Name _____ Class _____ Date _____

Skills Worksheet

Concept Review

Section: Classifying Chemical Reactions

Answer the following items in the space provided.

1. Your reactants are two elements. Your product is a binary compound. What type of reaction do you have?

2. Your reactants are a hydrocarbon and oxygen. Your products are carbon dioxide and water. What type of reaction do you have?

3. You have one reactant and two elements for products. What type of reaction do you have?

4. Your reactants are an element and a compound that is not a hydrocarbon. What type of reaction do you probably have?

5. Your reactants are two compounds composed of ions. What type of reaction do you probably have?

Classify the reaction type for each of the following reactions. Briefly explain the reason for your selection.

6. $2C_6H_{14}(l) + 19O_2(g) \rightarrow 14H_2O(g) + 12CO_2(g)$

7. $4Fe(s) + 3O_2(g) \rightarrow 2Fe_2O_3(s)$

8. $2AlCl_3(s) \rightarrow 2Al(s) + 3Cl_2(g)$

Concept Review *continued*

9. Write a balanced chemical equation for the combustion of C_2H_2 gas. One of the products is carbon dioxide. Be sure to include states of matter.

Determine whether each of the following reactions can occur. If the reaction does occur, write the complete, balanced equation. If the reaction does not occur, explain why not.

10. $2Cr(s) + SnCl_4(aq) \rightarrow$

11. $2Ni(s) + MgSO_4(aq) \rightarrow$

12. $Zn(s) + CdCl_2(aq) \rightarrow$

13. $Ag(s) + ZnCO_3(aq) \rightarrow$

14. Write a balanced chemical equation for the reaction of hydrochloric acid and magnesium metal. One of the products is magnesium chloride, $MgCl_2$. Be sure to include states of matter. What kind of reaction is this?