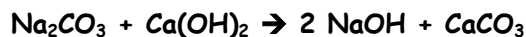


Balancing Chemical Equations

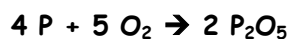
1. sodium carbonate + calcium hydroxide → sodium hydroxide + calcium carbonate



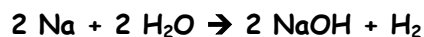
2. carbon dioxide + water → carbonic acid



3. phosphorus + oxygen → diphosphorus pentoxide



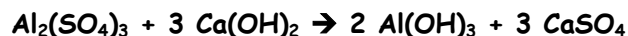
4. sodium + water → sodium hydroxide + hydrogen



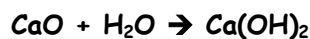
5. zinc + sulphuric acid → zinc sulfate hydrogen



6. aluminum sulfate + calcium hydroxide → aluminum hydroxide + calcium sulfate



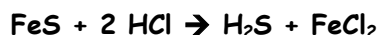
7. calcium oxide + water → calcium hydroxide



8. iron + copper(I) nitrate → iron(II) nitrate + copper



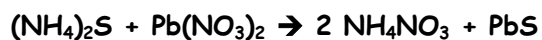
9. iron(II) sulfide + hydrochloric acid → hydrosulfuric acid + iron(II) chloride



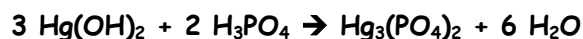
10. potassium oxide + water → potassium hydroxide



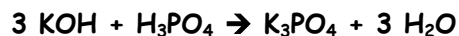
11. ammonium sulfide + lead(II) nitrate → ammonium nitrate + lead(II) sulfide



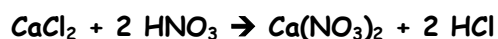
12. mercuric hydroxide + phosphoric acid → mercuric phosphate + water



13. potassium hydroxide + phosphoric acid → potassium phosphate + water



14. calcium chloride + nitric acid → calcium nitrate + hydrochloric acid



15. potassium carbonate + barium chloride → potassium chloride + barium carbonate

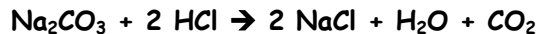


Balancing Chemical Equations - continued

16. sulfur dioxide + water → sulfurous acid



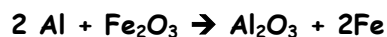
17. sodium carbonate + hydrochloric acid → sodium chloride + water + carbon dioxide



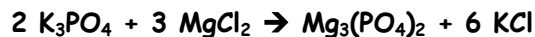
18. magnesium + nitric acid → magnesium nitrate + hydrogen



19. aluminum + ferric oxide → aluminum oxide + iron



20. potassium phosphate + magnesium chloride → magnesium phosphate + potassium chloride



21. ammonia + oxygen → nitrogen + water



22. calcium carbonate → calcium oxide + carbon dioxide



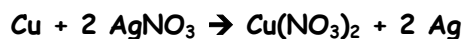
23. sodium chloride + sulfuric acid → sodium sulfate + hydrochloric acid



24. chromium + hydrochloric acid → chromium(II) chloride + hydrogen



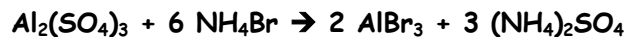
25. copper + silver nitrate → copper(II) nitrate + silver



26. copper + sulfuric acid → copper(II) sulfate + sulfur dioxide + water



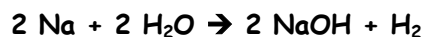
27. aluminum sulfate + ammonium bromide → aluminum bromide + ammonium sulfate



