**Ksp and Le Chatelier Station Review**

**Station #1**

**Calculate the Ksp for CaCl2 if 2.00g of CaCl2 is required to saturate 100.0 mL of solution.**

**Station #2**

**The solubility of SF2 is 2.83 x 10-5 M. Calculate the Ksp.**

**Station #3**

**Calculate the concentration of lithium and carbonate ions in a saturated solution of lithium carbonate given Ksp = 1.7x10-3**

**Station #4**

1. **Write the dissociation equation for silver chloride**
2. **Predict what will happen if sodium chloride is added to the solution (direction of shift, and concentration of silver ions)**
3. **What is the molar solubility of silver chloride in**

**Water and 0.15 M solution of NaCl**

**Ksp = 1.77 x 10-10**

**Station #5**

**Determine if silver chloride will form a precipitate if 0.05 mL of 6.0M of silver nitrate is added to 1.0 L of 0.1M of sodium chloride.**

**Station #6**

**In the following reaction 2H2S(g) + O2(g) ⇄ 2S(s) + 2H2O(g)**

**What happens to**

1. **[H2O] if O2 is added**
2. **[H2S] if O2 is added**
3. **[O2] if H2S is removed**
4. **[H2S] if S is added**

**Station #7**

**How would you change the volume of each of the following reactions to increase the yield of the products?**

1. **CaCO3(s) ⇄ CaO(s) + CO2(g)**
2. **S(s) + 3F2(g) ⇄ SF6(g)**
3. **Cl2(g) + I2(g) ⇄ 2ICl(g)**

**Station #8**

**Which direction would the following equations shift to if the temperature was increased?**

1. **CaO(s) + H2O(l) ⇄ Ca(OH)2(aq) ∆H=-82kJ**
2. **CaCO3(s) ⇄ CaO(s) + CO2(g) ∆H = 178kJ**