**RICE Problems 2**

**1)** A student places 8.0 moles of A and 8.0 mol of B in a 2.0 L flask. When equilibrium is reached there are 4.0 moles of X.

 Calculate the Keq of this reaction. **(85.3 = Keq)**

**A(g) + 2 B(g) ↔ 2 X(g) + 4 Y(g)**

**2)** For the reaction: **A(g) + B(g) ↔ C(g) + D(g)** the Keq is 40.0.

 The initial concentration for A was 0.15 mol/L and for B was 020 mol/L before reaction and no C or D was present.

 What is the concentration of C at equilibrium? **([C] = 0.14 M)**

**3)** For the reaction: **H2(g) + I2(g) ↔ 2 HI(g)** the Keq = 55.0.

a) What does that tell you?

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b) If the initial concentrations of the hydrogen and iodine before reacting were both 0.10 M and no HI was present what is the hydrogen iodide concentration at equilibrium?

**4)** For the reaction **A(g) + B(g) ↔ C(g) + D(g)** the equilibrium

 concentrations for A, B, C and D in mol/L are respectively: 0.11 - x, 0.11 - x, x and x.

 The Kc for the reaction is 100. What is the concentration for C in mol/L at equilibrium?