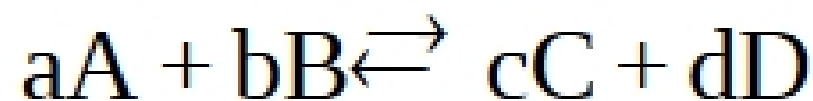


For PC this week (due Feb. 16) do the following  
EOCs: 2, 4, 8, 12, 14, 16, 20, 24, 26, 28, 32, 38, 44,  
48, 53, 62, 64

- The mass action expression or reaction quotient has the symbol  $Q$ . It is a measure of the progress of the reaction.
  - $Q$  has the same form as  $K_c$
- The major difference between  $Q$  and  $K_c$  is that the concentrations used in  $Q$  are not necessarily equilibrium values.

For this general reaction :



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

- Why do we need another “equilibrium constant” that does not use equilibrium concentrations?
- $Q$  will help us predict how the equilibrium will respond to an applied stress.
- To make this prediction we compare  $Q$  with  $K_c$ .
- $Q$  is a measure of the progress of the reaction.
- When  $Q = K_c$  then the reaction is at equilibrium