7.4 Qualitative Changes in Equilibrium Systems Part 1

Le Chatelier’s Principle is an important idea! It is important!!!

* Define what the Le Chatelier’s principle.(p. 439)
* Define an equilibrium shift (p. 439)

ANALAYZE: Figure 2 (p. 440): Analyze the graph here are the steps:

ANALYZING GRAPHS

1. Look at the balanced equation
2. Show what is happening to each of the reactants and products during the reaction process.
3. This means- during the first third the reactant decrease for Fe and FeSCN
4. During the 2nd part, what is the pattern?
5. During the 3rd part, what is added and what happens to the equilibrium.

Analyze Figure 4 (p. 441). What happens when carbon dioxide is added? Analyze what happened when Carbon monoxide is added?

 Collision Theory and Concentration Changes in an Equilibrium System, p. 441.

* Explain and apply how the collision theory explains the shifts in equilibrium.

Real Life Application, P. 441-442.

* Explain aqueous nitric acids are used and in what everyday products will you find these products.
* Explain the process of adding carbon monoxide gas in an equilibrium reaction. (p. 442)
* Explain in biological processes of hemoglobin in the blood (p. 442)

7.5 Quantitative Changes in Equilibrium Systems

* Define reaction quotient (Q), p. 449.
* Define instantaneous concentrations, p. 450.

Apply and Do: p. 452, #1-3

Compare K –***occurs when at equilibrium*** and Q **is when the system is not equilibrium**:

To find Q you must follow the same steps as to find K

What happens when Q is smaller than K? At Equilibrium and when Q is larger than K?

Calculate Q for the following, given K is 6.01 x 10-2

N2(g) + 3 H2(g) < ---🡪 2 NH3

Under these conditions.

