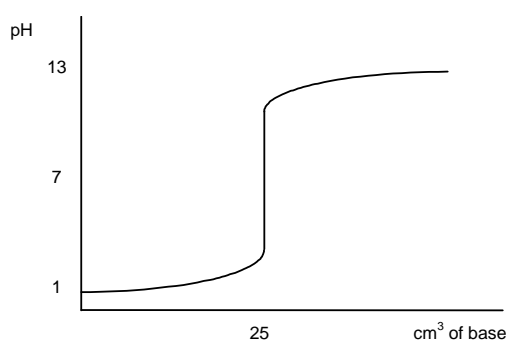


Titration curves

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Chemrevise.org

Titration curves



Titration curves are made by measuring the pH of the solution in the conical flask each time a small amount of acid or base is added to the mixture.

Normally base is added into the acid

Constructing a PH curve

Calibrate pH meter first by measuring known pH of a buffer solution. This is necessary because pH meters can lose accuracy on storage

Method

- Measure initial pH of the acid
 - Add alkali in small amounts noting the volume added
 - Stir mixture to equalise the pH
 - Measure and record the pH to 1 dp
 - When approaching endpoint add in smaller volumes of alkali
 - Add until alkali in excess
- Can improve accuracy by **maintaining solution** constant temperature

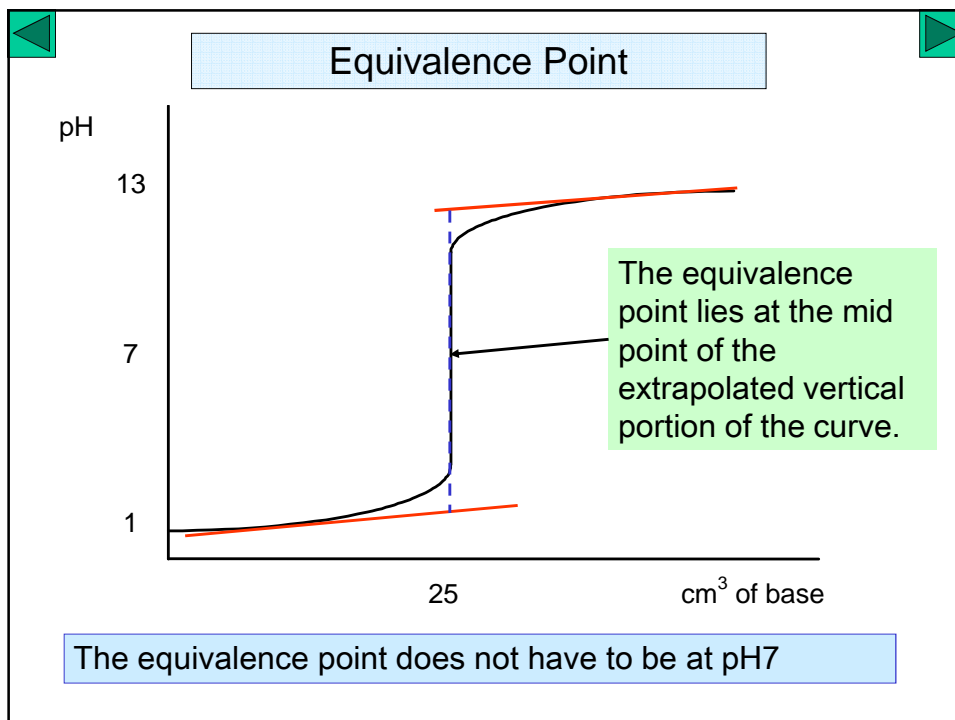
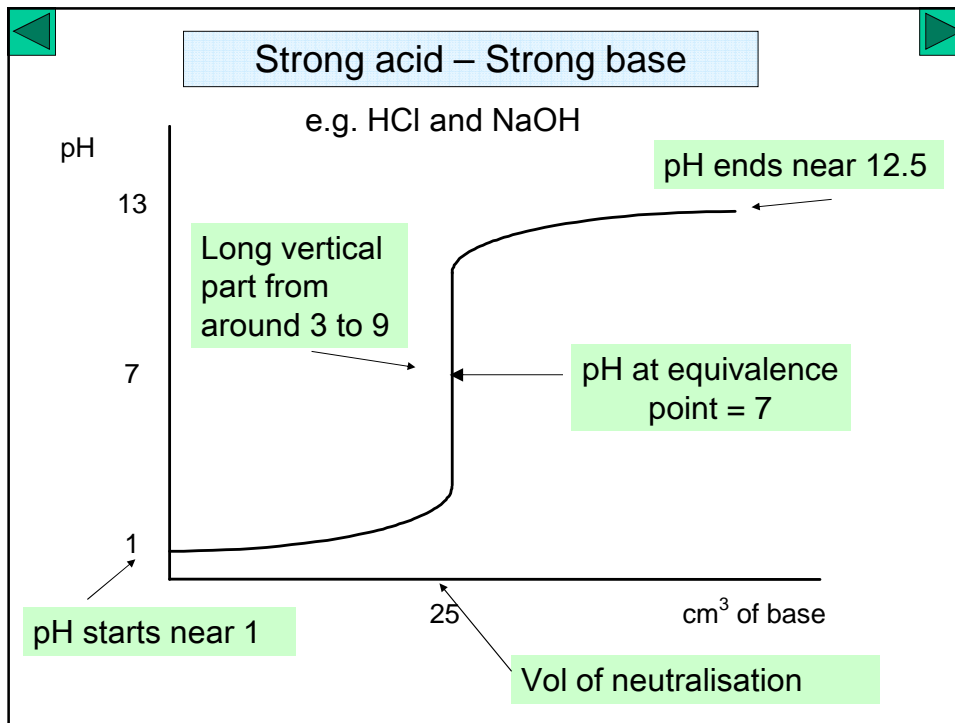
It is a standard question at A2 to be asked to sketch accurately a pH curve.

