1. Define Acid. Define Base.

2. As the concentration of H_3O^+ increases, does pH increase or decrease? As the concentration of OH^- increases, does pH increase or decrease? Explain.

3. Calculate the pH of antacid, given that the $[H^+]$ concentration=0.000 000 001 M?

4. Calculate the pH of blood, given that the $[H^+]$ concentration=0.000 000 048 M?

5. What is the [H+] concentration of tomato juice (pH=5)?

6. What is the [H+] concentration of seawater (pH=7.85)?

7. If it takes 25.30 mL of 0.277 M HCl to titrate 10.0 mL of aqueous ammonia to a methyl red endpoint, what is the molarity of the ammonia?

   $HCl(aq) + NH_4OH(aq) \longrightarrow NH_4Cl(aq) + H_2O(l)$