Work through the ChemCAL module that deal with acids and bases: *"Acids and Bases"*

1. In a titration experiment, 50.0 mL of 0.100 M HCl is reacted with NaOH.

    (a) Calculate the pH when the following quantities of 0.100 M NaOH have been added:

        (i)   0.0 mL (initial pH)
        (ii)   25.0 mL
        (iii) 45.0 mL
        (iv)   50.0 mL
        (v)   55.0 mL
        (vi)   75.0 mL

    (b) Using the calculated values, plot the pH curve for the titration.

2. Complete the following table by giving the conjugate acid or conjugate base.

Acid	Base	Acid	Base
HCl		HCO_3^-	
CH_3CH_2COOH			HCO_3^-
	PO_4^{3-}		NH_3
	CN^-	$CH_3CH_2NH_3^+$	