Name _____

At equilibrium, for the reaction $H_{2(g)} + F_{2(g)} \leftrightarrows 2HF_{(g)}$ $K_{eq} = 1 \times 10^{13}$. At some point in the reaction, $[H_2] = .0025$ M, $[F_2] = .0025$ M, and $[HF] = 12$ M. Calculate Q and determine which direction the reaction is proceeding (or if it's already at equilibrium).

Complete p.482 #11 in your textbook. Show work and units.

Complete p.481 #9 in your textbook. Show work and units.

Explain the differences between K_{eq} and Q and how they relate to each other

Complete p.495 #34 in your textbook. Show work and units.

Describe Henry's Law

Describe and explain 3 ways to shift the equilibrium in a chemical reaction

Use the solubility diagram on page 474 to answer questions #77 (a and b) on p.500 and #82 on page 501.

Complete p.492 #30 in your textbook. Show work and units.

Write the formula for Heat of Reaction (ΔH)

Write the complete ionic equation and the net ionic equation for this reaction. Make sure to indicate the state of matter and circle the spectator ions:

Magnesium sulfate + sodium phosphate —>

Explain why reactions involving ions are faster than those involving compounds or elements.

Draw energy diagrams for an exothermic and an endothermic reaction. Label the axes, the heat of the products, the heat of the reactants, the change in heat energy (ΔH), the activation energy, and the activated complex.

Use a diagram to explain solubility equilibrium.

Explain the 3 colligative properties learned in class; explain how they change as concentration changes.

Complete in any direction. Use colors, highlighters, etc. Make sure writing is neat and legible.

Solutions Equilibrium Reaction Rates Name _____

Use collision theory to explain the 5 factors that affect reaction rates

List/Describe all six solubility rules.

List and describe the factors that affect solubility

List and describe the factors that affect the rate of dissolving.

Describe LeChatelier's Principle

List 3 ways to calculate concentration of a solution. Include the formulas and units.

Explain the difference between gases and solids in terms of temperature and solubility. Use a diagram with your explanation.

Use salt and sugar to describe the differences between ionic and molecular compounds in aqueous solutions.

Describe what K_{eq} is and what it tells us. How does it explain whether products or reactants are favored in a reaction?

Complete p.502 #103 (a and b only)

Write the formulas for boiling point elevation and freezing point depression

Complete p.493 # 32 in your textbook. Show all work and units.

Explain what a catalyst is and why/how it works. Use a diagram to show how it changes a reaction.

Write the solubility product expression (K_{sp}) for $BaCO_{3(s)}$

Complete in any direction. Use colors, highlighters, etc. Make sure writing is neat and legible.