

Skill Practice 61

Intro Equilibrium Practice

Name: _____

Date: _____

Hour: _____

1. A certain reaction has an equilibrium constant of 12,470. At equilibrium, are there mostly products or are there mostly reactants present? Explain.
2. Indicate whether the statements are True or False. **CHANGE any false ones to make them true!**
 - _____ a) At equilibrium the amount of products must equal the amount of reactants.
 - _____ b) During equilibrium, the concentration of the products does not change.
 - _____ c) A collision between reactants is all that is needed to cause a reaction.
 - _____ d) At the beginning of a reaction the forward reaction is faster than the reverse reaction, but then the forward reaction slows down as the reverse reaction speeds up.
3. Write equilibrium constants for each of the following reactions.
 - a) $\text{CO}_2 + \text{Cl}_2 \rightarrow \text{CO}_2\text{Cl}_2$
 - b) $\text{N}_2 + 3\text{Ca} \rightarrow \text{Ca}_3\text{N}_2$
 - c) $3\text{O}_2 + 4\text{Al} \rightarrow 2\text{Al}_2\text{O}_3$
4. Given the following equilibrium constant expressions, write the reaction that goes with each:
 - a) $K = \frac{[\text{NH}_3]^2}{[\text{N}_2][\text{H}_2]^3}$
 - b) $K = \frac{[\text{CO}_2][\text{NO}]^2}{[\text{C}][\text{N}_2][\text{O}_2]^2}$

5. A certain reaction has an equilibrium constant of 0.00032. At equilibrium, are there mostly products or are there mostly reactants present? Explain.