

Chemical Equations

Here are some useful equations to use for reference...

REACTANTS \longrightarrow **PRODUCTS**

ACID + BASE \longrightarrow **SALT + WATER**

ACID + METAL \longrightarrow **SALT + HYDROGEN GAS**

ACID + CARBONATE \longrightarrow **SALT + CARBON DIOXIDE + WATER**

1. For each of the following equations, circle the reactants.

(a) copper + oxygen \longrightarrow copper oxide

(b) magnesium + hydrochloric acid \longrightarrow magnesium chloride + hydrogen

(c) $\text{H Cl} + \text{Na OH} \longrightarrow \text{Na Cl} + \text{H}_2\text{O}$

(d) $\text{H NO}_3 + \text{Na OH} \longrightarrow \text{Na NO}_3 + \text{H}_2\text{O}$

2. For each of the following equations, circle the products.

(a) nitric acid + calcium \longrightarrow calcium nitrate + hydrogen

(b) sulphuric acid + zinc \longrightarrow zinc sulphate + hydrogen

(c) $\text{H}_2 \text{SO}_4 + \text{Fe} \longrightarrow \text{Fe SO}_4 + \text{H}_2$

(d) $\text{H}_2 \text{SO}_4 + \text{Ca CO}_3 \longrightarrow \text{Ca SO}_4 + \text{CO}_2 + \text{H}_2\text{O}$

3. Complete the following word equations using this reference

acid + base \longrightarrow salt + water

(a) hydrochloric acid + sodium hydroxide \longrightarrow

(b) nitric acid + calcium hydroxide \longrightarrow

(c) sulphuric acid + ammonium hydroxide \longrightarrow

(d) carbonic acid + magnesium hydroxide \longrightarrow

4. Complete the following word equations using this reference

acid + metal \longrightarrow salt + hydrogen

(a) hydrochloric acid + magnesium \longrightarrow

(b) nitric acid + iron \longrightarrow

(c) carbonic acid + calcium \longrightarrow

(d) sulphuric acid + aluminium \longrightarrow

5. Complete the following word equations using this reference

acid + carbonate \longrightarrow salt + carbon dioxide + water

(a) hydrochloric acid + magnesium carbonate \longrightarrow

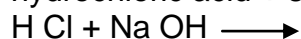
(b) nitric acid + iron carbonate \longrightarrow

(c) carbonic acid + calcium carbonate \longrightarrow

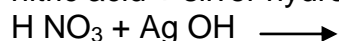
(e) sulphuric acid + aluminium carbonate \longrightarrow

6. Complete the equations using both words and formulae.

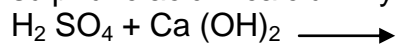
(a) hydrochloric acid + sodium hydroxide \longrightarrow



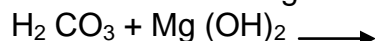
(b) nitric acid + silver hydroxide \longrightarrow



(c) sulphuric acid + calcium hydroxide \longrightarrow



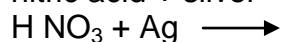
(d) carbonic acid + magnesium hydroxide \longrightarrow



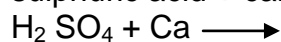
(e) hydrochloric acid + sodium \longrightarrow



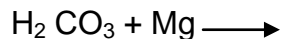
(f) nitric acid + silver \longrightarrow



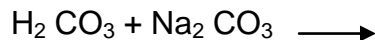
(g) sulphuric acid + calcium \longrightarrow



(h) carbonic acid + magnesium \longrightarrow



(i) carbonic acid + sodium carbonate \longrightarrow



(j) sulphuric acid + iron carbonate \longrightarrow



(k) nitric acid + potassium carbonate \longrightarrow

