TITRATION CALCULATIONS

**SECTION A**

**For these questions, your equation will be straight forward to balance.**

1. In a titration, 20 cm3 of 2.0 mol dm-3 HCl reacted with 25 cm3 of NaOH. What was the concentration of the sodium hydroxide?
2. In a titration, 20 cm3 of 0.2 mol dm-3 HCl reacted with 50 cm3 of NaOH. What was the concentration of the sodium hydroxide?
3. In a titration, 20 cm3 of 0.15 mol dm-3 HCl reacted with 25 cm3 of NaOH. What was the concentration of the sodium hydroxide?

In a titration, 20 cm3 of 1.14 mol dm-3 HCl reacted with 25 cm3 of NaOH. What was the concentration of the sodium hydroxide?

**SECTION B**

**For these equations, different acids have been used so you will need to think carefully about how to balance them.**

1. In a titration, 20 cm3 of 1.0 mol dm-3 sulphuric acid, H2SO4, reacted with 25 cm3 of NaOH. What was the concentration of the sodium hydroxide?
2. In a titration, 20 cm3 of 1.0 mol dm-3 nitric acid, HNO3, reacted with 25 cm3 of NaOH. What was the concentration of the sodium hydroxide?
3. In a titration, 20 cm3 of 1.0 mol dm-3 phosphoric acid, H3PO4, reacted with 25 cm3 of NaOH. What was the concentration of the sodium hydroxide?
4. In a titration, 25.0 cm3 of 0.5 mol dm-3 sulphuric acid, H2SO4, reacted with 25 cm3 of KOH. What was the concentration of the potassium hydroxide?

**COMMON FORMULAE**

* Hydrochloric acid = HCl
* Nitric acid = HNO3
* Sulphuric acid = H2SO4
* Sodium hydroxide – NaOH
* Sodium sulphate = Na2SO4
* Sodium nitrate = NaNO3
* Phosphoric acid = H3PO4
* Sodium phosphate = Na3PO4
* Potassium sulphate = K2