

**Introduction**  
**Chapter 1**

Chem 30A- Week 1

**Concepts**

Heteroatoms  
Formal Charges  
VSEPR

Lewis Structures  
Resonance structures  
3D molecular shapes

Dipole Moments  
electronegativity  
line formula

**Class Problems**

For each compound-

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

a.



b.

boron trifluoride

c.

carbon tetrachloride

d.



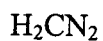
For each compound-

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

e.



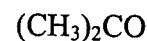
f.



g.



h.



**Bonus**

Is this molecule polar? Why?

