

Ch. 15.5-15.7: Finish Weak Acid Ionization Constants; Weak Base Ionization Constants; The Relationship Between Acid Ionization Constants & Their Conjugate Bases

Homework #15-3: Problems pg. 671-672 #41, 42, 44, 45, 46, 49, 52, 53a, 54, 56, 57

44 $[\text{CH}_3\text{COOH}] = 0.0181 \text{ M}$

45 $K_a = 3.3 \times 10^{-11}$ (4.0×10^{-11} if $[\text{H}^+]$ from H_2O is not taken into account)

46 $I = [\text{HCOOH}] = 2.3 \times 10^{-3} \text{ M}$

49 $K_a = 9.2 \times 10^{-4}$

53 (a) $\text{pH} = 11.11$

54 $K_b = 7.1 \times 10^{-7}$

56 Percent NH_3 present as $\text{NH}_4^+ = 1.5\%$