## Titration Curve

weak acid with strong base


## mL of base

The START of the titration is the same as a regular (type 1) weak acid problem. You know $K_{\mathrm{a}}$ and [HA] so you can calculate pH .

$$
\mathrm{HA} \rightleftharpoons \mathrm{H}^{+}+\mathrm{A}^{-}
$$

## The half-way point is important!

After you have determined the equivalence point (endpoint) of the titration, go to half that value. The pH at the half-titration point is equal to the $\mathrm{p} K_{\mathrm{a}}$ of the weak acid.


