**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Acid Base Speed Dating**

**Part A:** How do you calculate the Molarity and moles of the acidic or basic ion and the pH of the following solutions?

| One solution of: | A strong acid | A strong base |
| --- | --- | --- |
| A weak acid | A weak base |



**Your personal solution biography:**

Type of Solution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Molarity of HA/Base: \_\_\_\_ Volume: \_\_\_\_

Molarity of acidic or basic ion: \_\_\_\_\_\_\_ Moles of acidic or basic ion: \_\_\_\_\_\_\_\_\_\_\_\_ pH: \_\_\_\_

**Part B:** How do you calculate the pH of the following?

| A mixture of: | Multiple acids | Multiple bases |
| --- | --- | --- |
| A titration with: | Strong acid left over | Strong base left over |
| Weak acid left over | Weak base left over |
| Only salt left over | |

For each date record the other solution name and values. Then calculate your combined pH. Show all work.

| Date 1: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Date 2: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| --- | --- |
| Date 3: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Date 4: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

Reflections:

1. How did the addition of the same acid or base in date 1 affect the pH? Explain your understanding.
2. How did the addition of a similar acid or base in date 2 affect the pH? Explain your understanding.
3. Briefly summarize how to find the pH of any solution in terms of moles and liters.