**Name: Period: Seat#:**

**Worksheet #13**

**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.

|  |  |  |
| --- | --- | --- |
|  | **CS2** Name:Molecular Lewis Structure:Geometry:Bonds:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*Molecule:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*  | **sulfur difluoride** Formula:Molecular Lewis Structure:Geometry:Bonds:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*Molecule:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*  |
|  | **nitrogen trichloride** Formula:Molecular Lewis Structure:Geometry:Bonds:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*Molecule:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*  | **nitrogen tribromide** Formula:Molecular Lewis Structure:Geometry:Bonds:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*Molecule:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*  |
|  | **boron trihydride** Formula:Molecular Lewis Structure:Geometry:Bonds:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*Molecule:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*  | **NH3** Name:Molecular Lewis Structure:Geometry:Bonds:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*Molecule:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*  |
|  | **chlorine gas** Formula:Molecular Lewis Structure:Geometry:Bonds:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*Molecule:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*  | **phosphorus trichloride** Formula:Molecular Lewis Structure:Geometry:Bonds:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*Molecule:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*  |
|  | **silicon dioxide** Formula:Molecular Lewis Structure:Geometry:Bonds:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*Molecule:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*  | **carbon dioxide** Formula:Molecular Lewis Structure:Geometry:Bonds:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*Molecule:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*  |
|  | **CH4** Name:Molecular Lewis Structure:Geometry:Bonds:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*Molecule:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*  | **CH3Cl** Name:Molecular Lewis Structure:Geometry:Bonds:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*Molecule:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*  |
|  | **nitrogen trifluoride** Formula:Molecular Lewis Structure:Geometry:Bonds:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*Molecule:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*  | **phosphorus trifluoride** Formula:Molecular Lewis Structure:Geometry:Bonds:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*Molecule:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*  |
|  | **methyl chloride** Formula: CHCl3Molecular Lewis Structure:Geometry:Bonds:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*Molecule:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*  | **methyl bromide** Formula: CHBr3Molecular Lewis Structure:Geometry:Bonds:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*Molecule:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*  |
|  | **dihydrogen monoxide** Formula:Molecular Lewis Structure:Geometry:Bonds:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*Molecule:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*  | **dihydrogen monosulfide** Formula: Molecular Lewis Structure:Geometry:Bonds:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*Molecule:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*  |
|  | **hydrochloric acid** Formula: HClMolecular Lewis Structure:Geometry:Bonds:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*Molecule:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*  | **hydroiodic acid** Formula: HIMolecular Lewis Structure:Geometry:Bonds:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*Molecule:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*  |
|  | **methanol** Formula: CH3OHMolecular Geometry Lewis Structure:- around the Carbon:- around the Oxygen:Bonds:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*Molecule:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*  | **diethyl ether** Formula: (CH3)O(CH3)Molecular Geometry Lewis Structure:- around the Carbons:- around the Oxygen:Bonds:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*Molecule:  󠇯󠇯 *polar* *󠇯󠇯 non-polar*  |