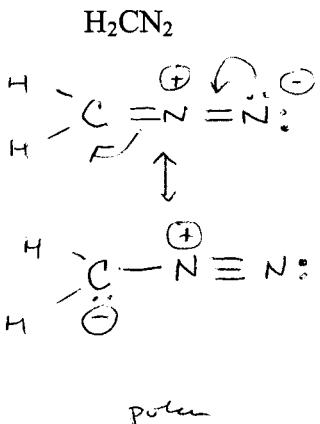
2. For each compound-

1. Draw the line formula structure
2. Draw the resonance forms
3. assign formal charges were applicable
4. Are the molecules polar?

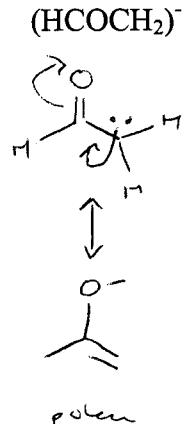
e.



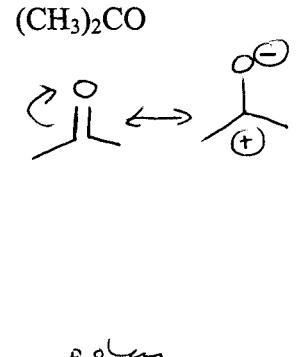
f.



g.

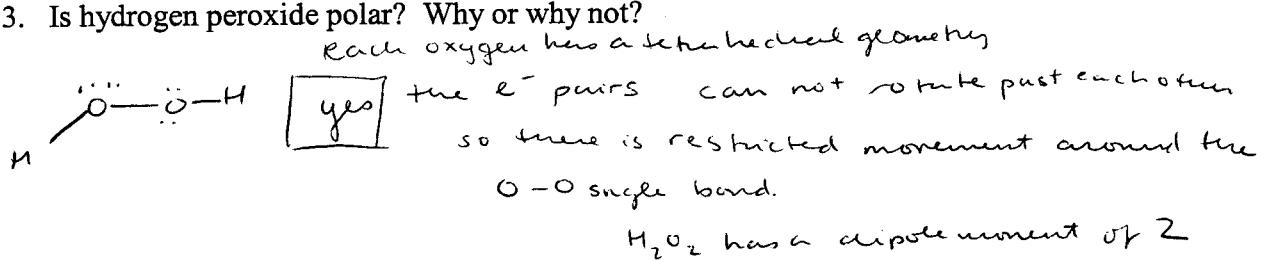


h.



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3. Is hydrogen peroxide polar? Why or why not?



4. Write all resonance structures for the following molecules and ions - Remember to include all arrows that show electron movement. Give the total number of atoms in each molecule.

