Chemistry-4311
October 10, 2014

Quiz #5 **Name_____**

R = 1.987 cal K^{-1} mol^{-1} = 8.314 J K^{-1} mol^{-1} = 0.08206 L atm K^{-1} mol^{-1} K = ^{o}C + 273.15

1. Matching (Use a letter only once)

If the sign of ΔS is positive and the sign of ΔH is negative, then the sign of ΔG is __a._.

The Clausius-Clapeyron equation can be used to calculate the vapor pressure versus ____c___.

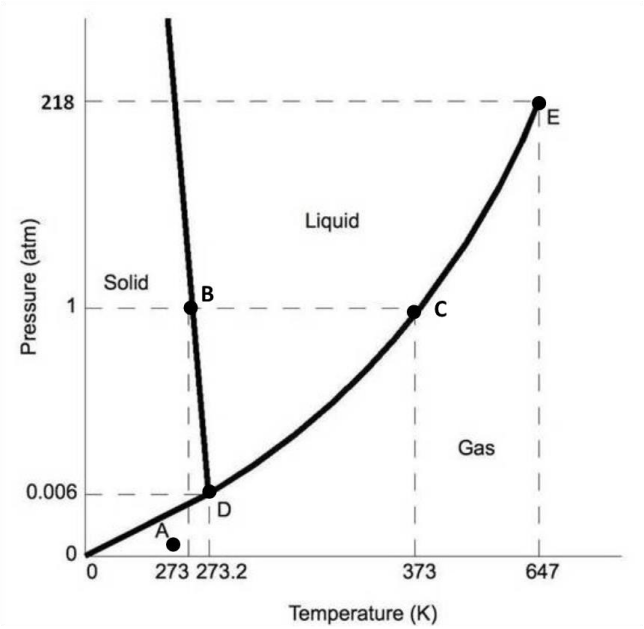
At equilibrium between phase 1 and phase 2, the molar __b___ of the two phases are equal.

If $G_{solid} > G_{liquid}$, then the liquid will freeze spontaneously. __d___ (yes or no)

The molar entropy of liquid water is __j____ than that of water vapor.

a. negative
b. Gibbs energy
c. temperature
d. no
e. positive
f. yes
g. pressure
h. greater
i. entropy
j. less

2. Below is the phase diagram for water. Identify each of the following:



The temperature at point B is the ___c____.
The temperature at point C is the ___d____.
Point D is ___a____.
Point E is ___b____.
Point A is at gas-solid phase equilibrium. ___f__ (yes or no)

a. triple point
b. critical point
c. freezing point
d. boiling point
e. yes f. no