

10/2/09, ~~10/2/09~~
P.1

$$1.0 \text{ L} \times \frac{0.1 \text{ mol NaOH}}{1.0 \text{ L}} = 0.1 \text{ mol NaOH}$$



$$0.1 \text{ mol } \cancel{\text{NaOH}} \times \frac{1 \text{ mol HCl}}{1 \text{ mol } \cancel{\text{NaOH}}} = 0.1 \text{ mol HCl}$$

$$0.1 \text{ mol HCl} \times \frac{1 \text{ L}}{1 \text{ mol HCl}} = 0.1 \text{ L of } 1.0 \text{ mol HCl soln.}$$



100 mL

$$\text{pH if } [\text{H}_3\text{O}^+] = 0.000057 \text{ M}$$

$$\text{pH} = -\log(0.000057)$$

$$\text{pH} = \cancel{2.241} \\ 4.2$$

$$pH = -\log [H_3O^+]$$

$$[H_3O^+] = 10^{-pH} = \log^{-1}(-pH)$$

$$[H_3O^+] = 8.6$$

$$\rightarrow \log^{-1}(-8.6)$$

$$[H_3O^+] = \frac{2.5 \times 10^{-9} \text{ mol}}{L}$$

$$pOH = -\log [OH^-]$$

$$pH + pOH = 14$$

Given pH
What's $[OH^-]$?

$$14 - pH = pOH$$

$$[OH^-] = \log^{-1}(-pOH)$$

Reactants

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insoluble

Soluble