

Exercise 1.34 – Balancing equations

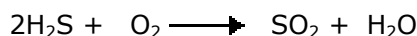
Q134-01 When the following equation is correctly balanced what is the coefficient for O₂?



Q134-02 When the following equation is balanced, what is the coefficient for oxygen?



Q134-03 Hydrogen sulfide, H₂S, reacts with oxygen to form sulphur dioxide and water as shown below:



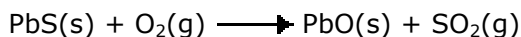
What is the whole number coefficient for oxygen when this equation is balanced?

Q134-04 When this equation:



is balanced correctly the coefficient, x, for O₂ is:

Q134-05 The reaction of lead (II) sulphide with oxygen at high temperature is represented by the unbalanced equation:



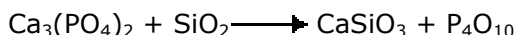
What is the sum of the coefficients in the balanced equation?

Q134-06 The oxidation of nitrogen monoxide can be represented by the word equation:



Write out the balanced equation.

Q134-07 White phosphorus is manufactured by heating phosphate ore with sand and coke in an electric furnace at 1500°C. The phosphorus (V) oxide, initially formed in an inert atmosphere of carbon monoxide, is then reduced by the coke to phosphorus. The first stage in the process may be represented by the *unbalanced* equation.



What is the coefficient for silicon dioxide when the equation is correctly balanced?

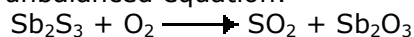
Q134-08 When the following equation is correctly balanced what is the coefficient for oxygen?



Q134-09 When the following equation is correctly balanced what is the coefficient for potassium chlorate (V)?



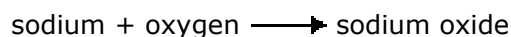
Q134-10 In the manufacture of antimony, the sulphide ore is roasted in oxygen to produce antimony oxide according to the unbalanced equation:



What is the coefficient for oxygen when the equation is correctly balanced?

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Q134-11 Write an equation to represent the following reaction:



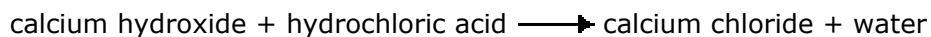
Q134-12 Write a formula equation to represent the following reaction:



Q134-13 Write an equation to represent the following decomposition:



Q134-14 Write an equation to represent the following neutralisation:



Q134-15 Write an equation to represent the following synthesis reaction:



Q134-16 Write the ionic equation for the reaction between sulphuric acid and sodium hydroxide.

Q134-17 Write an ionic equation for the reaction between silver nitrate and sodium chloride forming a white silver chloride precipitate.

Q134-18 Write an ionic equation to represent the reaction between barium chloride and magnesium sulphate

Q134-19 Write an ionic equation to represent the reaction between iron (III) sulphate and sodium hydroxide

Q134-20 Write an ionic equation for the reaction between manganese (IV) oxide and hydrochloric acid.
