

ANSWER KEY

Recipes for Chemical Change

Quiz on Reaction Types and on Predicting Products

For the following, indicate the type of reaction occurring (Synthesis, Decomposition, Single Replacement, Double Displacement, or Combustion). Predict what the products will be. Then complete and balance the equations.

TYPE	WRITE PRODUCTS & BALANCE EQUATION
1. <u>Decomposition</u>	$2\text{NI}_3 (\text{g}) \rightarrow \text{N}_2 (\text{g}) + 3 \text{I}_2$
2. <u>Double Displacement</u> $\text{MgCO}_3 (\text{s}) + 2 \text{NaBr} (\text{aq})$	$\text{Na}_2\text{CO}_3 (\text{aq}) + \text{MgBr}_2 (\text{aq}) \rightarrow$
3. <u>Synthesis</u>	$4\text{Al}(\text{s}) + 3 \text{Cl}_2 (\text{g}) \rightarrow$ $2 \text{Al}_2\text{Cl}_3 (\text{s})$
4. <u>Synthesis</u>	$3 \text{Ba} (\text{s}) + \text{N}_2(\text{g}) \rightarrow$ $\text{Ba}_3\text{N}_2 (\text{s})$
5. <u>Combustion</u> $22 \text{CO}_2 (\text{g}) + 18 \text{H}_2\text{O} (\text{g})$	$2\text{C}_{11}\text{H}_{18}(\text{l}) + 31 \text{O}_2(\text{g}) \rightarrow$
6. <u>Synthesis</u> $\rightarrow 2 \text{NaOH} (\text{aq})$	$\text{Na}_2\text{O}(\text{s}) + \text{H}_2\text{O} (\text{l})$