28. chlorine + sodium hydroxide → sodium chloride + sodium hypochlorite + water



29. sodium + water → sodium hydroxide + hydrogen



30. lead(II) nitrate → lead(II) oxide + nitrogen dioxide + oxygen



Balancing Chemical Equations - continued

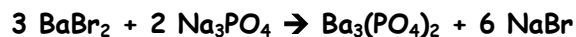
31. cupric oxide + ammonia → copper + water + nitrogen
 $3 \text{CuO} + 2 \text{NH}_3 \rightarrow 3 \text{Cu} + 3 \text{H}_2\text{O} + \text{N}_2$
32. sodium bicarbonate + sulfuric acid → sodium sulfate + water + carbon dioxide
 $2 \text{NaHCO}_3 + \text{H}_2\text{SO}_4 \rightarrow \text{Na}_2\text{SO}_4 + 2 \text{H}_2\text{O} + 2 \text{CO}_2$
33. ammonia + oxygen → nitrogen monoxide + water
 $4 \text{NH}_3 + 5 \text{O}_2 \rightarrow 4 \text{NO} + 6 \text{H}_2\text{O}$
34. potassium carbonate + hydrofluoric acid → potassium fluoride + carbon dioxide + water
 $\text{K}_2\text{CO}_3 + 2 \text{HF} \rightarrow 2 \text{KF} + \text{CO}_2 + \text{H}_2\text{O}$
35. fluorine + sodium hydroxide → sodium fluoride + oxygen + water
 $2 \text{F}_2 + 4 \text{NaOH} \rightarrow 4 \text{NaF} + \text{O}_2 + 2 \text{H}_2\text{O}$
36. magnesium nitrate + calcium iodide → calcium nitrate + magnesium iodide
 $\text{Mg}(\text{NO}_3)_2 + \text{CaI}_2 \rightarrow \text{Ca}(\text{NO}_3)_2 + \text{MgI}_2$
37. aluminum sulfate + ammonium bromide → aluminum bromide + ammonium sulfate
 $\text{Al}_2(\text{SO}_4)_3 + 6 \text{NH}_4\text{Br} \rightarrow 2 \text{AlBr}_3 + 3 (\text{NH}_4)_2\text{SO}_4$
38. potassium fluoride + barium bromide → barium fluoride + potassium bromide
 $2 \text{KF} + \text{BaBr}_2 \rightarrow \text{BaF}_2 + 2 \text{KBr}$
39. cupric nitrate + ammonium hydroxide → cupric hydroxide + ammonium nitrate
 $\text{Cu}(\text{NO}_3)_2 + 2 \text{NH}_4\text{OH} \rightarrow \text{Cu}(\text{OH})_2 + 2 \text{NH}_4\text{NO}_3$
40. sodium nitrate → sodium nitrite + oxygen
 $2 \text{NaNO}_3 \rightarrow 2 \text{NaNO}_2 + \text{O}_2$
41. ammonia + sulfuric acid → ammonium sulfate
 $2 \text{NH}_3 + \text{H}_2\text{SO}_4 \rightarrow (\text{NH}_4)_2\text{SO}_4$
42. hydrochloric acid + ammonia → ammonium chloride
 $\text{HCl} + \text{NH}_3 \rightarrow \text{NH}_4\text{Cl}$
43. aluminum + hydrochloric acid → aluminum chloride + hydrogen
 $2 \text{Al} + 6 \text{HCl} \rightarrow 2 \text{AlCl}_3 + 3 \text{H}_2$
44. calcium bicarbonate + calcium hydroxide → calcium carbonate + water
 $\text{Ca}(\text{HCO}_3)_2 + \text{Ca}(\text{OH})_2 \rightarrow \text{CaCO}_3 + 2 \text{H}_2\text{O}$
45. water + diphosphorus pentoxide → phosphoric acid
 $3 \text{H}_2\text{O} + \text{P}_2\text{O}_5 \rightarrow 2 \text{H}_3\text{PO}_4$

