

PS Chemistry: **Chapter 21 Review Questions**

Test Date: \_\_\_\_\_

- In the chemical equation  $\text{Mg} + \text{Br}_2 \rightarrow \text{MgBr}_2$ , the substances Mg and  $\text{Br}_2$  on the left side of the arrow are referred to as the \_\_\_\_\_.
  - The 2 in the above chemical equation is referred to as a(n) \_\_\_\_\_.
  - What type of chemical reaction is shown by the equation above? \_\_\_\_\_
- In the chemical equation  $2\text{AlCl}_3 \rightarrow 2\text{Al} + 3\text{Cl}_2$ , the substances 2Al and  $\text{Cl}_2$ , on the right side of the arrow are referred to as the \_\_\_\_\_.
  - The 3 in front of the  $\text{Cl}_2$  in the above chemical equation is referred to as a(n) \_\_\_\_\_.
  - What type of chemical reaction is shown by the equation above? \_\_\_\_\_
- In the equation  $2\text{H}_2(g) + \text{O}_2(g) \rightarrow 2\text{H}_2\text{O}(l)$ , what is produced and how many molecules of that substance are produced? \_\_\_\_\_
  - In the above chemical equation, what does the *(g)* represent? \_\_\_\_\_
  - In the above chemical equation, what does the *(l)* represent? \_\_\_\_\_
- If heat must be added to a chemical reaction for the reaction to take place, the reaction is \_\_\_\_\_.
- When one element replaces another element in a compound, the reaction is a \_\_\_\_\_ reaction.
- A substance that speeds up a chemical reaction is a(n) \_\_\_\_\_.
- The breaking down of a substance into 2 or more simpler substances is \_\_\_\_\_.
- Substances that prevent, or slow down, chemical reactions are called \_\_\_\_\_.

9. A chemical reaction in which heat energy is released is \_\_\_\_\_.

10. What does the arrow  $\rightarrow$  in a chemical equation represent? \_\_\_\_\_

11. Changes that take place during a chemical reaction are shown in a \_\_\_\_\_.

12. Balance the equation  $\text{NaNO}_3 + \text{MgCl}_2 \rightarrow \text{NaCl} + \text{Mg}(\text{NO}_3)_2$ .

a) What type of reaction is this?

b) What is/are the products?

c) What is/are the reactants?

13. Balance the equation  $\text{P}_4 + \text{Cl}_2 \rightarrow \text{PCl}_3$ .

a) What type of reaction is this?

b) What is/are the products?

c) What is/are the reactants?

14. According to the law of conservation of mass, how does the mass of the products in a chemical reaction compare to the mass of the reactants?

15. According to the law of conservation of mass, if six atoms of oxygen are used as a reactant, how many atoms of oxygen must be part of the product?

16. When they come in contact, zinc and hydrochloric acid react to produce hydrogen gas and zinc chloride. If the combined mass of the reactants, zinc and hydrochloric acid is 10 grams, what would be the combined mass of the products, hydrogen gas and zinc chloride?

17. Each of the diagrams at the right represents a different type of reaction. (Match)

\_\_\_\_ Synthesis

\_\_\_\_ Decomposition

\_\_\_\_ Single Replacement

\_\_\_\_ Double Replacement

