## Worksheet: Chemical Equilibrium

1. Draw a representation of the concentration of products and reactants reaching equilibrium.

2. Write the equilibrium expression for the following chemical equations:

a. 
$$N_2O_4(g) \to 2NO_2(g)$$

b. 
$$2C_2H_6(g) + 7O_2(g) \rightarrow 4CO_2(g) + 6H_2O(l)$$

c. CO (g) + 
$$2H_2$$
 (g)  $\rightarrow$  CH<sub>3</sub>OH (g)

d. 
$$2Al(s) + 3Cl_2(g) \rightarrow 2AlCl_3(s)$$

3. Consider the following reaction:  $2SO_2$  (g) +  $O_2$  (g)  $\rightarrow 2SO_3$  (g) Solve for Kc if  $[SO_2] = 0.0620$  M,  $[O_2] = 0.538$  M,  $[SO_3] = 0.938$  M