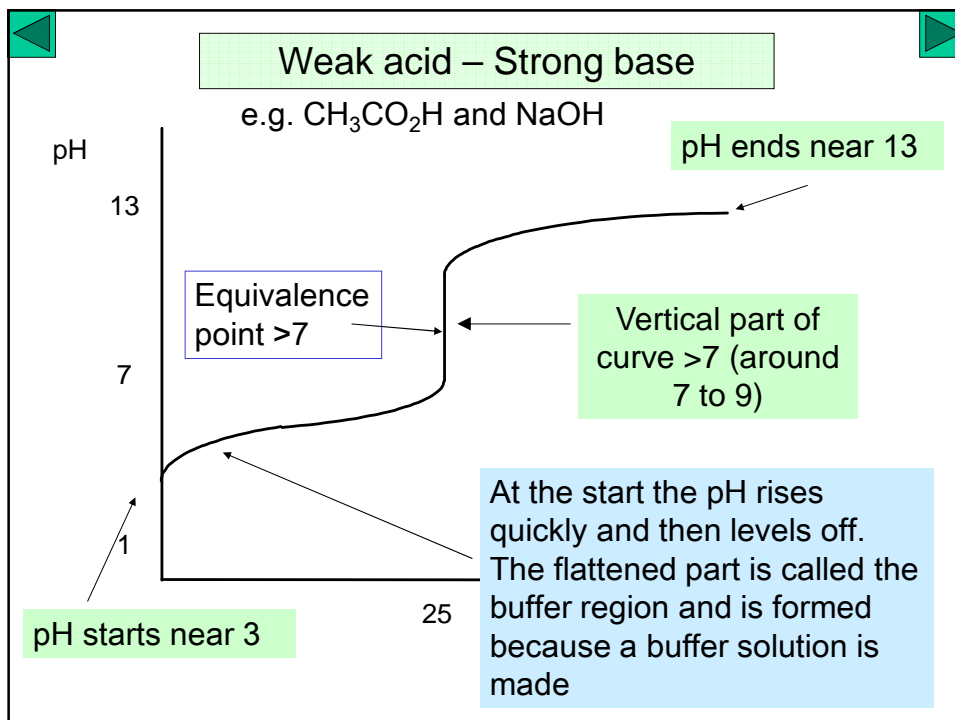
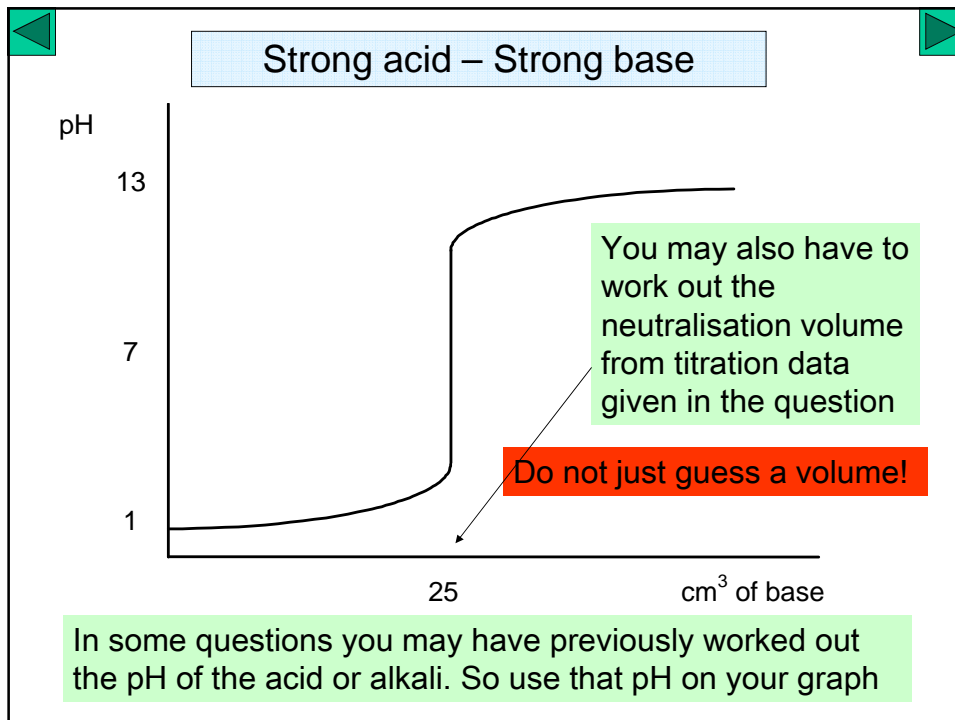
There are 4 main types of curve

