

Assessed Homework 2

TITRATION CALCULATIONS

1) Calculate the number of moles in the following.

a) 2 dm³ of 0.05 M HCl (1)

c) 25 cm³ of 0.01 M NaOH (1)

b) 50 litres of 5 M H₂SO₄ (1)

d) 10 cm³ of 0.25 M KOH (1)

2) Calculate the concentration of the following.

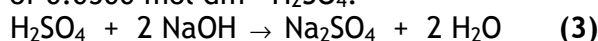
a) 0.400 moles of HCl in 2.00 litres of solution (1)
cm³ of solution (1)

c) 1.05g of NaOH in 500

b) 12.5 moles of H₂SO₄ in 5.00 dm³ of solution (1)
solution (1)

d) 2.56 g of Na₂CO₃ in 250 cm³ of

3) Calculate the concentration of a solution of sodium hydroxide given that 25.0 cm³ of it required 18.8 cm³ of 0.0500 mol dm⁻³ H₂SO₄.



4) Calculate what volume of 0.05 mol dm⁻³ KOH is required to neutralise 25.0 cm³ of 0.0150 mol dm⁻³ HNO₃.



5) A 250 cm³ solution of NaOH was prepared. 25.0 cm³ of this solution required 28.2 cm³ of 0.100 mol dm⁻³ HCl for neutralisation. Calculate what mass of NaOH was dissolved to make up the original 250 cm³ solution.



6) What volume of 5.00 mol dm⁻³ HCl is required to neutralise 20.0 kg of CaCO₃?



Total = (20) % =

Grade =