TITRATION CALCULATIONS 2

1) 25.0 cm^3 of a solution of sodium hydroxide solution required 21.50 cm^3 of 0.100 mol/dm^3 sulphuric acid for neutralisation. Find the concentration of the sodium hydroxide solution in mol/dm^3.

$H_2SO_4(aq) + 2\ NaOH(aq) \rightarrow Na_2SO_4(aq) + 2\ H_2O(l)$

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..... (3)

2) Find the volume of 1.2 mol/dm^3 hydrochloric acid that reacts with 25.00 cm^3 of 1.50 mol/dm^3 sodium hydroxide.

$HCl(aq) + NaOH(aq) \rightarrow NaCl(aq) + H_2O(l)$

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..... (3)

3) What volume of 0.040 mol/dm^3 calcium hydroxide just neutralises 25.0 cm^3 of 0.100 mol/dm^3 nitric acid?

$Ca(OH)_2(aq) + 2\ HNO_3(aq) \rightarrow Ca(NO_3)_2(aq) + 2\ H_2O(l)$

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..... (3)

4) 25.0 cm^3 of 0.020 mol/dm^3 sulphuric acid neutralises 18.6 cm^3 of barium hydroxide solution.

$H_2SO_4(aq) + Ba(OH)_2(aq) \rightarrow BaSO_4(s) + 2\ H_2O(l)$

a) Find the concentration of the barium hydroxide solution in mol/dm^3.

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..... (3)

b) Find the concentration of the barium hydroxide solution in g/dm^3.

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..... (2)

5) What volume of 0.10 mol/dm^3 calcium hydroxide neutralises 25.0 cm^3 of 0.140 mol/dm^3 sulphuric acid?

$H_2SO_4(aq) + Ca(OH)_2(aq) \rightarrow CaSO_4(s) + 2\ H_2O(l)$

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