

TYPES OF CHEMICAL REACTIONS

Match the following reactions to the examples on the next page:

1. **Synthesis Reaction**

- 2 or more simple substances combine to form a more complex substance.

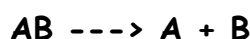
- These reactions come in the general form of:



2. **Decomposition Reaction**

- A more complex substance breaks down into its more simple parts. One reactant yields 2 or more products.

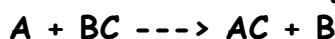
- These reactions come in the general form:



3. **Single Replacement Reaction**

- A single uncombined element replaces another in a compound. Two reactants yield two products.

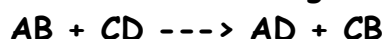
- These reactions come in the general form of:



4. **Double Replacement Reaction**

- Parts of two compounds switch places to form two new compounds. Two reactants yield two products.

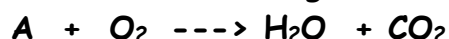
- These reactions are in the general form:



5. **Combustion**

- Oxygen combines with another compound to form water and carbon dioxide.

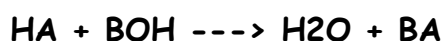
- These reactions are in the general form:



6. **Acid - Base**

- Acid and base react with each other. The H⁺ ion in the acid reacts with the OH⁻ ion in the base, causing the formation of water.

- The product of this reaction is salt and water:



Examples of different types of reactions.

Write the number 1-6 which matches to the proper reaction type:

_____ Silver nitrate combines with sodium chloride to form silver chloride and sodium nitrate



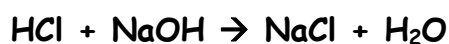
reactant + reactant \rightarrow product + product

_____ Zinc combines with hydrochloric acid, the zinc replaces hydrogen.



reactant + reactant \rightarrow product + product

_____ Reaction of hydrochloric acid and sodium hydroxide to form sodium chloride and water



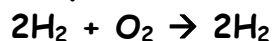
reactant + reactant \rightarrow product + product

_____ Water can be broken down into hydrogen gas and oxygen gas.



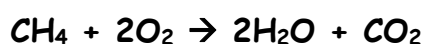
reactant \rightarrow product + product

_____ Hydrogen gas combined with oxygen gas can produce a more complex substance \rightarrow water!



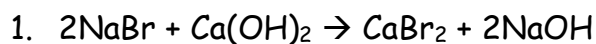
reactant + reactant \rightarrow product

_____ Methane combines with oxygen to form water and carbon dioxide



reactant + reactant \rightarrow product + product

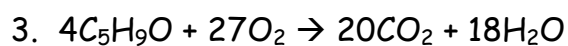
Indicate which type of reaction is represented by the following equations:



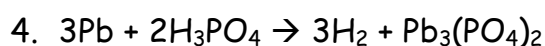
Type of reaction: _____



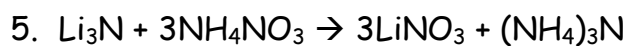
Type of reaction: _____



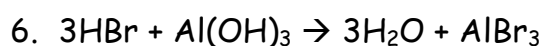
Type of reaction: _____



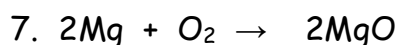
Type of reaction: _____



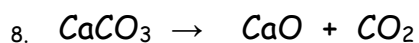
Type of reaction: _____



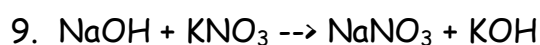
Type of reaction: _____



Type of reaction: _____



Type of reaction: _____



Type of reaction: _____

10. What is the main difference between a double replacement reaction and an acid - base reaction?