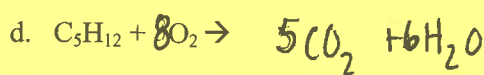
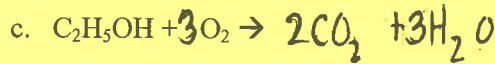
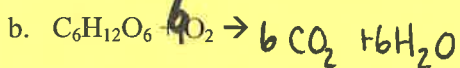
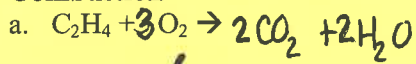


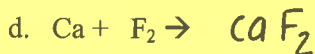
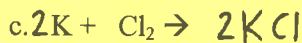
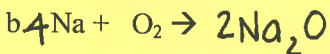
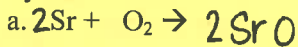
Key

Predict the products and write the balanced equation for each of these reactions:

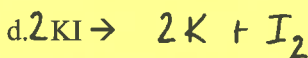
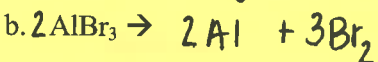
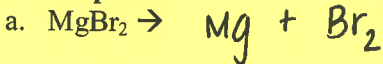
Combustion



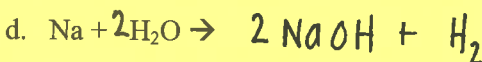
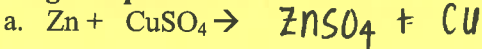
Synthesis



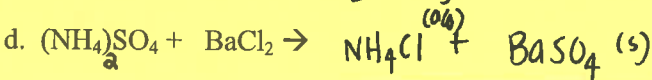
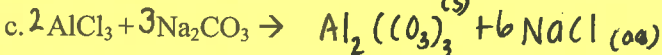
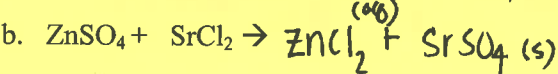
Decomposition



Single Replacement



Double Replacement



Key

Chemical Reactions – Equation Worksheet

Balance the following equations, then state what type of reaction it is.

- S 1. $4\text{Fe} + 3\text{O}_2 \rightarrow 2\text{Fe}_2\text{O}_3$ SR 2. $2\text{Fe} + 6\text{H}_2\text{O} \rightarrow 2\text{Fe}(\text{OH})_3 + 3\text{H}_2$
- D 3. $2\text{KClO}_3 \rightarrow 2\text{KCl} + 3\text{O}_2$ BR 4. $\text{Cl}_2 + 2\text{LiI} \rightarrow 2\text{LiCl} + \text{I}_2$
- D 5. $2\text{PbO}_2 \rightarrow 2\text{PbO} + \text{O}_2$ SR 6. $\text{Cu} + 2\text{AgNO}_3 \rightarrow \text{Cu}(\text{NO}_3)_2 + 2\text{Ag}$
- DR 7. $3\text{KOH} + \text{H}_3\text{PO}_4 \rightarrow \text{K}_3\text{PO}_4 + 3\text{H}_2\text{O}$
- DR 8. $2\text{Al}(\text{NO}_3)_3 + 3\text{H}_2\text{SO}_4 \rightarrow \text{Al}_2(\text{SO}_4)_3 + 6\text{HNO}_3$
- SR 9. $2\text{Al} + 3\text{Pb}(\text{NO}_3)_2 \rightarrow 2\text{Al}(\text{NO}_3)_3 + 3\text{Pb}$
- Mix 10. $\text{Na}_2\text{SO}_3 + 2\text{HCl} \rightarrow 2\text{NaCl} + \text{H}_2\text{O} + \text{SO}_2$

In the following equations, the reactants are written correctly. Identify the type of chemical reaction it is, then complete the equation by writing the correct products and balance it.

- | | Type of Reaction |
|--|---------------------------|
| 1. $2\text{HgO} \rightarrow 2\text{Hg} + \text{O}_2$ | <u>Decomposition</u> |
| 2. $2\text{Mg} + \text{O}_2 \rightarrow 2\text{MgO}$ | <u>Synthesis</u> |
| 3. $2\text{K} + 2\text{H}_2\text{O} \rightarrow 2\text{KOH} + \text{H}_2$ | <u>Single Replacement</u> |
| 4. $\text{CaO} + 2\text{HCl} \rightarrow \text{CaCl}_2 + \text{H}_2\text{O}$ | <u>Double Replacement</u> |
| 5. $2\text{NaClO}_3 \rightarrow 2\text{NaCl} + 3\text{O}_2$ | <u>Decomposition</u> |
| 6. $3\text{Zn} + 2\text{H}_3\text{PO}_4 \rightarrow \text{Zn}_3(\text{PO}_4)_2 + 3\text{H}_2$ | <u>Single Replacement</u> |
| 7. $\text{Si} + 2\text{Cl}_2 \rightarrow \text{SiCl}_4$ | <u>Synthesis</u> |
| 8. $\text{Al}(\text{NO}_3)_3 + 3\text{NH}_4\text{OH} \rightarrow \text{Al}(\text{OH})_3 + 3\text{NH}_4\text{NO}_3$ | <u>Double Replacement</u> |
| 9. $2\text{AgNO}_3 + \text{CaSO}_4 \rightarrow \text{Ag}_2\text{SO}_4 + \text{Ca}(\text{NO}_3)_2(\text{aq})$ | <u>Double Replacement</u> |
| 10. $\text{Cl}_2 + \text{AlF}_3 \rightarrow \text{NR}$ | <u>No Reaction</u> |

F_2
 Cl_2
 Br_2
→ can't replace F_3