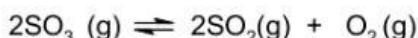


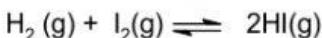
CHAPTER 6: CHEMICAL EQUILIBRIUM1. K_p for the reactionat 400°C is 1.64×10^{-4} . Calculate K_c .

- A. 0.30 C. 0.50
 B. 0.40 D. 0.60

2. One mole of SO_3 was placed in a one litre reaction flask at a given temperature.

When the reaction equilibrium was established in the reaction, the vessel was found to contain 0.6 mole of SO_2 . The value of equilibrium constant is

- A. 0.360 C. 0.450
 B. 0.675 D. 0.540

3. The value of K_c for the reaction;

is 50.2 at 450°C . If at the same temperature, $[H_2] = [I_2] = [HI] = 1.75 \times 10^{-3}$ M, which of the following statement is **TRUE**?

- A. The system is at equilibrium.
 B. HI concentration increases when the system re-establishes equilibrium.
 C. Concentration H_2 and I_2 increase as the system re-establishes equilibrium.
 D. Concentration HI and I_2 increase as the system re-establishes equilibrium.
 4. The equilibrium constant of $PCl_5(g)$ to form $PCl_3(g)$ and $Cl_2(g)$ is 0.04 mol dm^{-3} at 250°C . An equilibrium mixture contains 0.02 mol $PCl_3(g)$ and 0.12 mol $Cl_2(g)$ in a 4000 cm^3 container at 250°C . Calculate the mass of PCl_5 in this container.

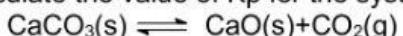
- A. 3.1275 g C. 0.0375 g

- B. 7.8200 g D. 0.5000 g

5. The value of K_c at 700°C for the equilibrium

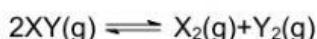
is 9.01. Calculate the value of K_p at the same temperature.

- A. 10.0 C. 1.09
 B. 0.19 D. 9.01

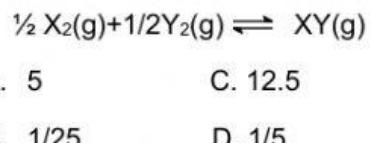
6. Calculate the value of K_p for the system

At 525°C , with the equilibrium pressure of CO_2 at 0.22 atm.

- A. 3.36 C. 0.08
 B. 0.22 D. 0.79

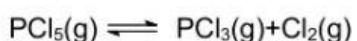
7. At a certain temperature, the equilibrium constant, K_c for the reaction

is 25. What is the equilibrium constant, K_c for the reaction below?



- A. 5 C. 12.5
 B. 1/25 D. 1/5

8. Consider the following reaction at 400K.



At equilibrium, the following concentration were obtained:

$[PCl_5] = 0.042 \text{ M}$, $[PCl_3] = 1.25 \text{ M}$, and $[Cl_2] = 0.4 \text{ M}$

What is the value of K_p for the reaction?

- A. 0.084 C. 11.90
 B. 0.363 D. 390.6