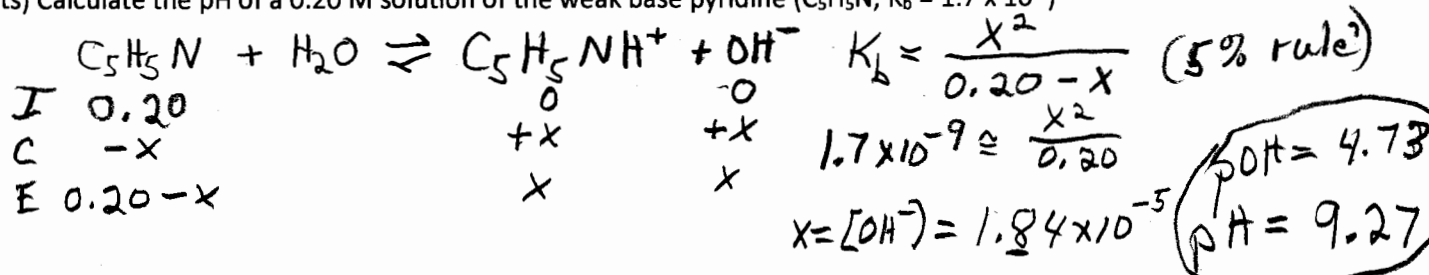
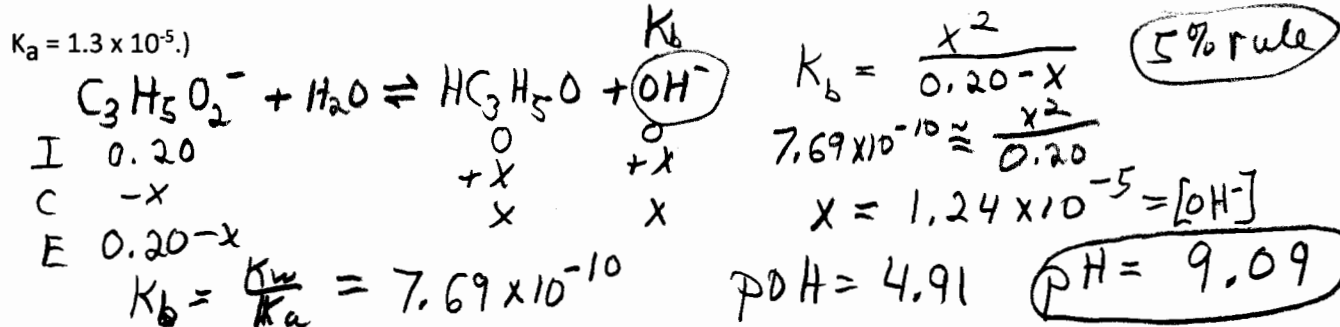


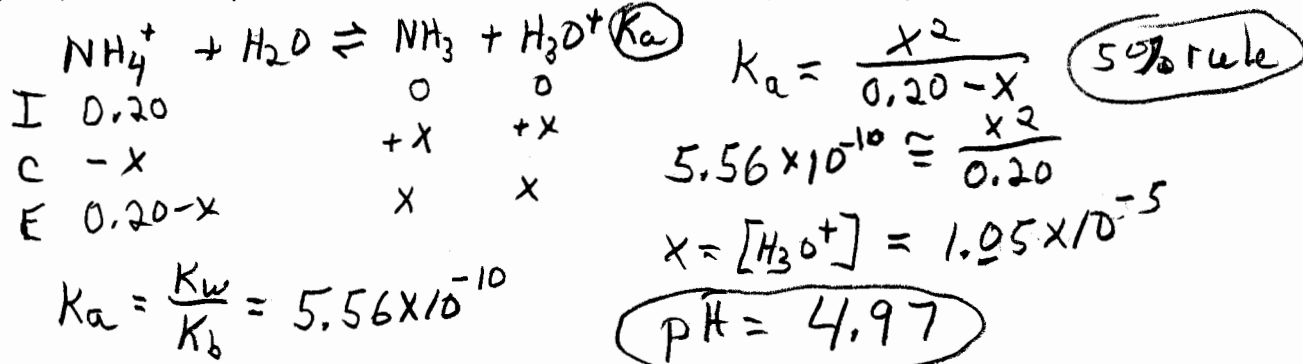
1. (5 Pts) Calculate the pH of a 0.20 M solution of the weak base pyridine (C_5H_5N ; $K_b = 1.7 \times 10^{-9}$)



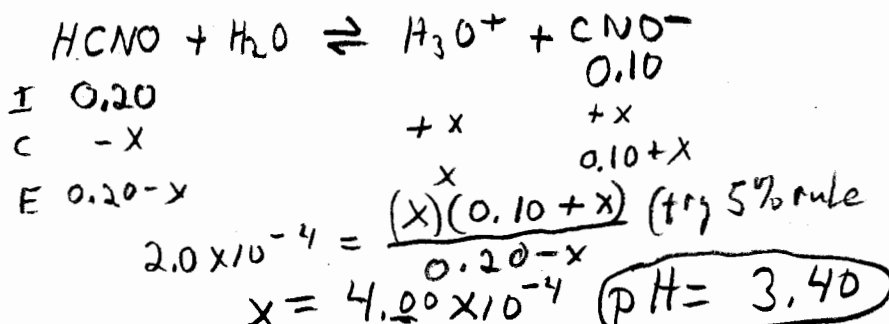
2. (5 Pts) What is the pH of a 0.20 M solution of sodium propionate, $NaC_3H_5O_2$? (For propionic acid, $HC_3H_5O_2$)



3. (5 Pts) Calculate the pH of a 0.20 M solution of ammonium nitrate, NH_4NO_3 . (NH_3 $K_b = 1.8 \times 10^{-5}$)



4. (5 Pts) Calculate the pH of a buffer solution prepared by dissolving 0.20 mole of cyanic acid ($HCNO$) and 0.10 mole of sodium cyanate ($NaCNO$) in enough water to make 1.0 liter of solution. $K_a(HCNO) = 2.0 \times 10^{-4}$.



5. (5 Pts) Calculate the pH of a 0.015 M solution of acetic acid. use 1.5×10^{-5} for K_a (1.75×10^{-5} K_a value)

