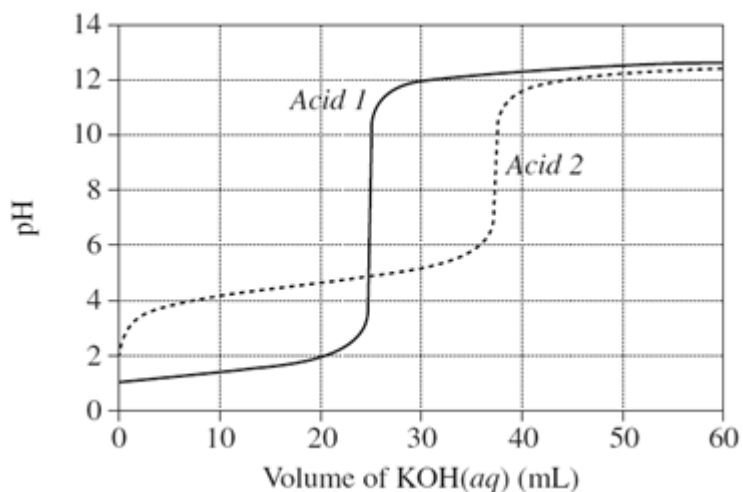**Friday Worksheet**   **Name:** ……………….

Volumetric 2

1) The graph below shows changes in pH for the titrations of equal volumes of solutions of two monoprotic acids, Acid 1 and Acid 2.

a) Explain the differences between Acid 1 and Acid 2 in terms of their relative strengths and concentrations.

b) Name the salt produced by the reaction of ethanoic acid with KOH(aq).

c) Calculate the concentration of hydrogen ions when 20 mL of KOH(aq) has been added to Acid 1.

d) Why would phenolphthalein be a suitable indicator for both titrations?

e) A student was heard to say "At the end of the titration we have reached the "neutral point" . Explain why is this term best avoided using the titration of a solution of ethanoic acid against a 0.100M NaOH.

f) What is the difference between a strong acid and a concentrated acid?

Acid-base indicators

Name	pH range	Colour change		K_a
		Acid	Base	
Thymol blue	1.2–2.8	red	yellow	2×10^{-2}
Methyl orange	3.1–4.4	red	yellow	2×10^{-4}
Bromophenol blue	3.0–4.6	yellow	blue	6×10^{-5}
Methyl red	4.2–6.3	red	yellow	8×10^{-6}
Bromothymol blue	6.0–7.6	yellow	blue	1×10^{-7}
Phenol red	6.8–8.4	yellow	red	1×10^{-8}
Phenolphthalein	8.3–10.0	colourless	red	5×10^{-10}