

Chapter 13 – Review Sheet (Exam I)

Chapter 13 – Equilibrium:

- Definition of equilibrium
- Definition of Heterogeneous and Homogeneous Equilibria
- Equilibrium constant – know definition
 - Know how to write equilibrium expression (products over reactants)
 - Remember exponents come from balanced reaction (not like kinetics where it is determined experimentally)
 - Know the difference between K_c & K_p
 - When do you use each one? (concentration VS partial pressure of a gas)
 - Remember they also relate to each other via ideal gas law
 - Equation is given on equation sheet
 - Be able to calculate the equilibrium constant given concentrations or pressures at equilibrium
 - Be able to interpret Equil. Constant (big vs. small) (reactant or product favored)
 - **Be able to setup an ICE table and use to solve problems**
 - Remember if you make an assumption of $x \rightarrow 0$, you **MUST** check your answer to verify your assumption
 - **MUST** know quadratic formula (not on equation sheet!)
- Reaction Quotient, Q
 - Know definition
 - Know how to calculate
 - Be able to predict the direction of the reaction (i.e. if $Q > k$, then ...)
- Le Chatelier's Principle
 - Know definition
 - Know factors that may or may not affect equilibrium shifts (i.e. concentration, temperature, catalyst, and etc...)
 - Be able to predict equilibrium shifts