Skill Practice 24

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Label the partial positive and partial negative charges on the following molecules. Remember for an atom to be partially positive or negative, it must be involved in a polar bond.

A) B) C) D)

1. Which of the compounds in question 1 are polar?
2. Name the type of intermolecular force between each of the compounds in question 1.

A) B) C) D)

1. Draw two NH3 molecules along with the forces of attraction between them. Label the partial positive and negative charges.
2. Name the force that exists between two NH3 molecules.
3. Arrange the following from strongest to weakest: dispersion forces, covalent bond, dipole-dipole force.
4. Draw each of the following structures. Indicate whether each has polar or nonpolar bonds.
5. CO2 c) CH4

Polar bonds? \_\_\_\_\_\_\_\_\_\_\_\_\_

Polar bonds? \_\_\_\_\_\_\_\_\_\_\_\_\_

Polar overall? \_\_\_\_\_\_\_\_\_\_\_\_

Bond angle: \_\_\_\_\_\_\_\_\_\_\_\_\_

Shape: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Polar overall? \_\_\_\_\_\_\_\_\_\_\_\_

Bond angle: \_\_\_\_\_\_\_\_\_\_\_\_\_

Shape: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. SO2 d) NH3

Polar bonds? \_\_\_\_\_\_\_\_\_\_\_\_\_

Polar overall? \_\_\_\_\_\_\_\_\_\_\_\_

Bond angle: \_\_\_\_\_\_\_\_\_\_\_\_\_

Shape: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Polar bonds? \_\_\_\_\_\_\_\_\_\_\_\_\_

Polar overall? \_\_\_\_\_\_\_\_\_\_\_\_

Bond angle: \_\_\_\_\_\_\_\_\_\_\_\_\_

Shape: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_