Worksheet #1: Writing and Balancing Formula Equations

Step 1: Write each formula and balance each formula using SUBSCRIPTS.
Step 2: Balance the overall equation using coefficients.

1. sulfur + oxygen → sulfur dioxide

2. zinc + sulfuric acid → zinc sulfate + hydrogen

3. hydrogen + nitrogen → ammonia

4. hydrogen + chlorine → hydrogen chloride

5. carbon + water → carbon monoxide + hydrogen

6. calcium oxide + water → calcium hydroxide

7. phosphorus + oxygen → diphosphorus pentoxide

8. hydrochloric acid + sodium hydroxide → sodium chloride + water

9. barium chloride + sulfuric acid → barium sulfate + hydrochloric acid

10. aluminum sulfate + calcium hydroxide → aluminum hydroxide + calcium sulfate

11. ethane (C_2H_6) + oxygen → carbon dioxide + water

12. aluminum oxide → aluminum + oxygen

Worksheet #1: Writing and Balancing Formula Equations

1. sulfur + oxygen → sulfur dioxide

   $S_8 + 8O_2 \rightarrow 8SO_2$

2. zinc + sulfuric acid → zinc sulfate + hydrogen

   $Zn + H_2SO_4 \rightarrow ZnSO_4 + H_2$

3. hydrogen + nitrogen → ammonia

   $3H_2 + N_2 \rightarrow 2NH_3$

4. hydrogen + chlorine → hydrogen chloride

   $H_2 + Cl_2 \rightarrow 2HCl$

5. carbon + water → carbon monoxide + hydrogen

   $C + H_2O \rightarrow CO + H_2$

6. calcium oxide + water → calcium hydroxide

   $CaO + H_2O \rightarrow Ca(OH)_2$

7. phosphorus + oxygen → diphosphorus pentoxide

   $P_4 + 5O_2 \rightarrow 2P_2O_5$

8. hydrochloric acid + sodium hydroxide → sodium chloride + water

   $HCl + NaOH \rightarrow NaCl\ H_2O$

9. barium chloride + sulfuric acid → barium sulfate + hydrochloric acid

   $BaCl_2 + H_2SO_4 \rightarrow BaSO_4 + 2HCl$

10. aluminum sulfate + calcium hydroxide → aluminum hydroxide + calcium sulfate

    $Al_2(SO_4)_3 + 3Ca(OH)_2 \rightarrow 2Al(OH)_3 + 3CaSO_4$

11. ethane (C_2H_6) + oxygen → carbon dioxide + water

    $2C_2H_6 + 7O_2 \rightarrow 4CO_2 + 6H_2O$

12. aluminum oxide → aluminum + oxygen

    $2Al_2O_3 \rightarrow 4Al + 3O_2$