

CHAPTER 7

Equations

Write a balanced chemical equation to represent each of the following chemical reactions:
Identify reaction type.

1. iron + sulfur $\rightarrow$ iron (II) sulfide
2. zinc + cupric sulfate $\rightarrow$ zinc sulfate + copper (cupric means copper (II))
3. silver nitrate + sodium bromide $\rightarrow$ sodium nitrate + silver bromide
4. potassium chlorate (heated) $\rightarrow$ potassium chloride + oxygen
5. water (electricity) $\rightarrow$ hydrogen + oxygen
6. mercury (II) oxide (heated) $\rightarrow$ mercury + oxygen
7. potassium iodide + lead (II) nitrate $\rightarrow$ lead (II) iodide + potassium nitrate
8. aluminum + oxygen $\rightarrow$ aluminum oxide
9. magnesium chloride + ammonium nitrate $\rightarrow$ magnesium nitrate + ammonium chloride
10. iron (III) chloride + ammonium hydroxide $\rightarrow$ iron (III) hydroxide + ammonium chloride
11. sodium peroxide + water $\rightarrow$ sodium hydroxide + oxygen (NaO)
12. iron (III) oxide + carbon $\rightarrow$ iron + carbon monoxide
13. iron + water $\rightarrow$ hydrogen + iron (III) oxide
14. iron (III) chloride + potassium hydroxide $\rightarrow$ potassium chloride + iron (III) hydroxide
15. aluminum + sulfuric acid $\rightarrow$ aluminum sulfate + hydrogen

(continued)

EQUATIONS

16. sodium carbonate + calcium hydroxide $\rightarrow$ sodium hydroxide + calcium carbonate
17. carbon dioxide + water $\rightarrow$ carbonic acid
18. phosphorus + oxygen $\rightarrow$ diphosphorus pentoxide
19. sodium + water $\rightarrow$ sodium hydroxide + hydrogen
20. zinc + sulfuric acid $\rightarrow$ zinc sulfate + hydrogen
21. aluminum sulfate + calcium hydroxide $\rightarrow$ aluminum hydroxide + calcium sulfate
22. calcium oxide + water $\rightarrow$ calcium hydroxide
23. iron + copper (I) nitrate $\rightarrow$ iron (II) nitrate + copper
24. iron (II) sulfide + hydrochloric acid $\rightarrow$ hydrogen sulfide + iron (II) chloride
25. potassium oxide + water $\rightarrow$ potassium hydroxide
26. ammonium sulfide + lead (II) nitrate $\rightarrow$ ammonium nitrate + lead (II) sulfide
27. mercury (II) hydroxide + phosphoric acid $\rightarrow$ mercury (II) phosphate + water
28. potassium hydroxide + phosphoric acid $\rightarrow$ potassium phosphate + water
29. calcium chloride + nitric acid $\rightarrow$ calcium nitrate + hydrochloric acid
30. potassium carbonate + barium chloride $\rightarrow$ potassium chloride + barium carbonate
31. magnesium hydroxide + sulfuric acid $\rightarrow$ magnesium sulfate + water
32. sulfur dioxide + water $\rightarrow$ sulfurous acid