

CONCEPT: TYPES OF CHEMICAL REACTIONS

- Chemical Reactions: Processes where _____ are broken down and reassembled into new _____.
- Types of chemical reactions are based on the changes reactants undergo and the types of products formed.
- Redox Reactions: Any chemical reactions that involve the transference of _____ between reactants.

Types of Chemical Reactions		
Combination Multiple reactants combine to form _____ product(s). $\text{Na (s)} + \text{ClO (aq)} \longrightarrow \text{_____}$	Decomposition One reactant splits into _____ product(s). $\text{H}_2\text{O (l)} \longrightarrow \text{_____} + \text{_____}$	Combustion (C & H) or (C, H & O) compound + O_2 produces _____ and _____. $\text{CH}_4 + \text{O}_2 \text{ (g)} \longrightarrow \text{_____} + \text{_____}$ $\text{CH}_3\text{OH} + \text{O}_2 \text{ (g)} \longrightarrow \text{_____} + \text{_____}$
Single Displacement A _____ element replaces another element within a nearby compound. $\text{Zn (s)} + \text{CuSO}_3 \text{ (aq)} \longrightarrow \text{_____} + \text{_____}$	Double Displacement Ions from two reacting compounds _____ places with each other. $\text{Ba(NO}_3)_2 \text{ (aq)} + \text{Na}_2\text{SO}_4 \text{ (aq)} \longrightarrow \text{_____} + \text{_____}$	

EXAMPLE: Balance the following equation and indicate the type of chemical reaction it represents.



a) Combination

b) Decomposition

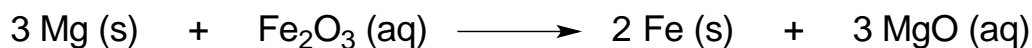
c) Combustion

d) Combination

PRACTICE: Ibuprofen is used as an anti-inflammatory agent used to deal with pain and bring down fevers. If it has a molecular formula of $\text{C}_{13}\text{H}_{18}\text{O}_2$, determine the balanced combustion reaction when it is subjected to high temperatures.

CONCEPT: TYPES OF CHEMICAL REACTIONS

PRACTICE: Indicate the type of chemical reaction taking place from the following equation:



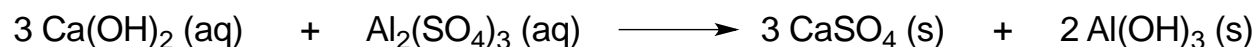
a) Combination

b) Combustion

c) Single Displacement

d) Decomposition

PRACTICE: Indicate the type of chemical reaction taking place from the following equation:



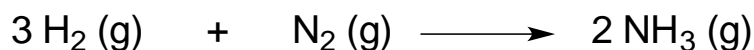
a) Decomposition

b) Double Displacement

c) Combination

d) Combustion

PRACTICE: Indicate the type of chemical reaction taking place from the following equation:



a) Single Displacement

b) Combustion

c) Redox Reaction

d) Decomposition