

1.
 - a. Write an equation that shows the reaction of ammonia, NH_3 with hydrobromic acid, HBr .
 - b. Label the acid, the base, and the salt.

2.
 - a. Write the equation for the dissociation of calcium hydroxide.
 - b. If the pH of the solution is 11.64, calculate the pOH of the solution
 - c. Calculate the hydroxide $[\text{OH}^-]$ of the solution
 - d. If the pH is 11.64 and you have 2.55 L of solution, how many grams of calcium hydroxide are in the solution

3. The following data was obtained during the titration of 1.0097 M sodium hydroxide with a 25.00 mL of hydrofluoric acid:

Volume of NaOH added	Trial 1	Trial 2	Trial 3
Burette final reading	34.56mL	39.42mL	44.20mL
Burette Initial reading	14.94mL	19.86mL	24.66
Volume of NaOH added			

Average = mL NaOH

- a. Write a balanced chemical equation for the reaction between sodium hydroxide and hydrofluoric acid
 - b. Use the above information to determine the molarity of hydrofluoric acid.
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4. A student prepares a calcium hydroxide solution by mixing calcium oxide with water.
 - a. Write the balance chemical equation for the reaction between calcium oxide and water.
 - b. Calculate the molarity of calcium hydroxide solution prepared by completely reacting 1.50g of CaO with 2.50L of deionized water
 - c. Calculate the pH of the solution in part b.