Balancing Chemical Equations - continued

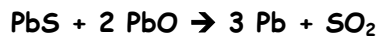
46. chlorine + sodium hydroxide → sodium chloride + sodium hypochlorite + water
 $\text{Cl}_2 + 2 \text{NaOH} \rightarrow \text{NaCl} + \text{NaClO} + \text{H}_2\text{O}$
47. plumbous nitrate → plumbous oxide + nitrogen dioxide + oxygen
 $2 \text{Pb}(\text{NO}_3)_2 \rightarrow 2 \text{PbO} + 4 \text{NO}_2 + \text{O}_2$
48. chromium(III) chloride + sulfuric acid → chromium(III) sulfate + hydrochloric acid
 $2 \text{CrCl}_3 + 3 \text{H}_2\text{SO}_4 \rightarrow \text{Cr}_2(\text{SO}_4)_3 + 6 \text{HCl}$
49. magnesium bicarbonate + hydrochloric acid → magnesium chloride + water + carbon dioxide
 $\text{Mg}(\text{HCO}_3)_2 + 2 \text{HCl} \rightarrow \text{MgCl}_2 + \text{H}_2\text{O} + \text{CO}_2$
50. iron + oxygen → ferric oxide
 $4 \text{Fe} + 3 \text{O}_2 \rightarrow 2 \text{Fe}_2\text{O}_3$
51. ferric oxide + carbon monoxide → iron + carbon dioxide
 $\text{Fe}_2\text{O}_3 + 3 \text{CO} \rightarrow 2 \text{Fe} + 3 \text{CO}_2$
52. calcium chloride + chromium(III) nitrate → calcium nitrate + chromium(III) chloride
 $3 \text{CaCl}_2 + 2 \text{Cr}(\text{NO}_3)_3 \rightarrow 3 \text{Ca}(\text{NO}_3)_2 + 2 \text{CrCl}_3$
53. zinc sulfide + oxygen → zinc oxide + sulfur dioxide
 $2 \text{ZnS} + 3 \text{O}_2 \rightarrow 2 \text{ZnO} + 2 \text{SO}_2$
54. iron(III) hydroxide → iron(III) oxide + water
 $2 \text{Fe}(\text{OH})_3 \rightarrow \text{Fe}_2\text{O}_3 + 3 \text{H}_2\text{O}$
55. aluminum sulfate + sodium bicarbonate → aluminum hydroxide + sodium sulfate + carbon dioxide
 $\text{Al}_2(\text{SO}_4)_3 + 6 \text{NaHCO}_3 \rightarrow 2 \text{Al}(\text{OH})_3 + 3 \text{Na}_2\text{SO}_4 + 6 \text{CO}_2$
56. calcium phosphate + silicon dioxide + carbon → phosphorus + calcium silicate + carbon monoxide
 $\text{Ca}_3(\text{PO}_4)_2 + 3 \text{SiO}_2 + 5 \text{C} \rightarrow 2 \text{P} + 3 \text{CaSiO}_3 + 5 \text{CO}$
57. magnesium nitride + water → magnesium hydroxide + ammonia
 $\text{Mg}_3\text{N}_2 + 6 \text{H}_2\text{O} \rightarrow 3 \text{Mg}(\text{OH})_2 + 2 \text{NH}_3$
58. arsenic + oxygen → diarsenic trioxide
 $4 \text{As} + 3 \text{O}_2 \rightarrow 2 \text{As}_2\text{O}_3$
59. cupric oxide + ammonia → copper + water + nitrogen
 $3 \text{CuO} + 2 \text{NH}_3 \rightarrow 3 \text{Cu} + 3 \text{H}_2\text{O} + \text{N}_2$
60. ammonium dichromate → chromium(III) oxide + nitrogen + water
 $(\text{NH}_4)_2\text{Cr}_2\text{O}_7 \rightarrow \text{Cr}_2\text{O}_3 + \text{N}_2 + 4\text{H}_2\text{O}$

Balancing Chemical Equations - continued

61. barium bromide + sodium phosphate → barium phosphate + sodium bromide



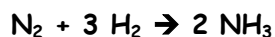
62. lead(II) sulfide + lead(II) oxide → lead + sulfur dioxide



63. aluminum hydroxide → aluminum oxide + water



64. nitrogen + hydrogen → ammonia



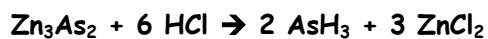
65. silicon dioxide + hydrofluoric acid → water + silicon tetrafluoride



66. sodium hypochlorite → sodium chloride + sodium chlorate



67. zinc arsenide + hydrochloric acid → arsine (AsH_3) + zinc chloride



68. diboron trioxide + magnesium → magnesium oxide + boron



69. iron(II) cyanide + potassium cyanide → potassium ferrocyanide

