

Balance each of the following equations.

1. $2 \text{ Al} + 3 \text{ Cl}_2 \rightarrow 2 \text{ AlCl}_3$
2. $4 \text{ Na} + \text{O}_2 \rightarrow 2 \text{ Na}_2\text{O}$
3. $2 \text{ Na} + \text{O}_2 \rightarrow \text{Na}_2\text{O}_2$
4. $\text{CH}_4 + 2 \text{ O}_2 \rightarrow \text{CO}_2 + 2 \text{ H}_2\text{O}$
5. $\text{N}_2 + 2 \text{ O}_2 \rightarrow 2 \text{ NO}_2$
6. $\text{O}_2 + 2 \text{ F}_2 \rightarrow 2 \text{ OF}_2$
7. $2 \text{ Zn} + \text{O}_2 \rightarrow 2 \text{ ZnO}$
8. $2 \text{ Cu}_2\text{S} + 3 \text{ O}_2 \rightarrow 2 \text{ Cu}_2\text{O} + 2 \text{ SO}_2$
9. $\text{N}_2\text{H}_4 + \text{O}_2 \rightarrow \text{N}_2 + 2 \text{ H}_2\text{O}$
10. $4 \text{ FeS}_2 + 11 \text{ O}_2 \rightarrow 2 \text{ Fe}_2\text{O}_3 + 8 \text{ SO}_2$
11. $3 \text{ NO}_2 + \text{H}_2\text{O} \rightarrow 2 \text{ HNO}_3 + \text{NO}$
12. $\text{CaCO}_3 + 2 \text{ NaCl} \rightarrow \text{Na}_2\text{CO}_3 + \text{CaCl}_2$
13. $\text{Ag} + 2 \text{ HNO}_3 \rightarrow \text{NO}_2 + \text{AgNO}_3 + \text{H}_2\text{O}$
14. $2 \text{ NCl}_3 \rightarrow \text{N}_2 + 3 \text{ Cl}_2$
15. $2 \text{ NH}_3 \rightarrow \text{N}_2 + 3 \text{ H}_2$
16. $\text{S}_8 + 8 \text{ O}_2 \rightarrow 8 \text{ SO}_2$
17. $2 \text{ KClO}_3 \rightarrow 2 \text{ KCl} + 3 \text{ O}_2$
18. $2 \text{ C}_2\text{H}_2 + 5 \text{ O}_2 \rightarrow 4 \text{ CO}_2 + 2 \text{ H}_2\text{O}$
19. $4 \text{ NH}_3 + 3 \text{ O}_2 \rightarrow 2 \text{ N}_2 + 6 \text{ H}_2\text{O}$
20. $\text{C}_{25}\text{H}_{52} + 38 \text{ O}_2 \rightarrow 25 \text{ CO}_2 + 26 \text{ H}_2\text{O}$

Balance each of the following equations.

1. $2 \text{ KNO}_3 \rightarrow 2 \text{ KNO}_2 + \text{O}_2$
2. $2 \text{ Pb(NO}_3)_2 \rightarrow 2 \text{ PbO} + 2 \text{ NO}_2 + 3 \text{ O}_2$
3. $\text{P}_4 + 6 \text{ I}_2 \rightarrow 4 \text{ PI}_3$
4. $2 \text{ H}_2\text{O}_2 \rightarrow 2 \text{ H}_2\text{O} + \text{O}_2$
5. $\text{Br}_2 + 2 \text{ KI} \rightarrow \text{I}_2 + 2 \text{ KBr}$
6. $\text{Bi}_2\text{O}_3 + 3 \text{ H}_2 \rightarrow 2 \text{ Bi} + 3 \text{ H}_2\text{O}$
7. $4 \text{ Fe} + 3 \text{ O}_2 \rightarrow 2 \text{ Fe}_2\text{O}_3$
8. $2 \text{ CaO} + 4 \text{ C} \rightarrow 2 \text{ CaC}_2 + \text{CO}_2$
9. $\text{H}_2\text{SO}_4 + \text{K}_2\text{CO}_3 \rightarrow \text{K}_2\text{SO}_4 + \text{H}_2\text{O} + \text{CO}_2$
10. $\text{NH}_4\text{NO}_2 \rightarrow \text{N}_2 + 2 \text{ H}_2\text{O}$
11. $\text{Mg} + 2 \text{ HCl} \rightarrow \text{MgCl}_2 + \text{H}_2$
12. $3 \text{ Ca} + \text{N}_2 \rightarrow \text{Ca}_3\text{N}_2$
13. $2 \text{ NH}_4\text{NO}_3 \rightarrow \text{N}_2\text{O} + 2 \text{ H}_2\text{O}$
14. $2 \text{ BiCl}_3 + 3 \text{ H}_2\text{S} \rightarrow \text{Bi}_2\text{S}_3 + 6 \text{ HCl}$
15. $2 \text{ C}_4\text{H}_{10} + 13 \text{ O}_2 \rightarrow 8 \text{ CO}_2 + 10 \text{ H}_2\text{O}$
16. $\text{C}_6\text{H}_{12}\text{O}_6 + 6 \text{ O}_2 \rightarrow 6 \text{ CO}_2 + 6 \text{ H}_2\text{O}$
17. $\text{Al}_4\text{C}_3 + 12 \text{ H}_2\text{O} \rightarrow 4 \text{ Al(OH)}_3 + 3 \text{ CH}_4$
18. $2 \text{ H}_2 + \text{O}_2 \rightarrow 2 \text{ H}_2\text{O}$
19. $2 \text{ KClO}_3 \rightarrow 2 \text{ KCl} + 3 \text{ O}_2$
20. $3 \text{ NO}_2 + \text{H}_2\text{O} \rightarrow 2 \text{ HNO}_3 + \text{NO}$