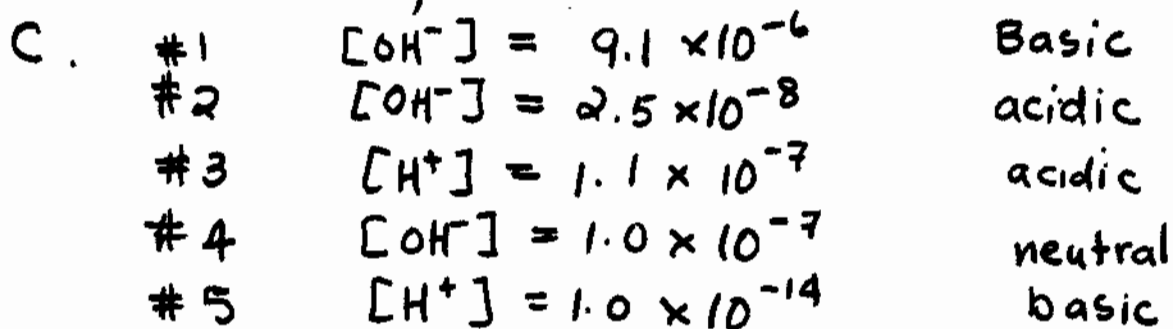
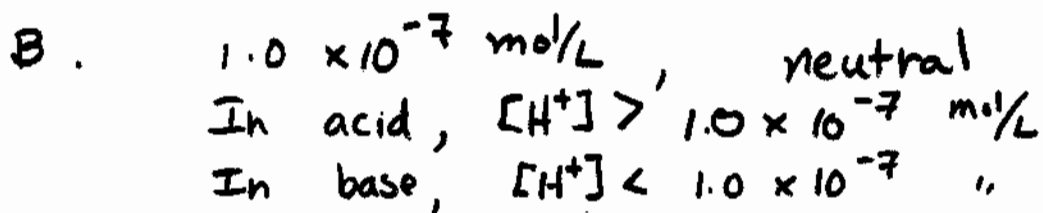
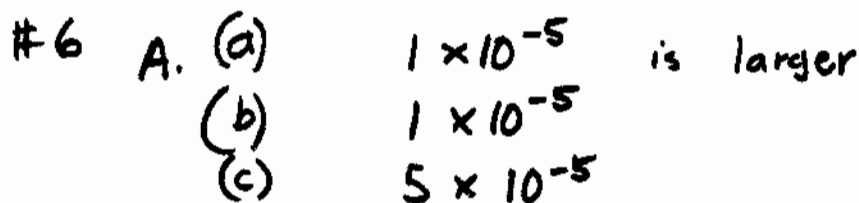
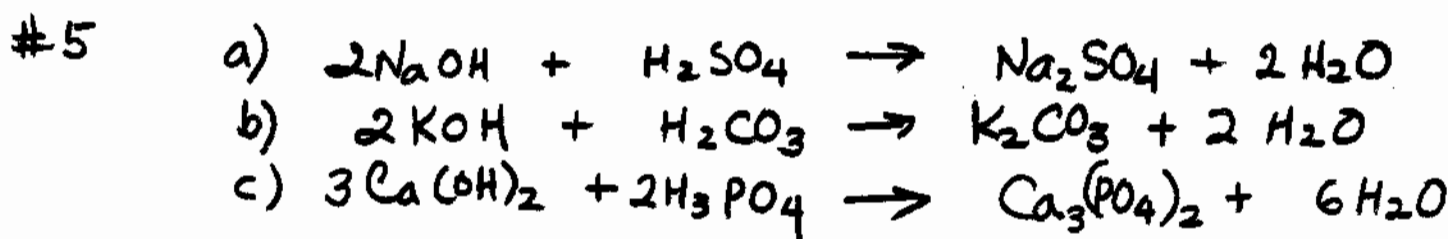
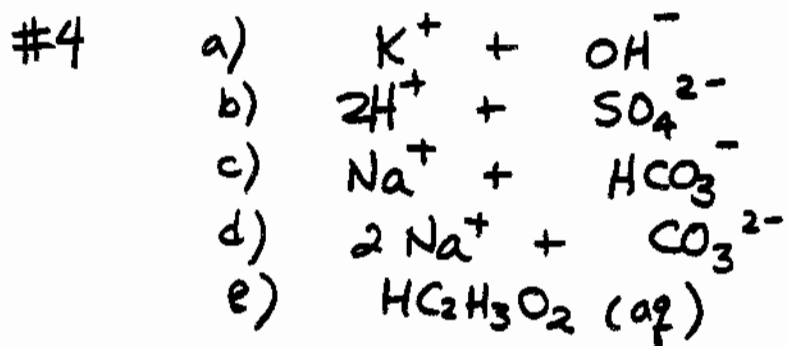
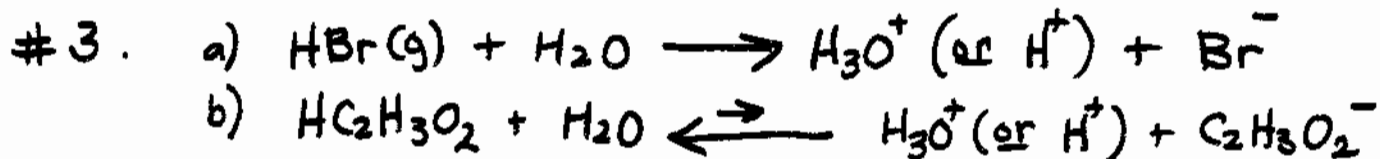


Chem 15.

Exercise (Acids & Bases)



< Acids & Bases, cont'd >

7.

$$\text{pH} = -\log [\text{H}^+]$$

$$\text{H} = [\text{H}^+]$$

8.

		$\log[\text{H}^+]$	pH	Sol'n is:
1)	1.0×10^{-3}	-3	3	A
2)	1.0×10^{-7}	-7	7	N
3)	1.0×10^{-8}	-8	8	B

10.

(a) $\text{pH} = 3$

(b) $\text{pH} = 11$

No, weak acid

$[\text{H}^+]$ is less than $1 \times 10^{-7} \text{ M}$
 $[\text{H}^+]$ is greater than $1 \times 10^{-8} \text{ M}$

Acid - Base Titration (p 36)

$$\# 11. \quad 0.1986 \frac{\text{mol}}{\text{L}} \text{NaOH} \times 0.03216 \text{ L} \times \left(\frac{1 \text{ mol H}_2\text{SO}_4}{2 \text{ mol NaOH}} \right) \times \left(\frac{1}{0.02500 \text{ L}} \right)$$

$$= \boxed{0.1277 \text{ M H}_2\text{SO}_4}$$

$$\# 12. \quad 0.5216 \frac{\text{mol}}{\text{L}} \text{HCl} \times 0.04005 \text{ L} \times \left(\frac{1 \text{ mol Ba(OH)}_2}{2 \text{ mol HCl}} \right) \times \left(\frac{1 \text{ L}}{0.2135 \text{ mol}} \right)$$

$$\times \frac{1000 \text{ mL}}{1 \text{ L}} = \boxed{48.92 \text{ mL Ba(OH)}_2}$$

$$\# 13. \quad 0.2109 \frac{\text{mol}}{\text{L}} \text{NaOH} \times 0.02452 \text{ L} \times \left(\frac{1 \text{ mol H}_2\text{C}_2\text{O}_4}{2 \text{ mol NaOH}} \right) \times \left(\frac{1}{0.01925 \text{ L}} \right)$$

$$= \boxed{0.1343 \text{ M H}_2\text{C}_2\text{O}_4}$$