

**Chem 122**  
**Quiz #1**

Name \_\_\_\_\_

1. (12) What forces oppose vaporization of each substance? (In each case, the first atom in the formula is the central atom in the molecule.)

(a) HF

(b) BCl<sub>3</sub>

(c) CO<sub>2</sub>

(d) TeF<sub>2</sub>

2. (4) Of the compounds in question 1, which one would have the highest boiling point? The lowest boiling point? Explain your answer in one or two complete sentences. (There may be more than one acceptable answer to this question and the next.)

3. (4) Of the compounds in question 1, which one would have the highest vapor pressure? The lowest vapor pressure? Explain your answer in one or two complete sentences.

Answers:

1.a. London forces, hydrogen bonding

b. London forces

c. London forces

d. London forces, dipole-dipole interactions

2. highest = HF or TeF<sub>2</sub> (could argue either way), lowest = CO<sub>2</sub>

3. lowest = HF or TeF<sub>2</sub> (could argue either way), highest = CO<sub>2</sub>