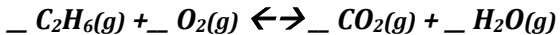


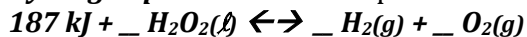
Practice Unit 13 Quiz

If the **total pressure** on the system is **decreased**...



- Which direction will the equilibrium shift?
- What happens to the $[\text{C}_2\text{H}_6]$?
- What happens to the $[\text{O}_2]$?
- What happens to the $[\text{CO}_2]$?
- What happens to the $[\text{H}_2\text{O}]$?

Hydrogen peroxide is decomposed as follows:



(a) **Increase** the $[\text{H}_2]$

- Equilibrium shift?
- $[\text{H}_2\text{O}_2]$?
- $[\text{O}_2]$?

(b) **Decrease** the $[\text{O}_2]$

- Equilibrium shift?
- $[\text{H}_2\text{O}_2]$?
- $[\text{H}_2]$?

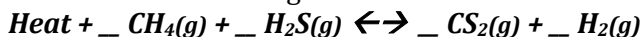
(c) **Decrease** the **total pressure**

- Equilibrium shift?
- $[\text{H}_2\text{O}_2]$?
- $[\text{H}_2]$?
- $[\text{O}_2]$?

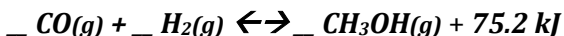
(d) **Increase** the **temperature**

- Equilibrium shift?
- $[\text{H}_2\text{O}_2]$?
- $[\text{H}_2]$?
- $[\text{O}_2]$?
-

Consider the following equilibrium and state which way (left or right) the equilibrium shift when each of the changes below are made.



- CH₄ gas is added
- CS₂ gas is removed
- H₂ gas is added
- The *temperature* is increased
- The *total pressure* is decreased



a) H₂ gas is removed from the system...

- Equilibrium shift?
- $[\text{CO}]$?
- $[\text{H}_2]$?
- $[\text{CH}_3\text{OH}]$?

b) temperature is decreased

- Equilibrium shift?
- $[\text{CO}]$?
- $[\text{H}_2]$?
- $[\text{CH}_3\text{OH}]$?

Write K_{eq} expressions for the following equations.

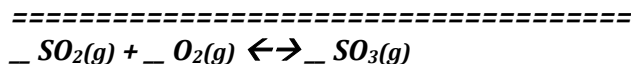
Then solve for the value of K_{eq} given the concentrations.



$K_{\text{eq}} =$

K_{eq} value =

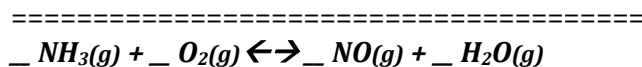
if $[\text{N}_2] = 1.25 \text{ M}$, $[\text{O}_2] = 2.75 \text{ M}$, and $[\text{NO}] = 0.50 \text{ M}$



$K_{\text{eq}} =$

K_{eq} value =

if $[\text{SO}_2] = 0.75 \text{ M}$, $[\text{O}_2] = 0.85 \text{ M}$, and $[\text{SO}_3] = 1.25 \text{ M}$



$K_{\text{eq}} =$

K_{eq} value =

if $[\text{NH}_3] = 3.95 \text{ M}$, $[\text{O}_2] = 0.975 \text{ M}$, $[\text{NO}] = 1.32 \text{ M}$, and $[\text{H}_2\text{O}] = 4.29 \text{ M}$

[Get the answers to this practice quiz](#)