

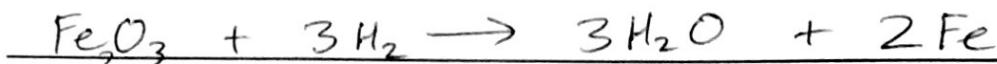
Word Equations

Write the skeleton equation for each of the following reactions. Then balance each of the following chemical equations.

1. hydrogen + oxygen → water



2. iron (III) oxide + hydrogen → water + iron



3. sodium + water → sodium hydroxide + hydrogen



4. calcium carbide + oxygen → calcium + carbon dioxide



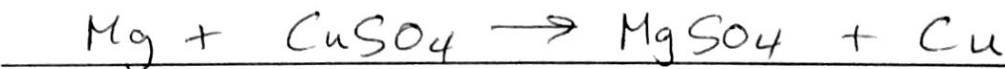
5. potassium iodide + chlorine → potassium chloride + iodine



6. chromium + tin (IV) chloride → chromium (III) chloride + tin



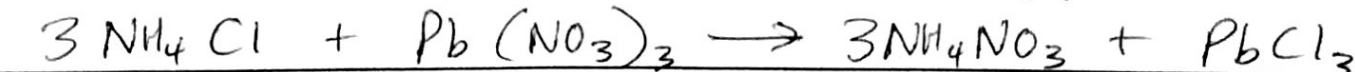
7. magnesium + copper (II) sulphate → magnesium sulphate + copper



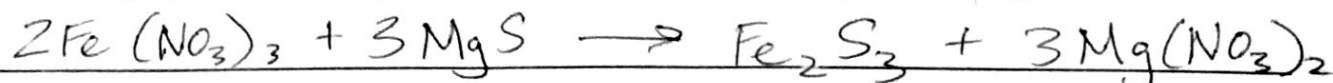
8. zinc sulphate + strontium chloride → zinc chloride + strontium sulphate



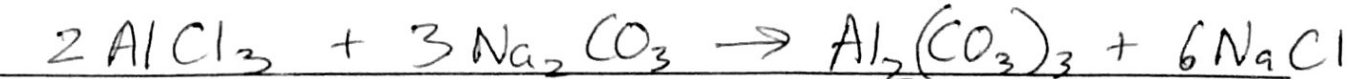
9. ammonium chloride + lead (III) nitrate → ammonium nitrate + lead (III) chloride



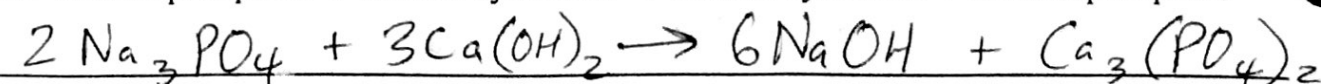
10. iron (III) nitrate + magnesium sulphide → iron (III) sulphide + magnesium nitrate



11. aluminum chloride + sodium carbonate → aluminum carbonate + sodium chloride



12. sodium phosphate + calcium hydroxide → sodium hydroxide + calcium phosphate



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Chemical reactions and chemical equations

Rewrite the following sentences as chemical word equations. Then write the skeleton equation and balance the equation.

1. Iron combines with oxygen to form rust, which is also known as iron (II) oxide.

Word equation: iron + oxygen gas → iron (II) oxide

Balanced equation: 2Fe + O₂ → 2FeO

2. A solution of hydrogen chloride reacts with sodium carbonate to produce carbon dioxide, sodium chloride, and water.

Word equation: hydrogen chloride + sodium carbonate → carbon dioxide + sodium chloride + water

Balanced equation: 2HCl + Na₂CO₃ → CO₂ + 2NaCl + H₂O

3. When aluminum metal is exposed to oxygen, a metal oxide called aluminum oxide is formed.

Word equation: aluminum + oxygen gas → aluminum oxide

Balanced equation: 4Al + 3O₂ → 2Al₂O₃

4. Water reacts with powdered sodium oxide to produce a solution of sodium hydroxide.

Word equation: water + sodium oxide → sodium hydroxide

Balanced equation: H₂O + Na₂O → 2NaOH

5. Hydrogen gas reacts with nitrogen trifluoride gas to form nitrogen gas and hydrogen fluoride.

Word equation: hydrogen gas + nitrogen trifluoride → nitrogen gas + hydrogen fluoride

Balanced equation: 3H₂ + 2NF₃ → N₂ + 6HF

6. Chromium (III) sulphate reacts with potassium carbonate to form chromium (III) carbonate and potassium sulphate.

Word equation: chromium (III) sulphate + potassium carbonate → chromium (III) carbonate + potassium sulphate

Balanced equation: Cr₂(SO₄)₃ + 3K₂CO₃ → Cr₂(CO₃)₃ + 3K₂SO₄

7. Potassium chlorate when heated becomes oxygen gas and potassium chloride.

Word equation: potassium chlorate → oxygen gas + potassium chloride

Balanced equation: 2KClO₃ → 3O₂ + 2KCl

8. A piece of metallic zinc is placed in a blue solution of copper (II) sulphate. A reddish brown layer of metallic copper forms in a clear solution of zinc sulphate.

Word equation: Zinc + copper (II) sulphate → copper + zinc sulphate

Balanced equation: Zn + CuSO₄ → Cu + ZnSO₄

sodium chloride + water.
Fluoride
potassium sulphate