Chemistry Worksheet
Reaction Types #2

Name: KEY
Block:

For each reaction:
a) Classify as synthesis (S), decomposition (D), combustion (C), single replacement (SR), precipitation (P) or acid-base (AB)
b) Write a balanced equation below the word equation. You may omit phases.

	Type of Reaction	Balanced Equation
1.	S	lithium + oxygen → lithium oxide $4Li + O_2 \rightarrow 2Li_2O$
2.	S	iron + sulfur → iron (III) sulfide $Fe + S \rightarrow Fe_2S_3$
3.	P	barium chloride + sodium sulfide → sodium chloride + barium sulfide $BaCl_2 + Na_2S \rightarrow 2NaCl + BaS$
4.	D	calcium carbonate → calcium oxide + carbon dioxide $CaCO_3 \rightarrow CaO + CO_2$
5.	SR	aluminum bromide + fluorine → aluminum + bromine $2AlBr_3 + 3F_2 \rightarrow 2AlF_3 + 3Br_2$
6.	SR	zinc + hydrobromic acid → zinc bromide + hydrogen $Zn + 2HBr \rightarrow ZnBr_2 + H_2$
7.	P	silver nitrate + iron (III) sulfate → silver sulfate + iron (III) nitrate $2AgNO_3 + Fe_2(SO_4)_3 \rightarrow 3Ag_2SO_4 + 2Fe(NO_3)_3$
8.	C	methane + oxygen → carbon dioxide + water $CH_4 + 2O_2 \rightarrow CO_2 + 2H_2O$
9.	AB	hydrobromic acid + sodium hydroxide → water + sodium bromide $HBr + NaOH \rightarrow NaBr + H_2O$
10.	C	ethanol + oxygen → carbon dioxide + water $C_2H_5OH + 3O_2 \rightarrow 2CO_2 + 3H_2O$

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Reaction Types #2

Name:_____

Block:_____

For each reaction :

a) Classify as synthesis (S), decomposition (D), combustion (C), single replacement (SR), precipitation (P) or acid-base (AB)

b) Complete the word equation.

c) Write a balanced equation below the word equation. You may omit phases.

11. D

silver oxide → silver + oxygen

$2Ag_2O \rightarrow 4Ag + O_2$

12. S

potassium + sulfur → potassium sulfide

$2K + S \rightarrow K_2S$

13. AB

acetic acid + potassium hydroxide → potassium acetate + water

$CH_3COOH + KOH \rightarrow CH_3COOK + H_2O$

or

$HC_2H_3O_2 + KOH \rightarrow KC_2H_3O_2 + H_2O$

14. P

aluminum sulfate + barium nitrate → aluminum nitrate + barium sulfate

$Al_2(SO_4)_3 + 3Ba(NO_3)_2 \rightarrow 3BaSO_4 + 2Al(NO_3)_3$

15. SR

magnesium + hydrochloric acid → magnesium chloride + hydrogen gas

$Mg + 2HCl \rightarrow MgCl_2 + H_2$

16. C

butane + oxygen → carbon dioxide + water

$2C_4H_{10} + 13O_2 \rightarrow 8CO_2 + 10H_2O$