

## Chapter 5 Review

Name \_\_\_\_\_

Answer the following questions on page 177

1. \_\_\_\_\_

6. \_\_\_\_\_

8. \_\_\_\_\_

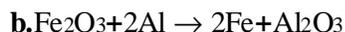
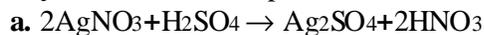
10. \_\_\_\_\_

2. \_\_\_\_\_

7. \_\_\_\_\_

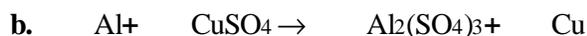
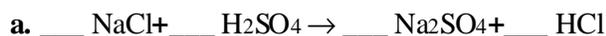
9. \_\_\_\_\_

**11. Identify** the reactants and products in each of the following chemical reactions.



**12. Contrast** endothermic and exothermic reactions.

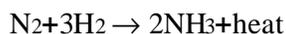
**13. Balance** the following equations:



**14. State** Le Chatelier's principle.

**15. Describe** two ways you could make table salt dissolve faster in water.

**16. Predict** the shift of equilibrium for each of the following conditions in the following reaction involving gaseous reactants and products:



- a.  $\text{NH}_3$  is added to the reaction.
- b.  $\text{NH}_3$  is removed from the reaction.
- c. The pressure is increased.
- d. The temperature is decreased.

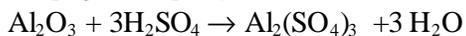
**Predict** how each of the following changes will affect the following reaction involving gaseous reactants and products:



- a. raising the temperature
- b. increasing the pressure
- c. removing  $\text{N}_2\text{O}_4$  from the equilibrium mixture
- d. adding  $\text{NO}_2$  to the equilibrium mixture

**17.** Foods kept in a refrigerator stay fresh longer than foods left out on the counter. Explain why this is true.

18. Aluminum sulfate,  $\text{Al}_2(\text{SO}_4)_3$ , is used to fireproof fabrics and to make antiperspirants. It can be formed from the reaction between  $\text{Al}_2\text{O}_3$  and  $\text{H}_2\text{SO}_4$



a. How many moles of  $\text{Al}_2(\text{SO}_4)_3$  would be produced if 6 mol of  $\text{H}_2\text{SO}_4$  reacted with  $\text{Al}_2\text{O}_3$ ?

b. How many mole of  $\text{Al}_2\text{O}_3$  are required to make 9 mol of  $\text{H}_2\text{O}$ ?

c. If 588 mol of  $\text{Al}_2\text{O}_3$  reacts with  $\text{H}_2\text{SO}_4$  how many moles of each product will be made?

19. **Concept Mapping** Complete the concept map below by writing the correct word or phrase in the lettered boxes.

