

Chemistry 146 – Van Bramer
Spring Problem Set – Week 6

1. For a 0.1 M solution of HCl calculate the equilibrium concentration of
 - a. H_3O^{1+}
 - b. Cl^{1-}
 - c. OH^{1-}
2. For a 0.1 M solution of KOH calculate the equilibrium concentration of
 - a. K^{1+}
 - b. OH^{1-}
3. For a 0.1 M solution of acetic acid ($K_a = 1.8 \times 10^{-5}$) calculate the equilibrium concentration of
 - a. CH_3COOH
 - b. $\text{CH}_3\text{COO}^{1-}$
 - c. H_3O^{1+}
4. For a 0.1 M solution of Ammonia ($K_b = 1.78 \times 10^{-5}$) calculate the equilibrium concentration of
 - a. NH_3
 - b. NH_4^{1+}
 - c. OH^{1-}