

Chem11 Balancing Word Eq. 2 : W.S. - 120

Rewrite the word equations using the chemical formulae and balance.
State the type of reaction.

1) silver nitrate + hydrogen sulfide \rightarrow silver sulfide + nitric acid

2) aluminum hydroxide + sulfuric acid \rightarrow aluminum sulfate + water

3) butane (C_4H_{10}) + oxygen \rightarrow carbon dioxide + water

4) aluminum + oxygen \rightarrow aluminum oxide

5) potassium chlorate \rightarrow potassium chloride + oxygen

6) aluminum + bromine \rightarrow aluminum bromide

7) calcium + water \rightarrow hydrogen + calcium hydroxide

8) zinc + hydrochloric acid \rightarrow hydrogen + zinc chloride

9) calcium carbonate \rightarrow calcium oxide + carbon dioxide

10) sulfur trioxide + water \rightarrow sulfuric acid

Answers : 1) $2\text{AgNO}_3 + \text{H}_2\text{S} \rightarrow \text{Ag}_2\text{S} + 2\text{HNO}_3$, (double replacement), 2) $2\text{Al}(\text{OH})_3 + 3\text{H}_2\text{SO}_4 \rightarrow \text{Al}_2(\text{SO}_4)_3 + 6\text{H}_2\text{O}$, (water forming), 3) $2\text{C}_4\text{H}_{10} + 13\text{O}_2 \rightarrow 8\text{CO}_2 + 10\text{H}_2\text{O}$, (combustion), 4) $4\text{Al} + 3\text{O}_2 \rightarrow 2\text{Al}_2\text{O}_3$, (synthesis), 5) $2\text{KClO}_3 \rightarrow 2\text{KCl} + 3\text{O}_2$, (decomposition), 6) $2\text{Al} + 3\text{Br}_2 \rightarrow 2\text{AlBr}_3$, (synthesis), 7) $\text{Ca} + 2\text{H}_2\text{O} \rightarrow \text{H}_2 + \text{Ca}(\text{OH})_2$, (single replacement), 8) $\text{Zn} + 2\text{HCl} \rightarrow \text{H}_2 + \text{ZnCl}_2$, (single replacement), 9) $\text{CaCO}_3 \rightarrow \text{CaO} + \text{CO}_2$, (decomposition), 10) $\text{SO}_3 + \text{H}_2\text{O} \rightarrow \text{H}_2\text{SO}_4$, (synthesis).