

Classify the following reactions as synthesis, decomposition, single replacement or double replacement.

1. $\text{KClO}_3 \rightarrow \text{KCl} + \text{O}_2$	synthesis decomposition	single replacement double replacement
2. $\text{HCl} + \text{NaOH} \rightarrow \text{NaCl} + \text{H}_2\text{O}$	synthesis decomposition	single replacement double replacement
3. $\text{Mg} + 2\text{HCl} \rightarrow \text{MgCl}_2 + \text{H}_2$	synthesis decomposition	single replacement double replacement
4. $\text{H}_2 + \text{O}_2 \rightarrow \text{H}_2\text{O}$	synthesis decomposition	single replacement double replacement
5. $\text{Al} + \text{NiBr}_2 \rightarrow \text{AlBr}_3 + 3\text{Ni}$	synthesis decomposition	single replacement double replacement
6. $\text{Al} + 3\text{O}_2 \rightarrow \text{Al}_2\text{O}_3$	synthesis decomposition	single replacement double replacement
7. $\text{NaCl} \rightarrow \text{Na} + \text{Cl}_2$	synthesis decomposition	single replacement double replacement
8. $\text{CaCl}_2 + \text{F}_2 \rightarrow \text{CaF}_2 + \text{Cl}_2$	synthesis decomposition	single replacement double replacement
9. $\text{AgNO}_3 + \text{KCl} \rightarrow \text{AgCl} + \text{KNO}_3$	synthesis decomposition	single replacement double replacement
10. $\text{N}_2 + \text{H}_2 \rightarrow \text{NH}_3$	synthesis decomposition	single replacement double replacement
11. $\text{H}_2\text{O}_2 \rightarrow \text{H}_2\text{O} + \text{O}_2$	synthesis decomposition	single replacement double replacement
12. $(\text{NH}_4)_2\text{SO}_4 + \text{Ba}(\text{NO}_3)_2 \rightarrow \text{BaSO}_4 + \text{NH}_4\text{NO}_3$	synthesis decomposition	single replacement double replacement
13. $\text{MgI}_2 + \text{Br}_2 \rightarrow \text{MgBr}_2 + \text{I}_2$	synthesis decomposition	single replacement double replacement
14. $\text{SO}_3 + \text{H}_2\text{O} \rightarrow \text{H}_2\text{SO}_4$	synthesis decomposition	single replacement double replacement
15. $\text{KCl} + \text{Zn}_3(\text{PO}_4)_2 \rightarrow \text{ZnCl}_2 + \text{K}_3\text{PO}_4$	synthesis decomposition	single replacement double replacement