

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 $K_{eq} = \frac{[\text{Products}]}{[\text{Reactants}]}$

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.

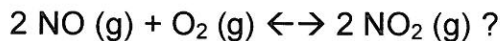
SEAT WORK/ HOMEWORK: EXERCISES 36 - 46 pgs 62 - 63

PLO's: F3 + F4

LESSON #8 A+ B: EQUILIBRIUM CALCULATIONS

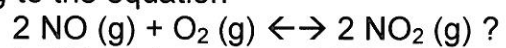
Example Type A:

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 K_{eq} for:



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



At equilibrium 0.500 mol of NO (g) was found. What is the value of K_{eq} ?

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