For the titration curve of 1.00g of HA with KOH shown below

- Write the balanced equation for the titration reaction
- Label the Y-axis
- Label the graph to show where HA is the major species present
- Label the graph to show where A⁻ is the major species present
- Label the equivalence and half equivalence points
- Show on the graph the point at when the reaction is over
- If the titrant concentration is 0.200M, find the molar mass of HA
- What is the K_a of the acid?
- Explain the equivalence point pH (why it isn't 7)
- Sketch the titration curve for a *weaker* acid that has about the same molar mass as HA
- Sketch the titration curve for an acid that has the same K_a as HA but a molar mass that is *half* that of HA
- Circle the region of the curve at which you'd want a visual acid-base indicator to change color

Volume of base added (mL)