**Solutions Chem:**

**Polarity and Intermolecular Forces: Quiz 1a**

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Answer the following:

1. Using your knowledge of molecular structure, identify the main intermolecular force in the following compounds. *You may find it useful to draw Lewis structures to find your answer*.
   1. PF3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. Cl2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. HF \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Rank the following compounds from weakest intermolecular forces to strongest. Justify your answer.

H2S I2 N2 H2O

Answers:

1. Using your knowledge of molecular structure, identify the main intermolecular force in the following compounds. *You may find it useful to draw Lewis structures to find your answer*.
2. PF3 dipole-dipole force
3. Cl2 London forces
4. HF hydrogen bonding
5. Rank the following compounds from weakest intermolecular forces to strongest. Justify your answers.

H2S I2 N2 H2O



N2 = I2 < H2S < H2O

N2 and I2 are nonpolar, so they only have dispersion forces; H2S has dipole-dipole, so it is stronger than I2 H2O has hydrogen bonding, so it is stronger than H2S