***Writing Equations Practice Set 1***

For each of the following reactions, write a **word equation** to describe the reaction.

1. Hydrogen gas reacts with oxygen gas to produce water.
2. Magnesium is burnt in oxygen to form magnesium oxide.
3. Hydrochloric acid is poured onto zinc metal to produce hydrogen gas and zinc chloride.
4. Sodium hydroxide is mixed with sulphuric acid, producing water and sodium sulphate.
5. Hydrochloric acid is poured over sodium carbonate. This produces carbon dioxide, water and sodium chloride.
6. Iron (III) oxide (rust) is formed when iron metal reacts with oxygen.
7. Lead reacts with oxygen gas to produce lead (II) oxide.
8. Hydrochloric acid is mixed with magnesium carbonate. This produces magnesium chloride, carbon dioxide and water.

For each of the word equations below, write a **formula equation**.

1. Hydrogen + oxygen → water
2. Iron + oxygen → iron (III) oxide
3. Iron + hydrochloric acid → hydrogen gas + iron (II) chloride
4. Aluminium metal + oxygen gas → aluminium oxide
5. Carbon + oxygen gas → carbon dioxide
6. Sodium carbonate + hydrochloric acid → sodium chloride + carbon dioxide + water
7. Magnesium + sulphuric acid → magnesium sulphate + hydrogen
8. Copper metal + oxygen gas → copper (II) oxide
9. Sodium + water → sodium hydroxide + hydrogen
10. Aluminium hydroxide + hydrochloric acid → aluminium chloride + water
11. Sodium carbonate + sulphuric acid → sodium sulphate + carbon dioxide + water
12. Calcium hydroxide + nitric acid → calcium nitrate + water
13. Magnesium + oxygen gas → magnesium oxide
14. Magnesium oxide + nitric acid → magnesium nitrate + water
15. Lead carbonate + sulphuric acid → lead sulphate + carbon dioxide + water
16. Sulphuric acid + sodium metal → sodium sulphate+ hydrogen gas
17. Calcium carbonate + sulphuric acid → calcium sulphate + carbon dioxide + water

***Writing Equations Practice Set 2***

For each of the following reactions, write a **word equation** to describe the reaction.

1. Barium nitrate reacts with sulphuric acid to produce barium sulphate and nitric acid.
2. Calcium carbonate reacts with hydrochloric acid to produce calcium chloride, carbon dioxide and water.
3. Solid aluminium hydroxide reacts with nitric acid to produce aluminium nitrate and water.
4. Sodium carbonate and water are produced when sodium hydroxide reacts with carbon dioxide.
5. Magnesium oxide reacts with hydrochloric acid to produce magnesium chloride and water.
6. Zinc sulphate and hydrogen gas are produced when sulphuric acid is poured onto zinc metal.
7. Calcium oxide reacts with hydrochloric acid to form calcium chloride and water.
8. Aluminium oxide is formed when aluminium is burnt in oxygen.

For each of the word equations below, write a **formula equation**.

1. Methane + oxygen gas → carbon dioxide + water
2. Copper + oxygen → copper (I) oxide
3. Silver + sulphur → silver sulphide
4. Silver nitrate + magnesium chloride → silver chloride + magnesium nitrate
5. Iron (II) sulphide + oxygen gas → Iron (II) oxide + sulphur dioxide
6. Copper hydroxide + carbon dioxide → copper carbonate + carbon dioxide + water
7. Sodium hydroxide + iron (II) nitrate → iron (II) hydroxide + sodium nitrate
8. Aluminium + silver nitrate → aluminium nitrate + silver
9. Iron (II) sulphide + hydrochloric acid → iron (II) chloride + hydrogen sulphide
10. Aluminium oxide + carbon → aluminium + carbon dioxide + oxygen
11. Sulphur + oxygen → sulphur dioxide
12. Lead (IV) oxide + phosphoric acid → lead (IV) phosphate + water
13. Ammonium chloride + calcium hydroxide → ammonia + calcium chloride + water
14. Sodium chloride + sulphuric acid → hydrogen chloride + sodium sulphate
15. Nitric acid + potassium hydroxide → potassium nitrate + water
16. Hydrochloric acid + zinc metal → zinc chloride + hydrogen gas
17. Calcium + water → calcium hydroxide + hydrogen gas