Strong Acid + Strong Base

0.1 M HCl   0.1 M NaOH

25.0 mL   35.0 mL

2.5×10^{-3} mol 3.5×10^{-3} mol OH$^-$

V = 25 + 35 mL

$[OH^-] = \dfrac{1.0 \times 10^{-3} \text{ mol}}{60 \times 10^{-3} \text{ L}}$

$[OH-] = 1.67 \times 10^{-2}$ M

pOH = 1.78

pH = 12.22

pH

10.0

5.0

0   10   20   30   40   50

volume NaOH added (mL)