

Combination Reactions

Predict the product and write balanced reactions for each of the following.

1. Hydrogen burned in oxygen.
2. Sodium plus iodine.
3. Calcium burned in chlorine.
4. Carbon burned in oxygen.
5. Hydrogen combined with nitrogen.
6. Sulfur burned in air.
7. Magnesium burned in hydrogen.
8. Zinc plus bromine.
9. Water plus carbon dioxide.
10. Sulfur dioxide plus water.
11. Sodium plus hydrogen.
12. Hydrogen burned in chlorine.
13. Iron burned in chlorine.
14. Copper plus fluorine.
15. Aluminum burned in air.
16. Calcium oxide plus water.
17. Iron combined with sulfur.
18. Zinc burned in chlorine.
19. Lithium oxide plus water.
20. Barium oxide plus water.

Decomposition Reactions

Predict the products and write balanced reactions for each of the following:

1. The heating of magnesium carbonate.
2. The heating of sodium chlorate.
3. The electrolysis of water.
4. The decomposition of calcium carbonate.
5. The heated of mercuric oxide.
6. The electrolysis of sodium chloride.
7. Ferric hydroxide heated.
8. Aluminum hydroxide heated.
9. Sodium carbonate heated.
10. Barium hydroxide heated.
11. The electrolysis of calcium bromide.
12. The heating of carbonic acid.
13. Decomposition of sulfuric acid.
14. Decomposition of calcium chlorate.
15. Heating of potassium bromate.
16. Decomposition of sulfurous acid.
17. Electrolysis of aluminum oxide.
18. Zinc carbonate heated.
19. Decomposition of phosphoric acid.
20. Heating of sodium tetraborate trihydrate.

Single Displacement Reactions

Predict the products and write balanced reactions for each of the following:

1. Chlorine plus sodium iodide.
2. Zinc and phosphoric acid.
3. Sodium and water.
4. Calcium and hydrochloric acid.
5. Calcium plus water.
6. Zinc sulfate plus sodium.
7. Ferrous chloride plus aluminum.
8. Ammonium iodide and chlorine.
9. Nickel and sulfuric acid.
10. Strontium and water.
11. Mercuric sulfate and zinc.
12. Potassium and water.
13. Carbonic acid plus aluminum.
14. Copper(II) nitrate and zinc.
15. Sodium nitrate and potassium.
16. Silver acetate and copper.
17. Iron added to sulfuric acid.
18. Zinc plus cupric sulfate.
19. Magnesium nitrate added to copper.
20. Cuprous chlorate plus magnesium.

Double Displacement

Predict the products and write balanced reactions for each of the following:

1. Sodium chloride and silver nitrate.
2. Barium chlorate and potassium phosphate.
3. Ammonium chloride and potassium hydroxide.
4. Potassium nitrate plus cupric sulfate.
5. Sulfuric acid plus potassium hydroxide.
6. Hydrochloric acid and calcium carbonate.
7. Stannous chloride plus sodium nitrate.
8. Strontium chlorate and sodium acetate.
9. Lithium hydroxide and aluminum bromide.
10. Sodium sulfate plus chloric acid.
11. Hydrochloric acid plus zinc hydroxide.
12. Sodium acetate and aluminum bromide.
13. Bromic acid and magnesium hydroxide.
14. Sodium carbonate plus calcium chloride.
15. Potassium chloride and silver nitrate.
16. Barium hydroxide plus ammonium sulfate.
17. Ferric chloride and potassium hydroxide.
18. Manganese(II) bromide and sodium hydroxide.
19. Hydrochloric acid and sodium sulfate.
20. Sulfurous acid and aluminum hydroxide.

Reaction Prediction - Review

- Directions:
1. State the type of reaction.
 2. If the reaction occurs, write the symbols, complete and balance the equation.
 3. If the reaction does not occur, state why not.

