

# Titration Curves

Weak Base	+	Strong Acid	
0.1 M NH <sub>3</sub>		0.1 M HCl	
25.0 mL		25.0 mL	
2.5 x 10 <sup>-3</sup> mol	-	2.5 x 10 <sup>-3</sup> mol	= 0.00

$$V = 25 + 25 \text{ mL}$$



$$x = 5.9 \times 10^{-6} \quad \text{pH} = 5.27$$

$$K_a = 5.6 \times 10^{-10} = \frac{[\text{NH}_3][\text{H}^+]}{[\text{NH}_4^+]}$$

[NH <sub>4</sub> ]	[NH <sub>3</sub> ]	[H <sup>+</sup> ]
0.05	0.00	0.0
0.05 - x	x	x

$$5.6 \times 10^{-10} = \frac{[x^2]}{[0.05 - x]}$$

