

Balancing Chemical Equations Race

1. ____ H_2 + ____ $\text{O}_2 \rightarrow$ ____ H_2O
2. ____ N_2 + ____ $\text{H}_2 \rightarrow$ ____ NH_3
3. ____ S_8 + ____ $\text{O}_2 \rightarrow$ ____ SO_3
4. ____ N_2 + ____ $\text{O}_2 \rightarrow$ ____ N_2O
5. ____ $\text{HgO} \rightarrow$ ____ Hg + ____ O_2
6. ____ CO_2 + ____ $\text{H}_2\text{O} \rightarrow$ ____ $\text{C}_6\text{H}_{12}\text{O}_6$ + ____ O_2
7. ____ Zn + ____ $\text{HCl} \rightarrow$ ____ ZnCl_2 + ____ H_2
8. ____ SiCl_4 + ____ $\text{H}_2\text{O} \rightarrow$ ____ H_4SiO_4 + ____ HCl
9. ____ Na + ____ $\text{H}_2\text{O} \rightarrow$ ____ NaOH + ____ H_2
10. ____ $\text{H}_3\text{PO}_4 \rightarrow$ ____ $\text{H}_4\text{P}_2\text{O}_7$ + ____ H_2O
11. ____ $\text{C}_{10}\text{H}_{16}$ + ____ $\text{Cl}_2 \rightarrow$ ____ C + ____ HCl
12. ____ CO_2 + ____ $\text{NH}_3 \rightarrow$ ____ $\text{OC}(\text{NH}_2)_2$ + ____ H_2O
13. ____ Si_2H_3 + ____ $\text{O}_2 \rightarrow$ ____ SiO_2 + ____ H_2O_3
14. ____ $\text{Al}(\text{OH})_3$ + ____ $\text{H}_2\text{SO}_4 \rightarrow$ ____ $\text{Al}_2(\text{SO}_4)_3$ + ____ H_2O
15. ____ Fe + ____ $\text{O}_2 \rightarrow$ ____ Fe_2O_3
16. ____ $\text{Fe}_2(\text{SO}_4)_3$ + ____ $\text{KOH} \rightarrow$ ____ K_2SO_4 + ____ $\text{Fe}(\text{OH})_3$
17. ____ $\text{C}_7\text{H}_6\text{O}_2$ + ____ $\text{O}_2 \rightarrow$ ____ CO_2 + ____ H_2O
18. ____ H_2SO_4 + ____ $\text{HI} \rightarrow$ ____ H_2S + ____ I_2 + ____ H_2O
19. ____ FeS_2 + ____ $\text{O}_2 \rightarrow$ ____ Fe_2O_3 + ____ SO_2
20. ____ Al + ____ $\text{FeO} \rightarrow$ ____ Al_2O_3 + ____ Fe
21. ____ Fe_2O_3 + ____ $\text{H}_2 \rightarrow$ ____ Fe + ____ H_2O
22. ____ Na_2CO_3 + ____ $\text{HCl} \rightarrow$ ____ NaCl + ____ H_2O + ____ CO_2
23. ____ K + ____ $\text{Br}_2 \rightarrow$ ____ KBr
24. ____ C_7H_{16} + ____ $\text{O}_2 \rightarrow$ ____ CO_2 + ____ H_2O
25. ____ P_4 + ____ $\text{O}_2 \rightarrow$ ____ P_2O_5

26. Dicarbon dihydride + Oxygen $\rightarrow$ Carbon dioxide + Water
27. Potassium oxide + Water $\rightarrow$ Potassium hydroxide
28. Hydrogen peroxide (H_2O_2) $\rightarrow$ Water + Oxygen
29. Aluminum + Oxygen $\rightarrow$ Aluminum oxide
30. Sodium peroxide(Na_2O_2) + Water $\rightarrow$ Sodium hydroxide + oxygen
31. Silicon dioxide + Hydrofluoric acid $\rightarrow$ Silicon tetrafluoride + Water
32. Carbon + water $\rightarrow$ Carbon monoxide + Hydrogen
33. Potassium chlorate $\rightarrow$ Potassium chloride + Oxygen
34. Potassium chlorate $\rightarrow$ Potassium perchlorate + Potassium chloride
35. Aluminum sulfate + Calcium hydroxide $\rightarrow$ Aluminum hydroxide + Calcium sulfate
36. Tetraphosphorus decoxide + Water $\rightarrow$ Phosphoric acid
37. Iron III chloride + Ammonium hydroxide $\rightarrow$ Iron III hydroxide + Ammonium chloride
38. Antimony + Oxygen $\rightarrow$ Tetrantimony Hexoxide
39. Tricarbon octahydride + Oxygen $\rightarrow$ Carbon dioxide + water
40. Dinitrogen pentoxide + Water $\rightarrow$ Nitric acid
41. Nitrogen trihydride + Nitrogen monoxide $\rightarrow$ Nitrogen + Water
42. Aluminum + hydrochloric acid $\rightarrow$ Aluminum chloride + Hydrogen
43. Phosphorus pentachloride + water $\rightarrow$ hydrochloric acid + phosphoric acid
44. Magnesium + Nitrogen $\rightarrow$ Magnesium nitride
45. Iron + Water $\rightarrow$ Iron III oxide + Hydrogen
46. Sodium hydroxide + Chlorine $\rightarrow$ Sodium chloride + Sodium hypochlorite + water
47. Lithium oxide + Water $\rightarrow$ Lithium hydroxide
48. Ammonium nitrate $\rightarrow$ Dinitrogen monoxide + water
49. Lead II nitrate $\rightarrow$ Lead II oxide + Nitrogen dioxide + Oxygen
50. Calcium chlorate $\rightarrow$ Calcium chloride + Oxygen

