

What Type of Reaction is it?

Instructions: Balance the following equations and indicate the type of reaction.

1. $\text{Li}_2\text{O} + \text{H}_2\text{O} \rightarrow 2\text{LiOH}$ (**synthesis**)
2. $\text{CaC}_2 + 2\text{H}_2\text{O} \rightarrow \text{C}_2\text{H}_2 + \text{Ca(OH)}_2$ (**double displacement**)
3. $2\text{Fe(OH)}_3 \rightarrow \text{Fe}_2\text{O}_3 + 3\text{H}_2\text{O}$ (**decomposition**)
4. $\text{BaO} + \text{H}_2\text{O} \rightarrow \text{Ba(OH)}_2$ (**synthesis**)
5. $3\text{Ca} + 2\text{AlCl}_3 \rightarrow 3\text{CaCl}_2 + 2\text{Al}$ (**single displacement**)
6. $\text{Fe}_2\text{O}_3 + 3\text{C} \rightarrow 3\text{CO} + 2\text{Fe}$ (**single displacement**)
7. $4\text{Si} + \text{S}_8 \rightarrow 2\text{Si}_2\text{S}_4$ (**synthesis**)
8. $\text{SiC} + 2\text{Cl}_2 \rightarrow \text{SiCl}_4 + \text{C}$ (**single displacement**)
7. $\text{Au}_2\text{S}_3 + 3\text{H}_2 \rightarrow 2\text{Au} + 3\text{H}_2\text{S}$ (**single displacement**)
8. $\text{SrBr}_2 + (\text{NH}_4)_2\text{CO}_3 \rightarrow \text{SrCO}_3 + 2\text{NH}_4\text{Br}$ (**double displacement**)
9. $\text{C}_4\text{H}_{10} + \text{O}_2 \rightarrow 4\text{CO}_2 + \text{H}_2\text{O}$ (**combustion**)
10. $\text{Ca(ClO}_3)_2 \rightarrow \text{CaCl}_2 + 3\text{O}_2$ (**decomposition**)
11. $\text{C}_2\text{H}_5\text{OH} + 3\text{O}_2 \rightarrow 2\text{CO}_2 + 3\text{H}_2\text{O}$ (**combustion**)
12. $\text{Xe} + 3\text{F}_2 \rightarrow \text{XeF}_6$ (**synthesis**)
13. $\text{NH}_4\text{NO}_3 \rightarrow \text{N}_2\text{O} + 2\text{H}_2\text{O}$ (**decomposition**)
14. $2\text{Au}_2\text{O}_3 \rightarrow 2\text{Au} + 3\text{O}_2$ (**decomposition**)
15. $\text{Fe}_3\text{O}_4 + 4\text{H}_2 \rightarrow 3\text{Fe} + 4\text{H}_2\text{O}$ (**single displacement**)
16. $2\text{C}_6\text{H}_6 + 15\text{O}_2 \rightarrow 12\text{CO}_2 + 6\text{H}_2\text{O}$ (**combustion**)
17. $\text{C}_2\text{H}_5\text{OH} + 3\text{O}_2 \rightarrow 2\text{CO}_2 + 3\text{H}_2\text{O}$ (**combustion**)
18. $3\text{BaCl}_2 + \text{Al}_2(\text{SO}_4)_3 \rightarrow 3\text{BaSO}_4 + 2\text{AlCl}_3$ (**double displacement**)
19. $\text{Fe}_2(\text{C}_2\text{O}_4)_3 \rightarrow 2\text{FeC}_2\text{O}_4 + 2\text{CO}_2$ (**decomposition**)
20. $\text{Fe}_2(\text{SO}_4)_3 + 6\text{KOH} \rightarrow 3\text{K}_2\text{SO}_4 + 2\text{Fe(OH)}_3$ (**double displacement**)

21. $\text{Al}_2(\text{SO}_4)_3 + 3\text{Ca}(\text{OH})_2 \rightarrow 2\text{Al}(\text{OH})_3 + 3\text{CaSO}_4$ (**double displacement**)
22. $3\text{Fe} + 4\text{H}_2\text{O} \rightarrow \text{Fe}_3\text{O}_4 + 4\text{H}_2$ (**single displacement**)
23. $3\text{Mg} + \text{N}_2 \rightarrow \text{Mg}_3\text{N}_2$ (**synthesis**)
24. $2\text{Al} + 3\text{FeO} \rightarrow \text{Al}_2\text{O}_3 + 3\text{Fe}$ (**single displacement**)
25. $2\text{N}_2 + \text{O}_2 \rightarrow 2\text{N}_2\text{O}$ (**synthesis**)
26. $\text{S}_8 + 12\text{O}_2 \rightarrow 8\text{SO}_3$ (**synthesis**)
27. $3\text{Na} + 3\text{H}_2\text{O} \rightarrow 3\text{NaOH} + \text{H}_2$ (**single displacement**)
28. $4\text{Fe} + 3\text{O}_2 \rightarrow 2\text{Fe}_2\text{O}_3$ (**synthesis**)
29. $2\text{C}_7\text{H}_6\text{O}_2 + 15\text{O}_2 \rightarrow 14\text{CO}_2 + 6\text{H}_2\text{O}$ (**combustion**)
30. $2\text{H}_2\text{O}_2 \rightarrow 2\text{H}_2\text{O} + \text{O}_2$ (**decomposition**)