

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.

boron trifluoride

c.

carbon tetrachloride

d.



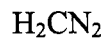
2. For each compound-

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

e.



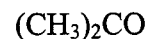
f.



g.



h.

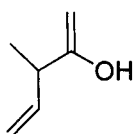


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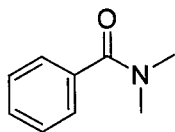
3. Is hydrogen peroxide polar? Why or why not?

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.

a.



b.



c.

