

Name: \_\_\_\_\_

## Types of Chemical Reactions Worksheet

### Types of Reactions

There are 5 major types of reactions simplified by the following equations:

- Synthesis/Combination  $A + B \rightarrow AB$
- Decomposition  $AB \rightarrow A + B$
- Combustion  $? + O_2 \rightarrow ?$
- Single Replacement  $X + AB \rightarrow XB + A$  *or*  $Y + AB \rightarrow AY + B$
- Double Replacement  $XY + AB \rightarrow XB + AY$

*Classify each of the following reactions:*

- $Zn + Cl_2 \rightarrow ZnCl_2$  \_\_\_\_\_
- $2 H_2S + 3 O_2 \rightarrow 2 SO_2 + 2 H_2O$  \_\_\_\_\_
- $Cu + 2 AgNO_3 \rightarrow Cu(NO_3)_2 + 2 Ag$  \_\_\_\_\_
- $Mg(OH)_2 \rightarrow MgO + H_2O$  \_\_\_\_\_
- $CaCl_2 + Na_2SO_4 \rightarrow CaSO_4 + 2 NaCl$  \_\_\_\_\_
- $CaO + H_2O \rightarrow Ca(OH)_2$  \_\_\_\_\_
- $Pb + 4 HCl \rightarrow PbCl_4 + 2 H_2$  \_\_\_\_\_
- $Li_2O + CO_2 \rightarrow LiCO_3$  \_\_\_\_\_
- $SO_2 + H_2O \rightarrow H_2SO_3$  \_\_\_\_\_
- $MgCO_3 \rightarrow MgO + CO_2$  \_\_\_\_\_

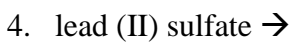
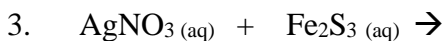
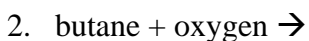
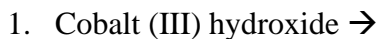
*Classify each of the following reactions when only the reactants are given:*

- $Mg + N_2 \rightarrow$  \_\_\_\_\_
- $C_2H_6 + O_2 \rightarrow$  \_\_\_\_\_
- $Zn + CuCl_2 \rightarrow$  \_\_\_\_\_
- $Ca + H_2O \rightarrow$  \_\_\_\_\_
- $AgNO_3 + NaI \rightarrow$  \_\_\_\_\_
- $Fe(NO_3)_3 + LiOH \rightarrow$  \_\_\_\_\_
- $MgCO_3 \rightarrow$  \_\_\_\_\_
- $SO_2 + H_2O \rightarrow$  \_\_\_\_\_
- $HI \rightarrow$  \_\_\_\_\_
- $H_2SO_4 + LiOH \rightarrow$  \_\_\_\_\_

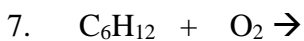
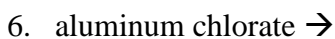
## Finishing Reactions

TYPE

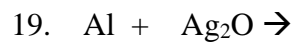
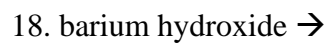
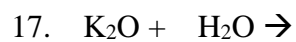
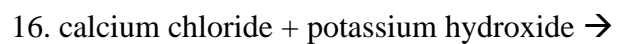
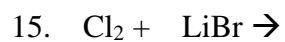
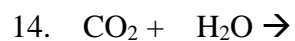
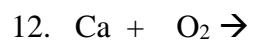
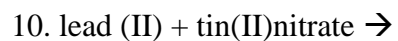
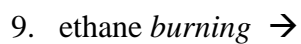
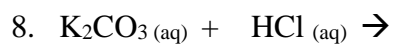
Complete the following by identifying the type of reaction AND properly writing balanced reactions with correct formulas: (HINT: double check to make sure the single and double replacements will work!)



(use iron (III) in your criss-cross )



TYPE



TYPE

