

Unit 9: Ch 18 – Chemical Equilibrium

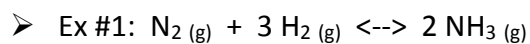
EQUILIBRIUM:

- Chemical reactions are often _____.
 - Products can _____ react to _____ reactants.
- Equilibrium (*EQ*) is established when _____ in reactant _____ and product _____.
- At equilibrium (*EQ*), _____ and _____ remain _____, or _____ with time.
 - This _____ mean that _____.
- At equilibrium (*EQ*), the _____ of the _____ and _____ are equal.
 - Occurs at the _____ time.

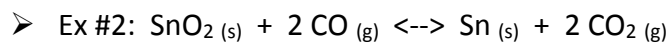
EQUILIBRIUM EXPRESSION:

- How far a reaction proceeds to _____ is expressed by _____.
- **EQUILIBRIUM EXPRESSION:** _____
 - Lower Case = _____
 - Equilibrium (*EQ*) Constant (____) shows the _____ of _____
_____ **TO** _____.
- **K =**
 - **NOTE:** _____ and _____ are _____ included in the equilibrium (*EQ*) expressions; **ONLY** _____ and _____.
 - **WHY:** Pure _____ and _____ concentrations _____ change the *EQ* constant.

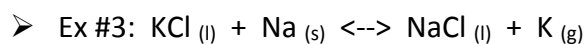
EQUILIBRIUM EXPRESSION:



○ EQ Expression:

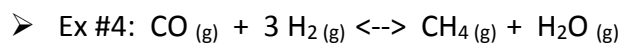


○ EQ Expression:



○ EQ Expression:

EQUILIBRIUM CONSTANT:



○ What is the EQ Constant if concentrations at EQ is as follows: $[\text{CO}] = 0.613 \text{ M}$, $[\text{H}_2] = 1.839 \text{ M}$, $[\text{CH}_4] = 0.387 \text{ M}$, and $[\text{H}_2\text{O}] = 0.387 \text{ M}$?

○ EQ Expression:

➤ $K = 1 \rightarrow$ _____ \rightarrow Product/reactant _____ are _____.

➤ $K > 1 \rightarrow$ _____ \rightarrow _____ reaction is favored (producing more _____)

➤ $K < 1 \rightarrow$ _____ \rightarrow _____ reaction is favored (producing more _____)