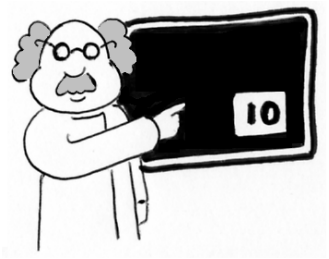


STARTER FOR 10...

3.4. Acid-base titrations

Some students are carrying out an investigation into the neutralisation reactions between strong acids and bases and weak acids and bases.

They titrate 25 cm^3 samples of four different bases against four different acids as shown in the table below.

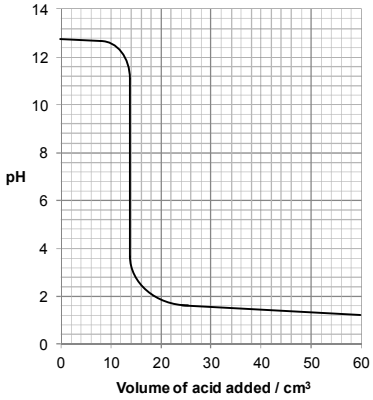
For each of the titrations **1** - **4**;

(a) Choose the correct titration curve from those shown below,

(b) Name a suitable indicator for the titration,

(c) For titrations **1** and **2**, calculate the concentration of the acid.

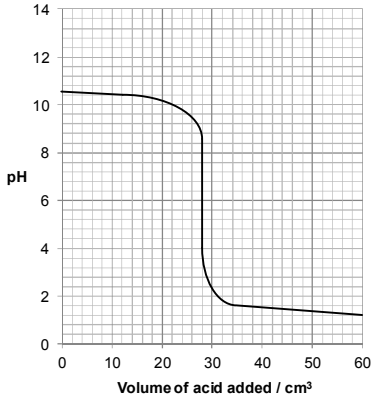
Titration	Base	Acid
1	0.100 mol dm^{-3} NaOH	HCl
2	0.100 mol dm^{-3} KOH	HCOOH
3	0.100 mol dm^{-3} NH_3 solution	HNO_3
4	0.100 mol dm^{-3} $NaHCO_3$	CH_3COOH



Titration number: 1 2 3 4

Suitable indicator: .....

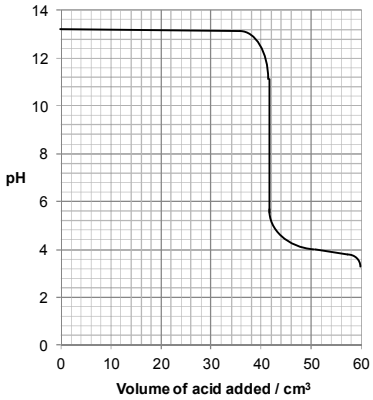
Conc. of acid (if needed): .....



Titration number: 1 2 3 4

Suitable indicator: .....

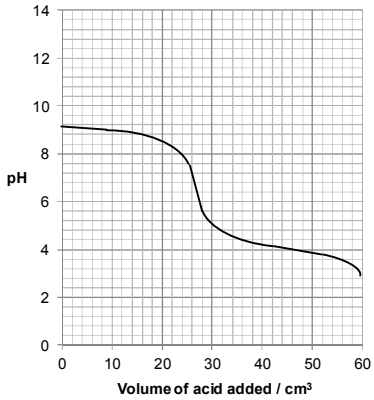
Conc. of acid (if needed):.....



Titration number: 1 2 3 4

Suitable indicator: .....

Conc. of acid (if needed):.....



Titration number: 1 2 3 4

Suitable indicator: .....

Conc. of acid (if needed):.....