

## BALANCING CHEMICAL EQUATIONS

- $C_3H_8 + 5 O_2 \rightarrow 3 CO_2 + 4 H_2O$
- $2 KClO_3 \rightarrow 2 KCl + 3 O_2$
- $Mg + 2 HCl \rightarrow MgCl_2 + H_2$
- $2 Fe_2O_3 + 3 C \rightarrow 4 Fe + 3 CO_2$
- $4 NH_3 + 5 O_2 \rightarrow 4 NO + 6 H_2O$
- $2 CH_3OH + 2 O_2 \rightarrow 2 CO + 2 H_2O$
- $CaCO_3 + 2 HCl \rightarrow CaCl_2 + H_2O + CO_2$
- $5 FeCl_2 + KMnO_4 + 8 HCl \rightarrow 5 FeCl_3 + KCl + MnCl_2 + 4 H_2O$
- $CaC_2 + 2 H_2O \rightarrow Ca(OH)_2 + C_2H_2$
- $2 Al + 3 H_2SO_4 \rightarrow 3 H_2 + Al_2(SO_4)_3$
- $3 Cu + 8 HNO_3 \rightarrow 2 NO + 4 H_2O + 3 Cu(NO_3)_2$
- $2 Fe(OH)_3 + 3 H_2SO_4 \rightarrow Fe_2(SO_4)_3 + 6 H_2O$

On this page, the chemical names for different reactions are given, write down their formulas in a skeleton equation (using the ionic charges of various elements sheet), and then balance the equation you wrote.

**Hint: In the examples below the gases made from only one element are actually made of molecules containing 2 atoms of that element, whereas the solids made from only one element are made from just 1 atom of that element.**

1. Copper(III) oxide combines with hydrogen gas to produce solid copper and water.



2. Lead (II) nitrate combines with potassium iodide to create lead (II) iodide and potassium nitrate.



3. Calcium metal and water combine to produce calcium hydroxide and hydrogen gas.



4. Lead(II) sulphide and oxygen gas combine to form lead and sulphur dioxide.



5. Hydrogen sulphide can be broken into hydrogen gas and solid sulphur.