1. potassium + iodine \rightarrow
2. water $\xrightarrow{\text{electrolyzed}}$
3. zinc + lead(II) chloride \rightarrow
4. sodium nitrate + ammonium chloride \rightarrow
5. mercury + cadmium nitrate \rightarrow
6. manganese + sodium \rightarrow
7. silver nitrate + hydrogen sulfide \rightarrow
8. potassium bromide $\xrightarrow{\text{electrolyzed}}$
9. tin + copper(II) sulfate \rightarrow
10. iron(III) nitrate + sodium chromate \rightarrow
11. calcium + iodine \rightarrow
12. magnesium + hydrochloric acid \rightarrow
13. carbon + oxygen \rightarrow
14. platinum + lead(II) nitrate \rightarrow
15. lithium oxide + water \rightarrow
16. aluminum + sulfuric acid \rightarrow
17. ammonium phosphate + lithium hydroxide \rightarrow
18. chlorine + fluorine \rightarrow
19. sodium carbonate $\xrightarrow{\Delta}$
20. potassium chlorate $\xrightarrow{\Delta}$
21. hydrogen + sodium \rightarrow
22. calcium oxide + water \rightarrow
23. aluminum + hydrochloric acid \rightarrow
24. calcium hydroxide + nitric acid \rightarrow
25. aluminum + magnesium \rightarrow
26. magnesium + zinc nitrate \rightarrow
27. dinitrogen pentoxide + water \rightarrow
28. sodium chlorate $\xrightarrow{\Delta}$
29. barium nitrate + sodium dichromate \rightarrow
30. calcium phosphate + aluminum sulfate \rightarrow
31. zinc carbonate $\xrightarrow{\Delta}$
32. potassium + fluorine \rightarrow
33. sodium + nitric acid \rightarrow
34. sodium + water \rightarrow
35. ferric iodide + cupric nitrate \rightarrow
36. lead + sulfuric acid \rightarrow
37. sulfur dioxide + water \rightarrow
38. oxygen + sulfur \rightarrow
39. potassium nitrate $\xrightarrow{\Delta}$
40. sodium bicarbonate $\xrightarrow{\Delta}$
41. ferrous carbonate + phosphoric acid \rightarrow
42. sulfur trioxide + water \rightarrow
43. plumbous chlorate + sodium sulfate \rightarrow
44. barium carbonate $\xrightarrow{\Delta}$
45. neon + potassium \rightarrow
46. silver iodide + ferrous sulfide \rightarrow
47. bromine + sodium chloride \rightarrow
48. zinc + sulfuric acid \rightarrow
49. ammonium phosphate + aluminum chloride \rightarrow
50. mercuric oxide $\xrightarrow{\Delta}$
51. ammonium nitrite + barium hydroxide \rightarrow
52. magnesium + water \rightarrow
53. magnesium + acetic acid \rightarrow
54. silver + barium \rightarrow
55. plumbous hydroxide $\xrightarrow{\Delta}$
56. carbonic acid $\xrightarrow{\Delta}$
57. lithium + curium(III) fluoride \rightarrow
58. zinc + aluminum nitrate \rightarrow
59. potassium + water \rightarrow
60. zinc + water \rightarrow
61. zinc + phosphoric acid \rightarrow
62. gold + hydrochloric acid \rightarrow
63. calcium bicarbonate $\xrightarrow{\Delta}$
64. copper(II) sulfate pentahydrate $\xrightarrow{\Delta}$
65. sulfur dioxide + water \rightarrow
66. dinitrogen trioxide + water \rightarrow
67. barium oxide + water \rightarrow
68. nickel(II) chlorate \rightarrow
69. iron + copper(II) nitrate \rightarrow
70. calcium hydroxide $\xrightarrow{\Delta}$
71. lithium carbonate $\xrightarrow{\Delta}$
72. barium oxide + water \rightarrow
73. aluminum + water \rightarrow
74. potassium + water \rightarrow
75. sulfur trioxide + water \rightarrow
76. magnesium bromate + aluminum dichromate \rightarrow
77. cupric silicate + potassium phosphite \rightarrow
78. nickel(III) bicarbonate + zinc \rightarrow