Chemistry 141 Name

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Quiz 8 (20 points) November 20, 2008

All work must be shown to receive credit.

R=0.0821 L atm/mol K = 62.4 L torr/mol K = 8.31 J/mol K

1. (10 points) Ethanol has a heat of vaporization of 38.56 kJ/mol and a normal boiling point of 78.4oC. What is the vapor pressure of ethanol at 15oC?
2. (10 points) Argon has a normal boiling point of 87.2 K and a melting point (at 1 atm) of 84.1 K. Its critical temperature is 150.8 K and critical pressure is 48.3 atm. It has a triple point at 83.7 K and 0.69 atm. Sketch the phase diagram of argon. Which has the greater density, solid argon or liquid argon?