**Intermediate Kc values.**

**If a reaction has an intermediate value of Kc (from 10-3 to 103)then appreciable (with in given range) concentrations of both reactants and products are present in the equilibrium mixture.**

**Example: Hydrogen + Iodine @ 700 K.**

**H2 (g) +I2 (g) 2HI (g)**

**Kc = [HI]2 / [H2][I2] = 57.0**

**If the equilibrium concentrations of H2 and I2 are both .01 M, then the concentration of HI at equilibrium is .075 M.**

**[HI]2 = Kc[H2][I2]**

**[HI] = Kc[H2] [I2] = (57)(.01)(.01) =.075 M**

**Thus, the concentrations of both reactants (.01 M) and Products (.075) are appreciable.**

**If Kc is > 103: products are predominant over reactants. If Kc is very large, the reaction proceeds nearly to completion.**

**If Kc < 10-3: reactants are predominant over the products. If Kc is very small, the reaction proceeds hardly at all.**

**If Kc is in the “appreciable” range (10-3 to 103) then “appreciable” concentrations of both reactants and products are present.**