Reversible Reactions Worksheet

Objectives

- Predict changes in the equilibrium position due to changes in concentration, temperature, and pressure
- Write the equilibrium-constant expression for a reaction and calculate its value from experimental data

Key Terms

- reversible reactions
- chemical equilibrium
- equilibrium position
- Le Châtelier's principle
- equilibrium constant (K_{eq})

Key Equation

- $K_{eq} = \dfrac{[C]^c \times [D]^d}{[A]^a \times [B]^b}$

  When $aA + bB \rightleftharpoons cC + dD$

Part A Completion

Use this completion exercise to check your understanding of the concepts and terms that are introduced in this section. Each blank can be completed with a term, short phrase, or number.

In principle, all reactions are __1__. That is, reactants go to __2__ in the __3__ direction and products go to __4__ in the __5__ direction.

The point at which the rate of conversion of __6__ to __7__ and vice versa is equal is the position of __8__. The __9__ of a reversible reaction, K_{eq}, is useful for determining the position of equilibrium. It is essentially a measure of the __10__ of products to reactants at equilibrium. The direction of change in the position of equilibrium may be predicted by applying __11__ principle.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____