

Exercise 8.2a

Types of Chemical Reactions

Name: _____

Date: _____ Per: _____

DIRECTIONS: Balance the following equations. Write the sum of the coefficients and type of reaction to the right.

	Sum of Coefficients	Type of Reaction
1. $\underline{\hspace{1cm}} \text{Ag} + \underline{\hspace{1cm}} \text{H}_2\text{S} + \underline{\hspace{1cm}} \text{O}_2 \rightarrow \underline{\hspace{1cm}} \text{Ag}_2\text{S} + \underline{\hspace{1cm}} \text{H}_2\text{O}$	_____	<u>single replacement & synthesis</u>
2. $\underline{\hspace{1cm}} \text{HBr} + \underline{\hspace{1cm}} \text{Mg} \rightarrow \underline{\hspace{1cm}} \text{H}_2 + \underline{\hspace{1cm}} \text{MgBr}_2$	_____	_____
3. $\underline{\hspace{1cm}} \text{C}_6\text{H}_{10}\text{O}_5 + \underline{\hspace{1cm}} \text{O}_2 \rightarrow \underline{\hspace{1cm}} \text{CO}_2 + \underline{\hspace{1cm}} \text{H}_2\text{O}$	_____	_____
4. $\underline{\hspace{1cm}} \text{C}_3\text{H}_5(\text{NO}_3)_3 \rightarrow \underline{\hspace{1cm}} \text{N}_2 + \underline{\hspace{1cm}} \text{O}_2 + \underline{\hspace{1cm}} \text{CO}_2 + \underline{\hspace{1cm}} \text{H}_2\text{O}$	_____	_____
5. $\underline{\hspace{1cm}} \text{ZnBr}_2 + \underline{\hspace{1cm}} \text{AgNO}_3 \rightarrow \underline{\hspace{1cm}} \text{Zn}(\text{NO}_3)_2 + \underline{\hspace{1cm}} \text{AgBr}$	_____	_____
6. $\underline{\hspace{1cm}} \text{H}_2\text{CO}_3 \rightarrow \underline{\hspace{1cm}} \text{H}_2\text{O} + \underline{\hspace{1cm}} \text{CO}_2$	_____	_____
7. $\underline{\hspace{1cm}} \text{NH}_3 + \underline{\hspace{1cm}} \text{HCl} \rightarrow \underline{\hspace{1cm}} \text{NH}_4\text{Cl}$	_____	_____
8. $\underline{\hspace{1cm}} \text{H}_2 + \underline{\hspace{1cm}} \text{O}_2 \rightarrow \underline{\hspace{1cm}} \text{H}_2\text{O}$	_____	_____

DIRECTIONS: Write the formulas for each, balance the equation and indicate the type of reaction.

9. methane + oxygen \rightarrow carbon dioxide + water
 _____ + _____ \rightarrow _____ + _____ Type: _____
10. phosphorus pentachloride \rightarrow phosphorus trichloride + chlorine
 _____ \rightarrow _____ + _____ Type: _____
11. cadmium oxide + carbon dioxide \rightarrow cadmium carbonate
 _____ + _____ \rightarrow _____ Type: _____
12. lead (II) chloride + lithium sulfate \rightarrow lead (II) sulfate + lithium chloride
 _____ + _____ \rightarrow _____ + _____ Type: _____
13. aluminum + iron (III) oxide \rightarrow iron + aluminum oxide
 _____ + _____ \rightarrow _____ + _____ Type: _____

DIRECTIONS: Predict the products of each reaction and balance the equation.

14. Double replacement: $\underline{\hspace{1cm}} \text{BaCl}_2 + \underline{\hspace{1cm}} \text{KIO}_3 \rightarrow$ _____ + _____
15. Decomposition: $\underline{\hspace{1cm}} \text{Pb}(\text{OH})_2 \rightarrow$ _____ + _____
16. Synthesis: $\underline{\hspace{1cm}} \text{CaO} + \underline{\hspace{1cm}} \text{SiO}_2 \rightarrow$ _____
17. Single Replacement: $\underline{\hspace{1cm}} \text{Cl}_2 + \underline{\hspace{1cm}} \text{KBr} \rightarrow$ _____ + _____
18. Combustion: $\underline{\hspace{1cm}} \text{C}_3\text{H}_8 + \underline{\hspace{1cm}} \text{O}_2 \rightarrow$ _____ + _____

DIRECTIONS: Write the formulas for each of the following, complete and balance the equation, and indicate the type of reaction for the following.

19. zinc + silver sulfate \rightarrow
20. potassium chloride + aluminum oxide \rightarrow