CHM 111 - Acid/Base Quiz 1   **Name:** _____
Due: 3/24/08 at 11:15 AM
Answer the following questions. Report all pH values to the nearest hundredth of a pH unit (Example: pH = 6.54). [20]

1) Write the ionization reactions for the following species when dissolved in water.

Nitric acid, HNO_3

Ammonia, NH_3

Hypochlorous acid, $HClO$

Methylamine, CH_3NH_2

Ammonium ion, NH_4^+

2) What is the pH of an 0.060 M solution of ammonia, NH_3? The K_b of ammonia is 1.8×10^{-5} .

- pH = _____

3) If the *hydroxide* ion concentration of a solution is 3.75×10^{-6} M , what is the pH of the solution? Is the solution acidic or basic?

- pH = _____ , so the solution is _____.

4) Calculate the pH of a solution made by dissolving 0.0702 grams of the strong base potassium hydroxide, KOH, in enough water to make 250. mL of solution?

- pH = _____

5) What is the pH of an 0.15 M solution of formic acid, $HCHO_2$? The K_a of formic acid is 1.7×10^{-4} .

- pH = _____