

Name: _____

Period: _____

Seat#: _____

Directions:

1. For each of the following pairs **write the name or formula** if it is missing
2. **Draw the Lewis structure** **Don't forget to take into account the 3D molecular geometry of the molecules!**
3. **Identify the molecular geometry**
4. **Identify any polarity** present with one of the ways you were shown in class – USE A DIFFERENT COLOR TO DO THIS!
5. For each pair - **determine which is MOST polar, highlight name/formula** for the most polar one, and **explain** your reason.

1)	<p>CS₂ Name: _____</p> <p>Molecular Geometry: _____ Lewis Structure: _____</p> <p>Bonds:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p> <p>Molecule:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p>	<p>sulfur difluoride Formula: _____</p> <p>Molecular Geometry: _____ Lewis Structure: _____</p> <p>Bonds:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p> <p>Molecule:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p>
2)	<p>nitrogen trichloride Formula: _____</p> <p>Molecular Geometry: _____ Lewis Structure: _____</p> <p>Bonds:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p> <p>Molecule:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p>	<p>nitrogen tribromide Formula: _____</p> <p>Molecular Geometry: _____ Lewis Structure: _____</p> <p>Bonds:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p> <p>Molecule:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p>
3)	<p>boron trihydride Formula: _____</p> <p>Molecular Geometry: _____ Lewis Structure: _____</p> <p>Bonds:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p> <p>Molecule:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p>	<p>NH₃ Name: _____</p> <p>Molecular Geometry: _____ Lewis Structure: _____</p> <p>Bonds:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p> <p>Molecule:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p>
4)	<p>chlorine gas Formula: _____</p> <p>Molecular Geometry: _____ Lewis Structure: _____</p> <p>Bonds:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p> <p>Molecule:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p>	<p>phosphorus trichloride Formula: _____</p> <p>Molecular Geometry: _____ Lewis Structure: _____</p> <p>Bonds:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p> <p>Molecule:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p>
5)	<p>silicon dioxide Formula: _____</p> <p>Molecular Geometry: _____ Lewis Structure: _____</p> <p>Bonds:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p> <p>Molecule:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p>	<p>carbon dioxide Formula: _____</p> <p>Molecular Geometry: _____ Lewis Structure: _____</p> <p>Bonds:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p> <p>Molecule:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p>

6)	<p>CH₄ Name:</p> <p>Molecular Geometry: Lewis Structure:</p> <p>Bonds:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p> <p>Molecule:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p>	<p>CH₃Cl Name:</p> <p>Molecular Geometry: Lewis Structure:</p> <p>Bonds:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p> <p>Molecule:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p>
7)	<p>nitrogen trifluoride Formula:</p> <p>Molecular Geometry: Lewis Structure:</p> <p>Bonds:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p> <p>Molecule:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p>	<p>phosphorus trifluoride Formula:</p> <p>Molecular Geometry: Lewis Structure:</p> <p>Bonds:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p> <p>Molecule:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p>
8)	<p>methyl chloride Formula: CHCl₃</p> <p>Molecular Geometry: Lewis Structure:</p> <p>Bonds:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p> <p>Molecule:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p>	<p>methyl bromide Formula: CHBr₃</p> <p>Molecular Geometry: Lewis Structure:</p> <p>Bonds:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p> <p>Molecule:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p>
9)	<p>dihydrogen monoxide Formula:</p> <p>Molecular Geometry: Lewis Structure:</p> <p>Bonds:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p> <p>Molecule:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p>	<p>dihydrogen monosulfide Formula:</p> <p>Molecular Geometry: Lewis Structure:</p> <p>Bonds:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p> <p>Molecule:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p>
10)	<p>hydrochloric acid Formula: HCl</p> <p>Molecular Geometry: Lewis Structure:</p> <p>Bonds:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p> <p>Molecule:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p>	<p>hydroiodic acid Formula: HI</p> <p>Molecular Geometry: Lewis Structure:</p> <p>Bonds:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p> <p>Molecule:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p>
11)	<p>methanol Formula: CH₃OH</p> <p>Molecular Geometry - around the Carbon: - around the Oxygen:</p> <p>Lewis Structure:</p> <p>Bonds:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p> <p>Molecule:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p>	<p>diethyl ether Formula: (CH₃)O(CH₃)</p> <p>Molecular Geometry - around the Carbons: - around the Oxygen:</p> <p>Lewis Structure:</p> <p>Bonds:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p> <p>Molecule:</p> <p><input type="checkbox"/> polar</p> <p><input type="checkbox"/> non-polar</p>