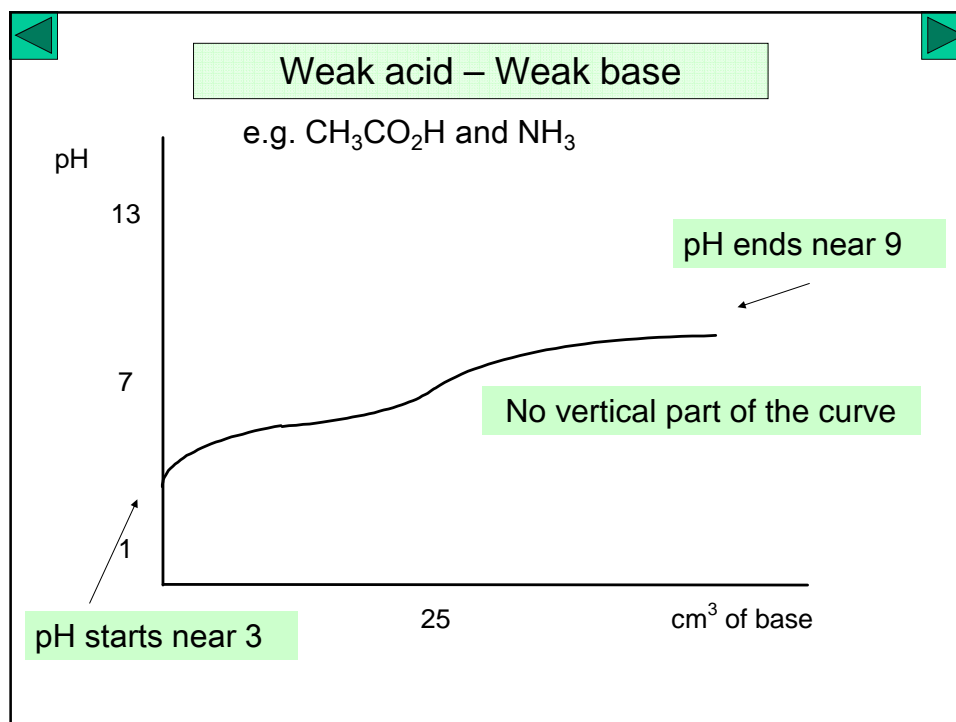
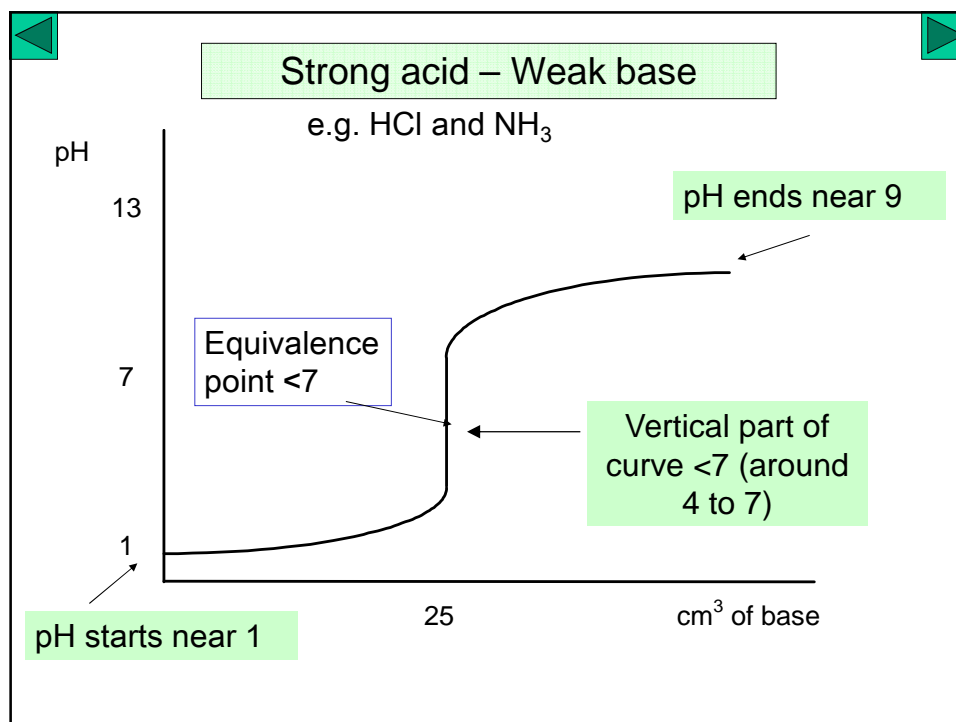
- Strong acid and strong base
- Weak acid and strong base
- Strong acid and weak base
- Weak acid and weak base

