

Writing Balanced Equations Answers

1. Recall the chemical formula of the following compounds:

a. water H_2O

b. ammonia NH_3

c. methane CH_4

d. hydrochloric acid HCl

e. sulfuric acid H_2SO_4

f. nitric acid HNO_3

2. Deduce the chemical formula of the following compounds:

a. magnesium oxide MgO

b. potassium hydroxide KOH

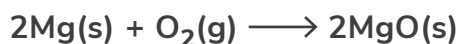
c. sodium hydrogen carbonate NaHCO_3

d. lithium sulfate Li_2SO_4

e. calcium nitrate $\text{Ca}(\text{NO}_3)_2$

f. ammonium phosphate $(\text{NH}_4)_3\text{PO}_4$

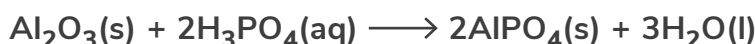
3. Write a balanced full equation for the reaction between magnesium metal and oxygen to produce magnesium oxide.



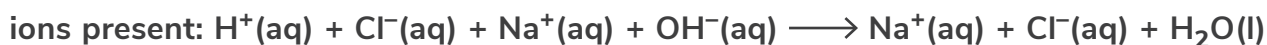
4. Write a balanced full equation for the reaction between lithium hydroxide solution and sulfuric acid to produce soluble lithium sulfate and water.



5. Write a balanced full equation for the reaction between solid aluminium oxide and phosphoric acid to produce insoluble aluminium phosphate and water.



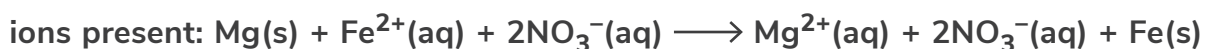
6. Write a balanced ionic equation for the reaction between hydrochloric acid and sodium hydroxide solution to produce sodium chloride and water.



identify spectator ions:



7. Write a balanced ionic equation for the reaction between magnesium metal and iron(II) nitrate solution to produce magnesium nitrate solution and iron metal.



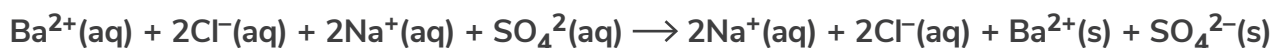
identify spectator ions:



8. Write a balanced ionic equation for the reaction between barium chloride solution and sodium sulfate solution to produce a precipitate of barium sulfate and aqueous sodium chloride.



ions present:



identify spectator ions:

