Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

IB acids and bases test

In part one, each student will be given a solution of a strong acid or a weak base with the molarity provided to you.

In part two, each student will be given a weak acid or base and it’s corresponding dissociation constant

For both parts show all work clearly for credit.

Part one: Strong acids and bases

1. You are given \_\_\_\_\_\_\_ mL of a \_\_\_\_\_M solution of \_\_\_\_\_\_\_\_\_\_\_\_
2. Is your solution acidic or basic? Explain by showing how H3O+ or OH- exists in the aqueous solution.
3. Calculate the pH of your solution
4. Provide a listed procedure to determine the pH of your solution by titration.
5. Show a reasonable complete titration curve for your titration. Include all relevant units and labels.
6. Calculate the number of H3O+ and OH- ions in your solution
7. Provide a procedure to lower the pH by one unit
8. Provide a procedure to raise the pH by one unit

Part one: Strong acids and bases

1. You are given \_\_\_\_\_\_\_ mL of a \_\_\_\_\_M solution of \_\_\_\_\_\_\_\_\_\_\_\_ which has a Ka/Kb of \_\_\_\_\_\_\_\_\_\_\_
2. Is your solution acidic or basic? Explain by showing how H3O+ or OH- exists in the aqueous solution.
3. Calculate the pH of your solution
4. Provide a listed procedure to determine the pH of your solution by titration.
5. Show a reasonable complete titration curve for your titration. Include all relevant units and labels.
6. Calculate the number of H3O+ and OH- ions in your solution
7. Provide a procedure to lower the pH by one unit
8. Provide a procedure to raise the pH by one unit