Salts

product of neutralization reaction

strong base   strong acid

1.00 M   NaOH   150 mL   0.500 M   HCl

$$\text{mol OH}^- = \text{mol H}^+$$

$$\frac{x \text{ L}}{} \left| \frac{1.00 \text{ mol}}{\text{L}} = 0.075 \text{ mol} = \frac{0.15 \text{ L}}{} \right| \frac{0.500 \text{ mol}}{\text{L}}$$

$$x = 0.075 \text{L}$$

$$\text{H}^+ + \text{Cl}^- + \text{Na}^+ + \text{OH}^- \rightarrow \text{H}_2\text{O} + \text{Na}^+ + \text{Cl}^-$$

$$[\text{Na}^+] = \frac{0.075 \text{ mol}}{.150 \text{ L} + .075 \text{ L}} = 0.333 \text{ M} = [\text{Cl}^-] \qquad \text{NaCl (s)}$$