

**REINFORCEMENT****Chapter 21****Types of Chemical Reactions**

Match each type of chemical reaction in Column II with its description in Column I. Write the letter of the correct reaction in the space provided.

**Column I**

- \_\_\_\_\_ 1. A precipitate, water, or a gas forms when two ionic compounds are dissolved in a solution.
- \_\_\_\_\_ 2. Two or more substances combine to form another substance
- \_\_\_\_\_ 3. One element replaces another in a compound
- \_\_\_\_\_ 4. A substance breaks down into two or more simpler substances.

**Column II**

- a. synthesis reaction
- b. decomposition reaction
- c. single displacement reaction
- d. double displacement reaction

Classify each of the following chemical reactions as a synthesis reaction, decomposition reaction, single displacement reaction, or double displacement reaction. Write the name of the reaction type on the line on the right.

5.  $4\text{Fe}(\text{cr}) + 3\text{O}_2(\text{g}) \longrightarrow 2\text{Fe}_2\text{O}_3(\text{cr})$  \_\_\_\_\_
6.  $\text{Zn}(\text{cr}) + 2\text{HCl}(\text{aq}) \longrightarrow \text{ZnCl}_2(\text{aq}) + \text{H}_2(\text{g})$  \_\_\_\_\_
7.  $\text{MgCO}_3(\text{aq}) + 2\text{HCl}(\text{aq}) \longrightarrow \text{MgCl}_2(\text{aq}) + \text{H}_2\text{O}(\text{l}) + \text{CO}_2(\text{g})$  \_\_\_\_\_
8.  $\text{NiCl}_2(\text{cr}) \longrightarrow \text{Ni}(\text{cr}) + \text{Cl}_2(\text{g})$  \_\_\_\_\_
9.  $4\text{C}(\text{cr}) + 6\text{H}_2(\text{g}) + \text{O}_2(\text{g}) \longrightarrow 2\text{C}_2\text{H}_6(\text{cr})$  \_\_\_\_\_
10.  $\text{C}_{12}\text{H}_{22}\text{O}_{11}(\text{cr}) \longrightarrow 12\text{C}(\text{cr}) + 11\text{H}_2\text{O}(\text{g})$  \_\_\_\_\_
11.  $2\text{LiI}(\text{aq}) + \text{Pb}(\text{NO}_3)_2(\text{aq}) \longrightarrow 2\text{LiNO}_3(\text{aq}) + \text{PbI}_2(\text{cr})$  \_\_\_\_\_
12.  $\text{CdCO}_3(\text{cr}) \longrightarrow \text{CdO}(\text{cr}) + \text{CO}_2(\text{g})$  \_\_\_\_\_
13.  $\text{Cl}_2(\text{g}) + 2\text{KBr}(\text{aq}) \longrightarrow 2\text{KCl}(\text{aq}) + \text{Br}_2(\text{g})$  \_\_\_\_\_
14.  $\text{BaCl}_2(\text{aq}) + 2\text{KIO}_3(\text{aq}) \longrightarrow \text{Ba}(\text{IO}_3)_2(\text{cr}) + 2\text{KCl}(\text{aq})$  \_\_\_\_\_