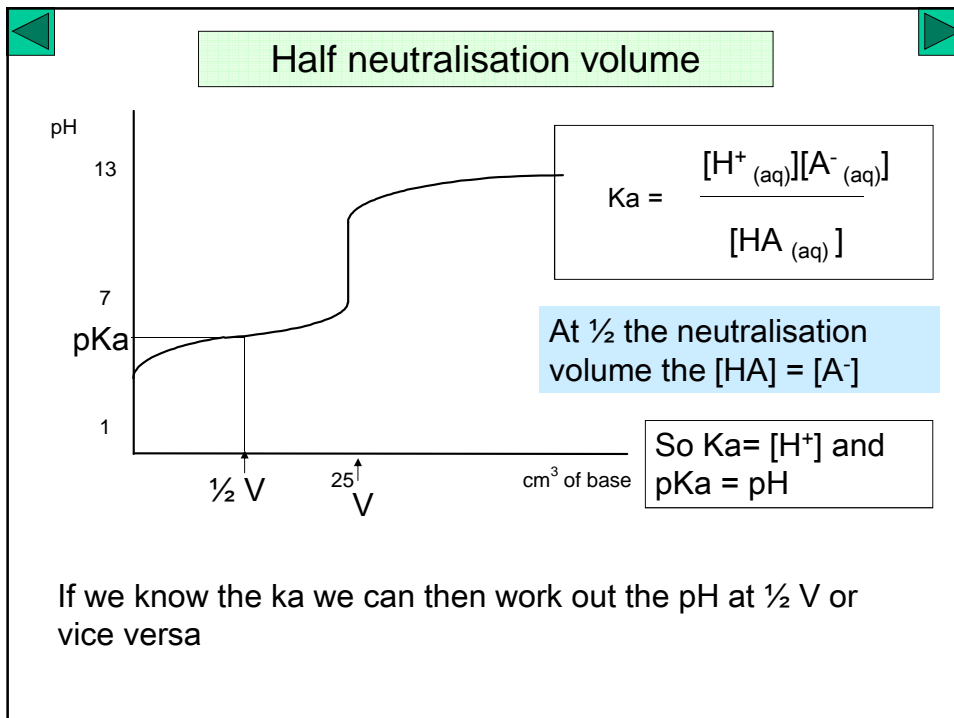
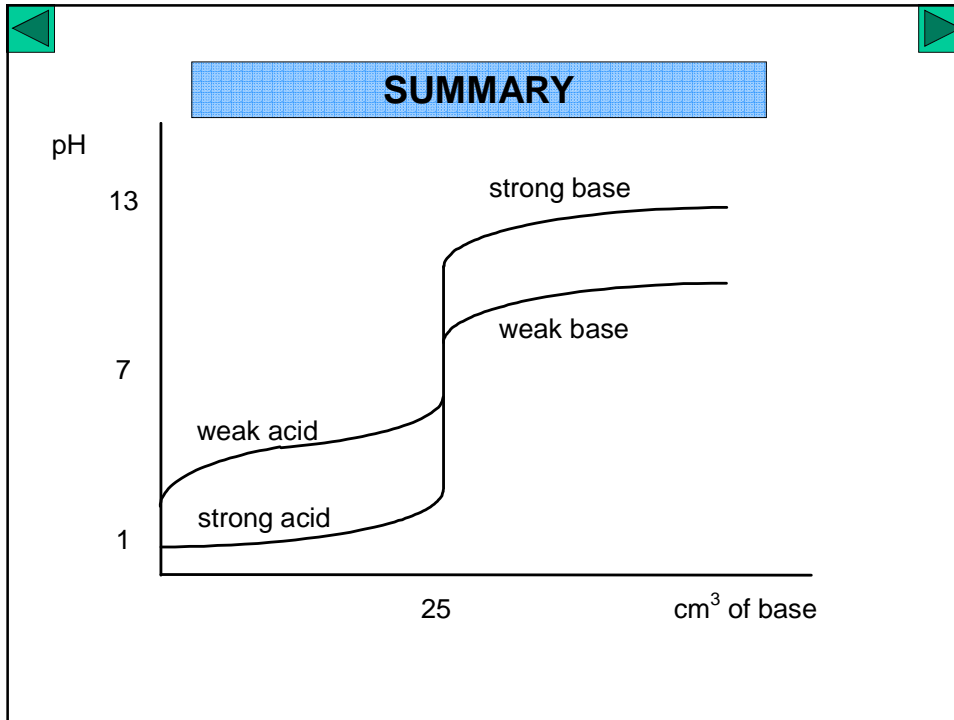
The Key points to sketching a curve

1. Initial and final pH
2. Volume at neutralisation
3. General Shape (pH at neutralisation)









Choosing an Indicator

Indicators can be considered as weak acids. The acid must have a different colour to its conjugate base

