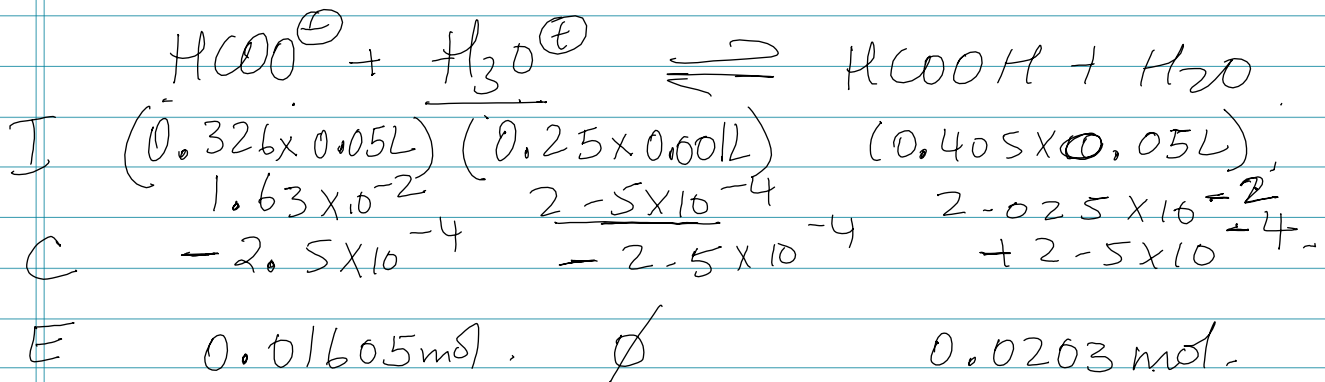


## Acid-Base Eq (11) Buffers (2)

What is the new pH of a solution made from 0.405M HCOOH and 0.326M HCOONa if 1.00 mL of 0.250M HCl is added to 50.0 mL of the buffer.  $K_a \text{ HCOOH} = 1.8 \times 10^{-4}$ .

Reaction for acid base (9) for calc. of pH.



$$[\text{H}_3\text{O}^{\oplus}] = K_a \times \frac{[\text{acid}]}{[\text{base}]}$$

$$= 1.8 \times 10^{-4} \times \frac{0.0203}{0.01605}$$

$$= 2.32 \times 10^{-4}$$

$$\text{pH} = -\log 2.32 \times 10^{-4} = \boxed{3.63}$$

original pH = 4.74.