Balancing Chemical Equations Race (ANSWERS)

1. 2 H₂ + 1 O₂ → 2 H₂O
2. 1 N₂ + 3 H₂ → 2 NH₃
3. 1 S₈ + 12 O₂ → 8 SO₃
4. 2 N₂ + 1 O₂ → 2 N₂O
5. 2 HgO → 2 Hg + 1 O₂
6. 6 CO₂ + 6 H₂O → 1 C₆H₁₂O₆ + 6 O₂
7. 1 Zn + 2 HCl → 1 ZnCl₂ + 1 H₂
8. 1 SiCl₄ + 4 H₂O → 1 H₄SiO₄ + 4 HCl
9. 2 Na + 2 H₂O → 2 NaOH + 1 H₂
10. 2 H₃PO₄ → 1 H₄P₂O₇ + 1 H₂O
11. 1 C₁₀H₁₆ + 8 Cl₂ → 10 C + 16 HCl
12. 1 CO₂ + 2 NH₃ → 1 OC(NH₂)₂ + 1 H₂O
13. 4 Si₂H₃ + 17 O₂ → 8 SiO₂ + 6 H₂O₃
14. 2 Al(OH)₃ + 3 H₂SO₄ → 1 Al₂(SO₄)₃ + 6 H₂O
15. 4 Fe + 3 O₂ → 2 Fe₂O₃
16. 1 Fe₂(SO₄)₃ + 6 KOH → 3 K₂SO₄ + 2 Fe(OH)₃
17. 2 C₇H₆O₂ + 17 O₂ → 14 CO₂ + 6 H₂O
18. 1 H₂SO₄ + 8 HI → 1 H₂S + 4 I₂ + 4 H₂O
19. 4 FeS₂ + 11 O₂ → 2 Fe₂O₃ + 8 SO₂
20. 2 Al + 3 FeO → 1 Al₂O₃ + 3 Fe
21. 1 Fe₂O₃ + 3 H₂ → 2 Fe + 3 H₂O
22. 1 Na₂CO₃ + 2 HCl → 2 NaCl + 1 H₂O + 1 CO₂
23. 2 K + 1 Br₂ → 2 KBr
24. 1 C₇H₁₆ + 11 O₂ → 7 CO₂ + 8 H₂O
25. 1 P₄ + 5 O₂ → 2 P₂O₅

26. Dicarbon dihydride + Oxygen → Carbon dioxide + Water

$$2 \text{ C}_2\text{H}_2 + 5 \text{ O}_2 \rightarrow 4 \text{ CO}_2 + 2 \text{ H}_2\text{O}$$
27. Potassium oxide + Water → Potassium hydroxide

$$\text{K}_2\text{O} + \text{H}_2\text{O} \rightarrow 2 \text{ KOH}$$
28. Hydrogen peroxide (H₂O₂) → Water + Oxygen

$$2 \text{ H}_2\text{O}_2 \rightarrow 2 \text{ H}_2\text{O} + \text{O}_2$$
29. Aluminum + Oxygen → Aluminum oxide

$$4 \text{ Al} + 3 \text{ O}_2 \rightarrow 2 \text{ Al}_2\text{O}_3$$
30. Sodium peroxide(Na₂O₂) + Water → Sodium hydroxide + oxygen

$$2 \text{ Na}_2\text{O}_2 + 2 \text{ H}_2\text{O} \rightarrow 4 \text{ NaOH} + \text{O}_2$$
31. Silicon dioxide + Hydrofluoric acid→ Silicon tetrafluoride + Water

