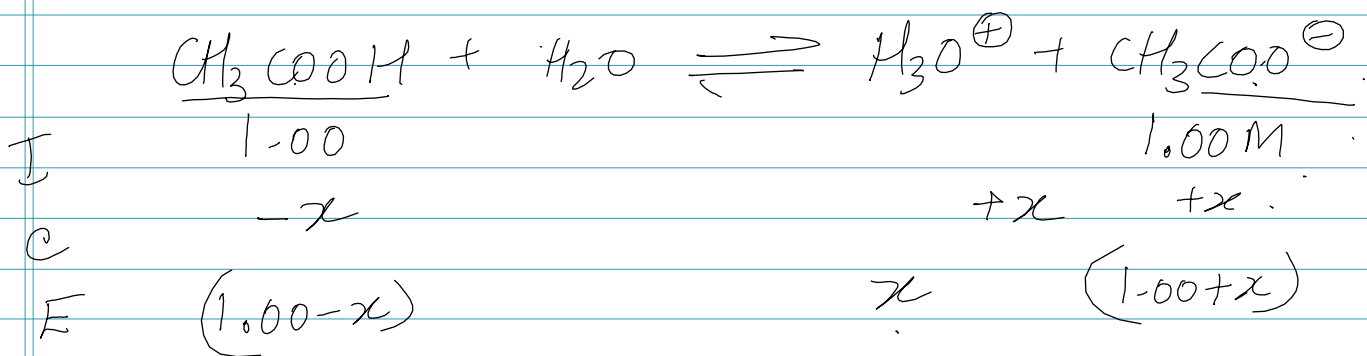


Supra

Acid-Base Eq (9) Common Ion Effect.

Calculate the pH of a soln that has 1.00 M CH_3COOH and 1.00 M CH_3COONa .

$$K_a \text{ CH}_3\text{COOH} = 1.8 \times 10^{-5}$$



$$K_a = 1.8 \times 10^{-5} = \frac{(x)(1.00+x)}{(1.00-x)}$$

ignore all x.

$$\left(\frac{1}{1.8 \times 10^{-5}} \right)$$

$$1.8 \times 10^{-5} = x = \{ \text{H}_3\text{O}^{\oplus} \}$$

$$-\log 1.8 \times 10^{-5} = \boxed{4.74}$$