Worksheet 11

1. Calculate the molar concentration of OH^- ions in 0.5 M solution of hypobromite ion BrO^-, $K_a = 2.5.0 \times 10^{-9}$. What is the pH of the solution?

2. Predict whether aqueous solutions of the following substances are acidic, basic, or neutral: a) $CrBr_3$, b) LiI, c) K_3PO_4, d) $KHSO_4$

3. Explain the following observations: a) HCl is a stronger acid than H_2S, b) $HBrO_3$ is a stronger acid than $HBrO_2$, c) H_3PO_4 is a stronger acid than H_3AsO_4

4. Calculate the percent ionization of hydrazoic acid (HN_3) in solutions of each of the following concentrations. The K_a is 1.9×10^{-5}. a) 0.04 M, b) 0.01 M, c) 0.004 M.