Chemistry 141 Name

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Quiz 10 (20 points) November 19, 2012

All work must be shown to receive credit.

$$ln\left(\frac{P\_{2}}{P\_{1}}\right)=\frac{-∆H\_{vap}}{R}\left(\frac{1}{T\_{2}}-\frac{1}{T\_{1}}\right)=\frac{∆H\_{vap}}{R}\left(\frac{T\_{2}-T\_{1}}{T\_{1}T\_{2}}\right)$$

$$log\left(\frac{P\_{2}}{P\_{1}}\right)=\frac{-∆H\_{vap}}{2.303 R}\left(\frac{1}{T\_{2}}-\frac{1}{T\_{1}}\right)=\frac{∆H\_{vap}}{2.303R}\left(\frac{T\_{2}-T \_{1}}{T\_{1}T\_{2}}\right)$$

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

1. (20 points) Carbon tetrachloride, CCl4, has a vapor pressure of 213 torr at 40oC and 836 torr at 80oC.
	1. What is the heat of vaporization for carbon tetrachloride?
	2. What is the normal boiling point of carbon tetrachloride?
	3. What is the vapor pressure of carbon tetrachloride at 60oC?