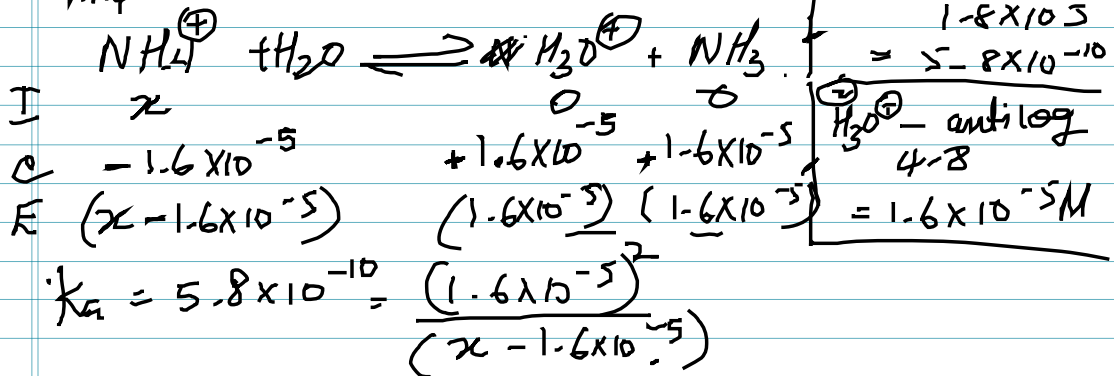


SupraBryon ..

Acid-Base Eq. 8) Conc. of ions from pH of salt.

- ① What is the molarity of
- NH_4NO_3
- soln with pH 4.80.

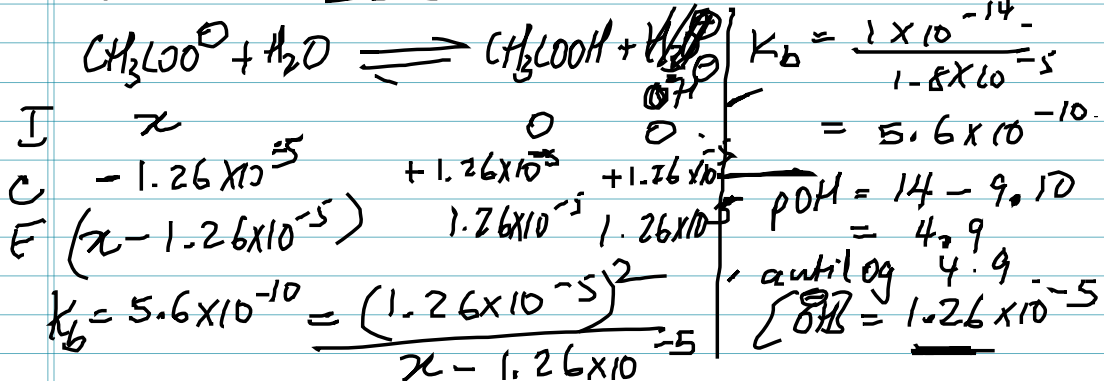
(K_b $\text{NH}_3 = 1.8 \times 10^{-5}$) NH_4^+ is acid salt - need K_a.

$$K_a = \frac{1 \times 10^{-14}}{1.8 \times 10^{-5}} = 5.8 \times 10^{-10}$$

$$\text{H}_3\text{O}^+ - \text{antilog } 4.8 = 1.6 \times 10^{-5} \text{ M}$$

$$x = 0.46 \text{ M}$$

- ② What is the molarity of a
- CH_3COONa
- solution of pH = 9.10. (K
- _a
- acetic acid =
- 1.8×10^{-5}
-)

 CH_3COO^- is weak base so need K_b, need pH

$$K_b = \frac{1 \times 10^{-14}}{1.8 \times 10^{-5}} = 5.6 \times 10^{-10}$$

$$\text{pOH} = 14 - 9.10 = 4.9$$

$$\text{OH}^- - \text{antilog } 4.9 = 1.26 \times 10^{-5}$$

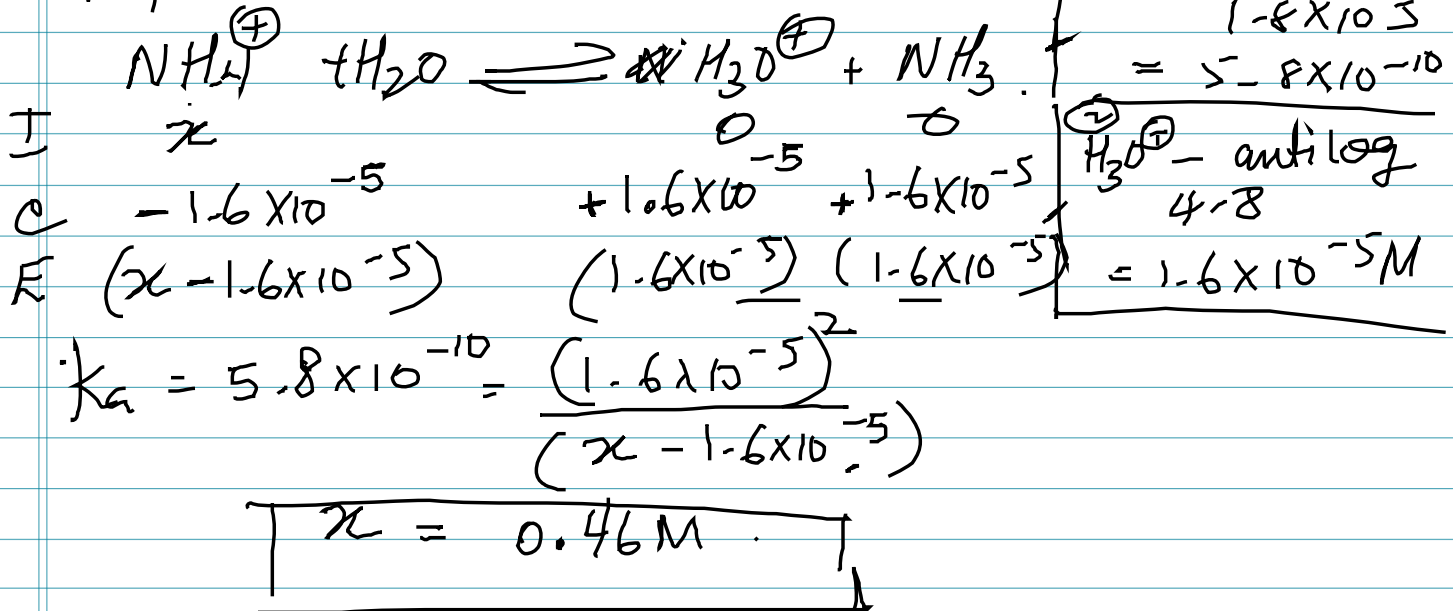
$$x = 0.29 \text{ M}$$

SupraSupra --

Acid-Base Eq. (8) conc. of ions from pH of salts.

① What is the molarity of NH_4NO_3 soln with pH 4.80.

($K_b \text{ NH}_3 = 1.8 \times 10^{-5}$)
 NH_4^+ is acid salt - need K_a .



② What is the molarity of a CH_3COONa solution of pH = 9.10. ($K_a \text{ acetic acid} = 1.8 \times 10^{-5}$)
 CH_3COO^- is weak base so need K_b . need OH^-

