

Name: _____

25. Weak Acids and Bases

1. Fiendix prepares a 0.05 M HCl solution.
 - a. What is $[H^+]$ in this solution?
 - b. What is the pH of this solution?
 - c. What is the pOH of this solution?
2. Droo prepares a 0.05 M KOH solution.
 - a. What is $[OH^-]$ in this solution?
 - b. What is the pOH of this solution?
 - c. What is the pH of this solution?
3. Sai prepares an acetic acid/sodium acetate buffer that is 0.10 M in both acetic acid and sodium acetate. The pK_a of acetic acid is 4.75.
 - a. What is the pH of this buffer?
 - b. Bren dilutes some of this buffer to twice its volume with distilled water. What is the pH of the diluted buffer solution?
 - c. Pammie adds 0.05 moles of HCl to 1.000 L of Sai's buffer. What is the pH of the new solution?

- d. Rahul adds a 0.05 moles of sodium hydroxide to 1.000 L of Sai's buffer. What is the pH of this new solution?

- e. How does the pH of Pammie's solution compare to the pH of Fiendix's solution?

- f. How does the pH of Rahul's solution compare to the pH of Droo's solution?

- 4. Dr. Banda prepares a solution of 0.10 M acetic acid. What is the pH of this solution?