10.14 equivalence $\times \frac{.1M}{1000} \times 100m \times \frac{1000ml}{1.00M} = 10ml$

@ $V_a = 0$

$$\underset{F-x}{B} + H_2O \rightleftharpoons \underset{x}{BH^+} + \underset{x}{OH^-}$$

$$\frac{x^2}{F-x} = K_b$$

$$K_b = 10^{-pkb} \quad 10^{-5}$$

$$\frac{x^2}{.1-x} = 10^{-5}$$

$$x = 9.95 \times 10^{-4} \quad [OH^-]$$

$$H^+ = \frac{K_W}{[OH^-]} = \frac{10^{-14}}{9.95 \cdot 10^{-4}} = 1.01 \times 10^{-11} M$$

$$-\log 1.01 \times 10^{-11} M$$

$$pH = 11$$