Word Equations Answer Key

1. Zinc and Lead (II) nitrate react to form Zinc Nitrate and Lead.

 $Zn + Pb(NO_3)_2 \longrightarrow Zn(NO_3)_2 + Pb$

Single Replacement

2. Aluminum Bromide and Chlorine gas react to form Aluminum Chloride and Bromine gas.

 $2AlBr_3 + 3Cl_2 \longrightarrow 2AlCl_3 + 3Br_2$

Single Replacement

3. Sodium Phosphate and Calcium Chloride react to form Calcium Phosphate and Sodium Chloride.

 $2Na_3PO_4 + 3CaCl_2 \longrightarrow 6NaCl + Ca_3(PO_4)_2$

Double replacement

4. Potassium metal and Chlorine gas combine to form

2 K + Cl₂ ->> 2KCl

Synthesis

5. Aluminum and Hydrochloric acid react to form Aluminum Chloride and Hydrogen gas.

 $2 AI + 6 HCI \longrightarrow 3H_2 + 2 AICI_3$

Single Replacement

6. Calcium Hydroxide and Phosphoric acid react to form Calcium Phosphate and water.

 $3 \text{ Ca}(OH)_2 + 2 \text{ H}_3PO_4 \longrightarrow \text{Ca}_3(PO_4)_2 + 6\text{H}_2O$

Double Replacement

7. Copper and Sulfuric acid react to form Copper (II) Sulfate and water and Sulfur Dioxide

 $Cu + 2H_2SO_4 \longrightarrow CuSO_4 + 2H_2O + SO_2$ Single Replacement and acid base

8. Hydrogen gas and Nitrogen Monoxide react to form water and Nitrogen gas.

 $2 H_2 + 2NO \longrightarrow 2H_2O + N_2$

Single Replacement

Word Equations Worksheet - Solutions

1) When dissolved beryllium chloride reacts with dissolved silver nitrate in water, aqueous beryllium nitrate and silver chloride powder are made.

$$BeCl_{2(aq)} + 2 AgNO_{3(aq)} \rightarrow Be(NO_3)_{2(aq)} + 2 AgCl_{(s)}$$
 Double Replacement

When isopropanol (C_3H_8O) burns in oxygen, carbon dioxide, water, and heat are produced.

$$2 C_3 H_8 O_{(I)} + 9 O_{2(g)} \rightarrow 6 CO_{2(g)} + 8 H_2 O_{(g)}$$
 Combustion

3) When dissolved sodium hydroxide reacts with sulfuric acid, aqueous sodium sulfate, water, and heat are formed.

2 NaOH_(aq) + H₂SO_{4(I)}
$$\rightarrow$$
 Na₂SO₄ + 2 H₂O_(I) Double Replacement

4) When fluorine gas is put into contact with calcium metal at high temperatures, calcium fluoride powder is created in an exothermic reaction.

$$F_{2(g)} + Ca_{(s)} \rightarrow CaF_{2(s)}$$
 Synthesis

5) When sodium metal reacts with iron (II) chloride, iron metal and sodium chloride are formed.

$$2 \text{ Na}_{(s)} + \text{FeCl}_{2(s)} \rightarrow 2 \text{ NaCl}_{(s)} + \text{Fe}_{(s)}$$
 Single Replacement