Chemistry 123	Quiz 7
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Section # _____

- 1. Suppose that liquid A has stronger intermolecular forces than liquid B at room temperature.
 - (a) Which substance will have greater surface tension?
 - (b) Which substance will have the greater vapor pressure?
 - (c) Which substance will have the greater viscosity?
- 2. Calculate the boiling point of water at 24 mm Hg. (The ΔH_{vap} of water is 40.7 kJ/mol.)
- 3. Solid lithium has a body-centered cubic unit cell with the length of the edge of 351 pm at 20°C. What is the density of lithium at this temperature?
- 4. The vapor pressure of ethanol, C_2H_5OH , at 50.0°C is 233 mm Hg and its normal boiling point at 1 atm is 78.3°C. What is the ΔH_{vap} of ethanol?
- 5. Halomethane, which had been used as an anesthetic, has the molecular formula $CHBrCICF_3$.
 - (a) Write the Lewis structure for halomethane,
 - (b) Is halomethane a polar molecule? Explain your answer.
 - (c) Does hydrogen bonding occur in halomethane? Explain.
- In another universe, elements try to achieve a nonet (nine valence electrons) instead of an octet when forming chemical bonds. As a result, covalent bonds form when a trio of electrons is shared between two atoms. Two compounds in this other universe are H₃O and H₂F. Draw their Lewis structure, then determine their electron-trio geometry and molecular geometry.