$$\text{SiO}_2 + 4 \text{ HF} \rightarrow \text{SiF}_4 + 2 \text{ H}_2\text{O}$$
32. Carbon + water → Carbon monoxide + Hydrogen

$$\text{C} + \text{H}_2\text{O} \rightarrow \text{CO} + \text{H}_2 : \text{Balanced!!}$$
33. Potassium chlorate → Potassium chloride + Oxygen

$$2 \text{ KClO}_3 \rightarrow 2 \text{ KCl} + 3 \text{ O}_2$$
34. Potassium chlorate → Potassium perchlorate + Potassium chloride

$$4 \text{ KClO}_3 \rightarrow 3 \text{ KClO}_4 + \text{KCl}$$
35. Aluminum sulfate + Calcium hydroxide → Aluminum hydroxide + Calcium sulfate

$$\text{Al}_2(\text{SO}_4)_3 + 3 \text{ Ca}(\text{OH})_2 \rightarrow 2 \text{ Al}(\text{OH})_3 + 3 \text{ CaSO}_4$$
36. Tetraphosphorus decoxide + Water → Phosphoric acid

$$\text{P}_4\text{O}_{10} + 6 \text{ H}_2\text{O} \rightarrow 4 \text{ H}_3\text{PO}_4$$
37. Iron III chloride + Ammonium hydroxide → Iron III hydroxide + Ammonium chloride

$$\text{FeCl}_3 + 3 \text{ NH}_4\text{OH} \rightarrow \text{Fe}(\text{OH})_3 + 3 \text{ NH}_4\text{Cl}$$
38. Antimony + Oxygen → Tetrantimony Hexoxide

$$4 \text{ Sb} + 3 \text{ O}_2 \rightarrow \text{Sb}_4\text{O}_6$$
39. Tricarbon octahydride + Oxygen → Carbon dioxide + water

$$\text{C}_3\text{H}_8 + 5 \text{ O}_2 \rightarrow 3 \text{ CO}_2 + 4 \text{ H}_2\text{O}$$
40. Dinitrogen pentoxide + Water → Nitric acid

$$\text{N}_2\text{O}_5 + \text{H}_2\text{O} \rightarrow 2 \text{ HNO}_3$$
41. Nitrogen trihydride + Nitrogen monoxide → Nitrogen + Water

$$4 \text{ NH}_3 + 6 \text{ NO} \rightarrow 5 \text{ N}_2 + 6 \text{ H}_2\text{O}$$
42. Aluminum + hydrochloric acid → Aluminum chloride + Hydrogen

$$2 \text{ Al} + 6 \text{ HCl} \rightarrow 2 \text{ AlCl}_3 + 3 \text{ H}_2$$

43. Phosphorus pentachloride + water $\rightarrow$ hydrochloric acid + phosphoric acid

$$\text{PCl}_5 + 4 \text{H}_2\text{O} \rightarrow 5 \text{HCl} + \text{H}_3\text{PO}_4$$
44. Magnesium + Nitrogen $\rightarrow$ Magnesium nitride

$$3 \text{Mg} + \text{N}_2 \rightarrow \text{Mg}_3\text{N}_2$$
45. Iron + Water $\rightarrow$ Iron III oxide + Hydrogen

$$2 \text{Fe} + 3 \text{H}_2\text{O} \rightarrow \text{Fe}_2\text{O}_3 + 3 \text{H}_2$$
46. Sodium hydroxide + Chlorine $\rightarrow$ Sodium chloride + Sodium hypochlorite + water

$$2 \text{NaOH} + \text{Cl}_2 \rightarrow \text{NaCl} + \text{NaClO} + \text{H}_2\text{O}$$
47. Lithium oxide + Water $\rightarrow$ Lithium hydroxide

$$\text{Li}_2\text{O} + \text{H}_2\text{O} \rightarrow 2 \text{LiOH}$$
48. Ammonium nitrate $\rightarrow$ Dinitrogen monoxide + water

$$\text{NH}_4\text{NO}_3 \rightarrow \text{N}_2\text{O} + 2 \text{H}_2\text{O}$$
49. Lead II nitrate $\rightarrow$ Lead II oxide + Nitrogen dioxide + Oxygen

$$2 \text{Pb}(\text{NO}_3)_2 \rightarrow 2 \text{PbO} + 4 \text{NO}_2 + \text{O}_2$$
50. Calcium chlorate $\rightarrow$ Calcium chloride + Oxygen

$$\text{Ca}(\text{ClO}_3)_2 \rightarrow \text{CaCl}_2 + 3 \text{O}_2$$