**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: CHCl3  Molecular Lewis Structure: Geometry:  Bonds:  󠇯󠇯 *polar*  *󠇯󠇯 non-polar*  Molecule:  󠇯󠇯 *polar*  *󠇯󠇯 non-polar* | **methyl bromide** Formula: CHBr3  Molecular 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: HCl  Molecular Lewis Structure: Geometry:  Bonds:  󠇯󠇯 *polar*  *󠇯󠇯 non-polar*  Molecule:  󠇯󠇯 *polar*  *󠇯󠇯 non-polar* | **hydroiodic acid** Formula: HI  Molecular Lewis Structure: Geometry:  Bonds:  󠇯󠇯 *polar*  *󠇯󠇯 non-polar*  Molecule:  󠇯󠇯 *polar*  *󠇯󠇯 non-polar* |
|  | **methanol** Formula: CH3OH  Molecular 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* |