**Dougherty Valley HS AP Chemistry**

**S-32**

**Equilibrium Review**

**Quick Check #3**

**Name: Date: Period: Seat #:**

Check off each item if you can do the question. Write down a question to ask if you cannot do the question.

* **Kp & Kc**

2 NO(g) + Br2(g)  2 NOBr(g)

Kc = 1.2 x 10-10 at 25 °C

Write the Kp expression for this reaction and

calculate its value. [R = 0.0821 L·atm/mol·K]

* **ICE Box Problem**

A solution is prepared by dissolving 0.050 mol of diiodocyclohexane, C6H10I2, in the solvent CCl4. The total solution volume is 1.00 L. When the reaction, C6H10I2 ⮀ C6H10 + I2, comes to equilibrium, the concentration of I2 is 0.035 mol/L. What is are the concentrations of C6H10I2 and C6H10 at equilibrium?

C6H10I2 ⮀ C6H10 + I2­­

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* **Le Châtelier’s’ Principle Demo**

Co(H2O)62+(aq) + 4 Cl(aq)  CoCl42(aq) + 6 H2O(l)

pink blue

a) add HCl(aq) \_\_\_\_ \_\_\_\_ \_\_\_\_ \_\_\_\_

b) add H2O(l) \_\_\_\_ \_\_\_\_ \_\_\_\_ \_\_\_\_

c) increase the temperature \_\_\_\_ \_\_\_\_ \_\_\_\_ \_\_\_\_

d) decrease the temperature \_\_\_\_ \_\_\_\_ \_\_\_\_ \_\_\_\_

e) add AgNO3(aq) \_\_\_\_ \_\_\_\_ \_\_\_\_ \_\_\_\_

Note:

Predict (a) and (b) before the demonstration.

Watch (c) and determine whether the reaction is endo- or exo-thermic.

Predict (e) before the demonstration.