

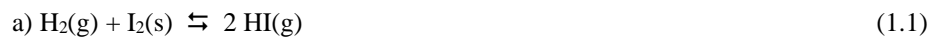
* While I prefer you turn in a hard copy of the worksheet, I will accept scanned copies sent to my email address, joensj@fiu.edu

Section: (circle one) M,W,F

Tu,Tr

For problems involving calculations you must show your work for credit.

1) For each of the following reactions, write the appropriate expression for K_C , K_p , and K , or say an expression cannot be written.



2) For the reaction



the equilibrium concentrations observed in a system at $T = 1000. \text{ K}$ were $[\text{H}_2] = 0.250 \text{ mol/L}$, $[\text{CO}] = 0.110 \text{ mol/L}$, and $[\text{CH}_3\text{OH}] = 0.00260 \text{ mol/L}$. What are the numerical values for K_C and K_p at this temperature?

3) The equilibrium constant for the reaction



is $K_C = 49.5$ at $T = 440. \text{ }^\circ\text{C}$.

In a particular system at $T = 440. \text{ }^\circ\text{C}$ the initial concentrations present are $[\text{H}_2] = 0.140 \text{ M}$, $[\text{I}_2] = 0.000 \text{ M}$, and $[\text{HI}] = 0.080 \text{ M}$. What concentrations will be present when equilibrium is reached?

4) Which of the following will cause a change in the numerical value for the equilibrium constant for a reaction?

- a) A change in pressure
- b) A change in temperature
- c) A change in volume
- d) Both a and c
- e) Both a and b and c