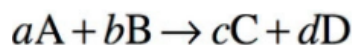# AP Chemistry Daily Videos
7.3 Reaction Quotient and Equilibrium Constant

1. Identify all the parts in the equation for Q. Describe how these items change for gases.

$$aA + bB \rightarrow cC + dD$$

$$Q_c = \frac{[C]^c [D]^d}{[A]^a [B]^b}$$

2. Why are only gases and aqueous included in the reaction quotient formula? Answer in terms of Molarity (mol/L).

Ⅱ 3:32

3. Try following the problem before the explanation and answer is given. If you got it wrong, what was your misunderstanding? Write Q for: $CaO(s) + CO_2(g) \longleftrightarrow CaCO_3(s)$

4. You learned that the concentrations of reactants and products do not change when a system reaches equilibrium. What equation is used to measure the concentrations <u>at equilibrium?</u>

Ⅱ 6:14

5. Try following the problem before the explanation and answer is given. If you got it wrong, what was your misunderstanding?

The graph below shows the relationship between concentration and time for a reversible reaction involving reactants A(g) and B(g) and product C(g).

a) Write a balanced chemical equation that could be represented by the graph.

b) From the balanced equation in (a), write the equilibrium constant expression, K_c, for the reaction at equilibrium. During what time range is this expression valid?

c) From the balanced equation in (a), write the equilibrium constant expression, Q_c, for the reaction at equilibrium. During what time range would it be most appropriate to use Q_c?