

Review for Chapter 13

1. What is meant by an equilibrium state?
2. What is an equilibrium constant?
3. What is the physical meaning of a $K < 1$, a $K > 1$
4. Be able to define the equilibrium constant for any chemical reaction.
5. Given the K for a give reaction:
 - Determine the Units of K
 - Find the K for a reverse reaction.
 - Find the K for a reaction where the equation of the new reaction is some multiple of your original reaction equation
6. Be able to convert from a K based on concentration to a K based on pressure for a gas phase reaction.
7. How are solids and liquids treated in equilibria equations?
8. What is a homogeneous equilibria, a heterogeneous equilibria?
9. What is Q
10. Use Q to determine the direction of a reaction.
11. Given a set of starting conditions, determine what the concentrations of a system after it has come to equilibrium
12. What is LeChâtelier's Principle?
 - Use Le Chat's principle to predict how a system at equilibrium will respond to
 - Lowering the concentration of a reactant
 - raising the concentration of a reactant
 - lowering the concentration of a product
 - raising the concentration of a product
 - Changing the pressure of a system (gas phase reaction)
 - Changing the volume of a system (gas phase reaction_
 - Changing the temperature of a system.