



COMPLETING WORD EQUATIONS

Complete the following word equations:

Combustion (of metals)

metal + oxygen → metal oxide

calcium + oxygen →

magnesium + oxygen →

iron + oxygen →

lead + oxygen →

Combustion (alkanes – contain C & H)

alkane + oxygen → carbon dioxide + water

methane (CH₄) + oxygen →

ethane (C₂H₆) + oxygen →

propane (C₃H₈) + oxygen →

Decomposition (water)

water (H₂O) → hydrogen + oxygen

water →

Decomposition (carbonates)

metal carbonate → metal oxide + carbon dioxide

copper carbonate →

lead carbonate →

zinc carbonate →

iron carbonate →



An acid reacting with a metal, alkali or carbonate will produce a salt. The salt produced will depend on the metal present and the type of acid:

hydrochloric acid → _____ **chloride**

sulfuric acid → _____ **sulfate**

nitric → _____ **nitrate**

Acid + metal

acid + metal → salt + hydrogen

e.g. hydrochloric acid + zinc → zinc chloride + hydrogen

sulfuric acid + calcium →

nitric acid + magnesium →

hydrochloric acid + iron →

nitric acid + copper →

hydrochloric acid + lead →

Acid + alkali– [contain hydroxide] (neutralisation)

acid + alkali → salt + water

e.g. hydrochloric acid + sodium hydroxide → sodium chloride + water

sulfuric acid + potassium hydroxide →

nitric acid + calcium hydroxide →

hydrochloric acid + potassium hydroxide →

nitric acid + sodium hydroxide →

hydrochloric acid + calcium hydroxide →



CHEMICAL EQUATIONS

Acid + carbonate

acid + metal carbonate \rightarrow salt + water + carbon dioxide

e.g. hydrochloric acid + calcium carbonate \rightarrow calcium chloride + water + carbon dioxide

sulfuric acid + magnesium carbonate \rightarrow

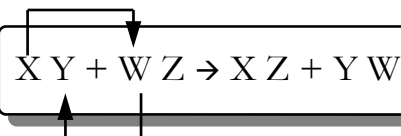
nitric acid + sodium carbonate \rightarrow

hydrochloric acid + potassium carbonate \rightarrow

nitric acid + zinc carbonate \rightarrow

hydrochloric acid + lead carbonate \rightarrow

Precipitation



e.g.. zinc sulfate + lead (II) nitrate \rightarrow lead (II) sulfate + zinc nitrate

sodium carbonate + copper (II) sulfate \rightarrow

aluminium chloride + calcium hydroxide \rightarrow

potassium carbonate + copper (II) sulfate \rightarrow

magnesium sulfate + barium nitrate \rightarrow

sodium hydroxide + magnesium chloride \rightarrow