

Rewrite each word equation as a balanced chemical equation. Indicate the type of reaction.

Reaction Type: (Synthesis, Decomp, Single Displac, Double Displac, Combustion, Neutralization)	Word Equation
Synthesis	tin + bromine gas \rightarrow tin(II) bromide $\text{Sn} + \text{Br}_2 \rightarrow \text{SnBr}_2$
Synthesis	potassium + fluorine gas \rightarrow potassium fluoride $2\text{K} + \text{F}_2 \rightarrow 2\text{KF}$
Decomp	iron(II) oxide \rightarrow iron + oxygen gas $2\text{FeO} \rightarrow 2\text{Fe} + \text{O}_2$
Synthesis	water + dinitrogen pentoxide \rightarrow nitric acid $\text{H}_2\text{O} + \text{N}_2\text{O}_5 \rightarrow 2\text{HNO}_3$
Single	lithium + water \rightarrow lithium hydroxide + hydrogen gas $2\text{Li} + 2\text{H}_2\text{O} \rightarrow 2\text{LiOH} + \text{H}_2$
decomp	calcium carbonate \rightarrow calcium + carbon dioxide + oxygen $2\text{CaCO}_3 \rightarrow 2\text{Ca} + 2\text{CO}_2 + \text{O}_2$
single	sodium + water \rightarrow sodium hydroxide + hydrogen $2\text{Na} + 2\text{H}_2\text{O} \rightarrow 2\text{NaOH} + \text{H}_2$
decomp	sulphurous acid (H_2SO_3) \rightarrow sulphur dioxide + water $\text{H}_2\text{SO}_3 \rightarrow \text{SO}_2 + \text{H}_2\text{O}$
single	silver nitrate + magnesium \rightarrow magnesium nitrate + silver $2\text{AgNO}_3 + \text{Mg} \rightarrow \text{Mg}(\text{NO}_3)_2 + 2\text{Ag}$
single	chlorine + calcium bromide \rightarrow bromine + calcium chloride $\text{Cl}_2 + \text{CaBr}_2 \rightarrow \text{Br}_2 + \text{CaCl}_2$
double	lead(II) nitrate + sodium iodide \rightarrow lead(II) iodide + sodium nitrate $\text{Pb}(\text{NO}_3)_2 + 2\text{NaI} \rightarrow \text{PbI}_2 + 2\text{NaNO}_3$
syn	nitrogen monoxide gas + oxygen gas \rightarrow nitrogen dioxide gas $2\text{NO} + \text{O}_2 \rightarrow 2\text{NO}_2$
decomp	silver carbonate \rightarrow silver oxide + carbon dioxide gas $\text{Ag}_2\text{CO}_3 \rightarrow \text{Ag}_2\text{O} + \text{CO}_2$
decomp	ammonium nitrate \rightarrow water + dinitrogen oxide $\text{NH}_4\text{NO}_3 \rightarrow \text{H}_2\text{O} + \text{N}_2\text{O}$
syn	iron + chlorine \rightarrow iron(III) chloride $2\text{Fe} + 3\text{Cl}_2 \rightarrow 2\text{FeCl}_3$
single	sodium + calcium hydroxide \rightarrow sodium hydroxide + calcium $2\text{Na} + \text{Ca}(\text{OH})_2 \rightarrow 2\text{NaOH} + \text{Ca}$
double	sodium phosphate + magnesium hydroxide \rightarrow magnesium phosphate + sodium hydroxide $2\text{Na}_3(\text{PO}_4) + 3\text{Mg}(\text{OH})_2 \rightarrow \text{Mg}_3(\text{PO}_4)_2 + 6\text{NaOH}$

Reaction Type: (Synthesis, Decomposition, Single Displacement, Double Displacement, Combustion, Neutralization)	Word Equation
double	sulphuric acid (H_2SO_4) + nickel(III) hydroxide \rightarrow nickel(III) sulphate + water $3\text{H}_2\text{SO}_4 + \text{Ni}(\text{OH})_3 \rightarrow \text{Ni}(\text{SO}_4)_3 + 3\text{H}_2\text{O}$
single	Aqueous silver nitrate and copper metal react to produce aqueous copper (II) nitrate and silver metal. $2\text{AgNO}_3 + \text{Cu} \rightarrow \text{Cu}(\text{NO}_3)_2 + 2\text{Ag}$
double	Solid magnesium chloride and aqueous potassium phosphate react to produce aqueous potassium chloride and solid magnesium phosphate. $3\text{MgCl}_2 + 2\text{K}_3\text{PO}_4 \rightarrow 6\text{KCl} + \text{Mg}_3(\text{PO}_4)_2$
weird! so.	Hydrogen gas and carbon dioxide gas react to produce carbon monoxide gas and liquid water. $\text{H}_2 + \text{CO}_2 \rightarrow \text{CO} + \text{H}_2\text{O}$
syn	Solid potassium reacts with oxygen gas to produce solid potassium oxide. $4\text{K} + \text{O}_2 \rightarrow 2\text{K}_2\text{O}$
syn	Solid aluminum metal combines with fluorine gas to produce solid aluminum fluoride. $2\text{Al} + 3\text{F}_2 \rightarrow 2\text{AlF}_3$
syn	Potassium metal combines with oxygen gas to produce solid potassium oxide. $4\text{K} + \text{O}_2 \rightarrow 2\text{K}_2\text{O}$
double	Lithium sulphate combines with barium chloride and yields solid barium sulphate and lithium chloride. $\text{Li}_2\text{SO}_4 + \text{BaCl}_2 \rightarrow \text{BaSO}_4 + 2\text{LiCl}$
double	Aluminum chloride combines with sodium carbonate to produce aluminum carbonate and sodium chloride. $2\text{AlCl}_3 + 3\text{Na}_2\text{CO}_3 \rightarrow \text{Al}_2(\text{CO}_3)_3 + 6\text{NaCl}$
double	sodium sulphate + calcium chloride \rightarrow sodium chloride + calcium sulphate $\text{Na}_2\text{SO}_4 + \text{CaCl}_2 \rightarrow 2\text{NaCl} + \text{CaSO}_4$
syn	magnesium + nitrogen \rightarrow magnesium nitride $3\text{Mg} + \text{N}_2 \rightarrow \text{Mg}_3\text{N}_2$
double	strontium hydroxide + lead(II) bromide \rightarrow strontium bromide + lead(II) hydroxide $\text{Sr}(\text{OH})_2 + \text{Pb}(\text{Br})_2 \rightarrow \text{SrBr}_2 + \text{Pb}(\text{OH})_2$
syn	sodium + oxygen \rightarrow sodium oxide $4\text{Na} + \text{O}_2 \rightarrow 2\text{Na}_2\text{O}$
syn	nitrogen + hydrogen \rightarrow ammonia (NH_3) $\text{N}_2 + 3\text{H}_2 \rightarrow 2\text{NH}_3$
decomp	hydrogen chloride \rightarrow hydrogen + chlorine $2\text{HCl} \rightarrow \text{H}_2 + \text{Cl}_2$
single	aluminum iodide + bromine \rightarrow aluminum bromide + iodine $2\text{AlI}_3 + 3\text{Br}_2 \rightarrow 2\text{AlBr}_3 + 3\text{I}_2$
double	hydrochloric acid (HCl) + sodium hydroxide (a base) \rightarrow sodium chloride + water $\text{HCl} + \text{NaOH} \rightarrow \text{NaCl} + \text{H}_2\text{O}$

