

More Practice With Chemical Reactions

SNC2D

Note: Chemical equations often contain information on the states of the reactant and products:

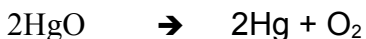
(s) for solid, (l) for liquid, (g) for gas, and (aq) for aqueous, i.e. in solution

Ex. Chemists in the 18th century prepared oxygen gas by heating solid mercury (II) oxide, leaving globules of mercury metal.

Write the word equation for this reaction:

mercury (II) oxide → mercury + oxygen gas

Write the balanced chemical equation (including states) for this reaction:



Identify the type of chemical reaction: decomposition

1. When zinc metal is mixed with aqueous copper (II) sulphate, copper metal and aqueous zinc sulphate are produced.

Write the word equation for this reaction:

zinc + copper(II) sulfate → copper + zinc sulfate

Write the balanced chemical equation (including states) for this reaction:



Identify the type of chemical reaction: single displacement

2. Ammonia, which is a gas, may be synthesized from the reaction of hydrogen and nitrogen gases.

Write the word equation for this reaction:

hydrogen + nitrogen → ammonia

Write the balanced chemical equation (including states) for this reaction:



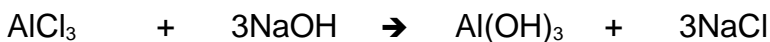
Identify the type of chemical reaction: synthesis

3. When aqueous aluminum chloride and aqueous sodium hydroxide react, solid aluminum hydroxide and aqueous sodium chloride form.

Write the word equation for this reaction:

Aluminum chloride + sodium hydroxide → aluminum hydroxide + sodium chloride

Write the balanced chemical equation (including states) for this reaction:



Identify the type of chemical reaction: ____double displacement____

4. Chlorine gas and sodium metal can be produced by passing an electric current through hot, molten sodium chloride.

Write the word equation for this reaction:

sodium chloride → chlorine gas + sodium

Write the balanced chemical equation (including states) for this reaction:



Identify the type of chemical reaction: ____decomposition____

5. When aqueous zinc bromide and aqueous silver nitrate react, solid silver bromide and aqueous zinc nitrate are produced.

Write the word equation for this reaction:

zinc bromide + silver nitrate → silver bromide + zinc nitrate

Write the balanced chemical equation (including states) for this reaction:



Identify the type of chemical reaction: ____double displacement____