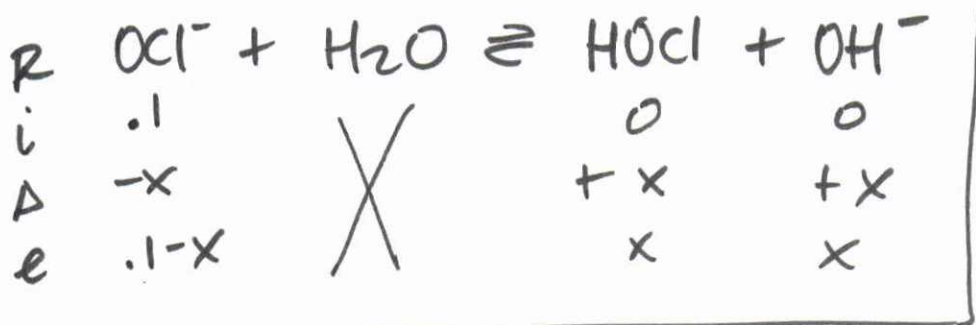


CALCULATING THE PH OF SALT SOLUTIONS

- We can determine if salt solutions are acidic, basic, or neutral by inspection, but in order to determine the exact pH we must know the exact concentration of H^+ , (OH^-)

- Calculate the pH of a 0.1 M solution of sodium hypochlorite.



$$K_b = 3.3 \times 10^{-7} = \frac{[HOCl][OH^-]}{[OCl^-]}$$

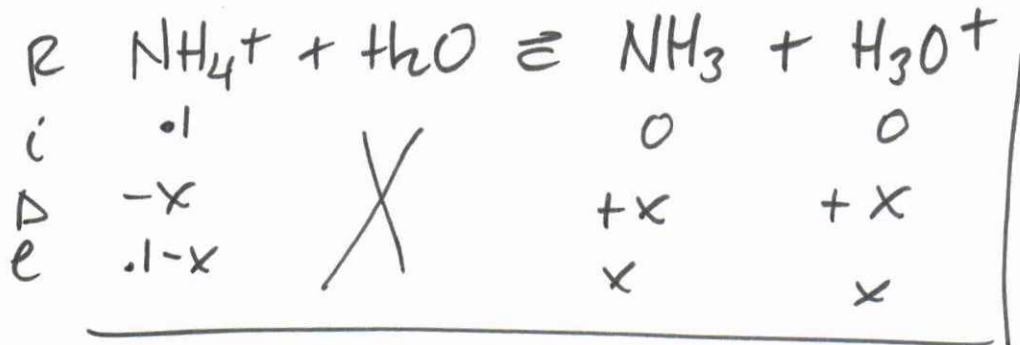
$$3.3 \times 10^{-7} = \frac{x^2}{.1-x} \rightarrow \phi$$

$$x =$$

$$pOH = 3.7$$

$$pH = 10.3$$

- Calculate the pH of a 0.1 M solution of ammonium bromide.



$$K_a = \frac{[NH_3][H_3O^+]}{[NH_4^+]}$$

$$K_b = 1.8 \times 10^{-5}$$

$$K_a = 5.55 \times 10^{-10} = \frac{x^2}{.1}$$

$$x = 7.45 \times 10^{-6} = H^+$$

$$5.1$$