Name:_____
Blk:_____Date:_____

Chemistry 12
EQUILIBRIUM Lesson #7 + 8

LESSON #7: LE CHATELIER'S PRINCIPLE AND K_{eq}

When the concentration, pressure or surface area is changed, the reaction tends to counteract these changes, and equilibrium is _____.
The re-established equilibrium has the _____ **K_{eq} value**.

The only change imposed on a system at equilibrium that will result in a change in the **K_{eq} value** is a _____ change!!!!

THE MEANING OF THE NUMERICAL VALUE FOR K_{eq} :

Recall that **K_{eq}** = [Products] / [Reactants]

This is simply a fraction. For any fraction if the number is _____ it means that the value in the _____ is greater, or in this case the _____ is larger. If the number is _____ it means that the value in the _____ is greater, or in this case the _____ is larger.

IN OTHER WORDS:

K_{eq} = 1 both reactants and products are equally favoured at equilibrium
K_{eq} > 1 the _____ are favoured at equilibrium.
K_{eq} < 1 the _____ are favoured at equilibrium.

SEAT WORK/ HOMEWORK: EXERCISES 36 - 46 pgs 62 - 63
PLO's: F3 + F4

LESSON #8 A+ B: EQULIBRIUM CALCULATIONS

Example Type A:
A 2.0 L bulb contains 6.00 mol of NO_2 (g). 3.0 mol of NO (g) and 0.20 mol of O_2 (g) at equilibrium. What is Keq for:

$$2\ NO\ (g) + O_2\ (g) \leftrightarrow 2\ NO_2\ (g)\ ?$$

Example Type B:
Into a 2.00L bulb was introduced 4.00 mol of NO (g). After a while equilibrium was attained according to the equation

$$2\ NO\ (g) + O_2\ (g) \leftrightarrow 2\ NO_2\ (g)\ ?$$

At equilibrium 0.500 mol of NO (g) was found. What is the value of Keq?

SEAT WORK/HOMEWORK: Exercises 47- 54 pgs 70-71
PLO's: F5,F6 and F7