**Chemistry B Name**

**Acid-Base Review Sheet Period\_\_\_\_\_\_\_**

OBJECTIVE ONE

1. Identify the Bronsted acid, base, conjugate acid, and conjugate base in the following reactions (assume all reactants are liquid or in aqueous solution).

 H2CO3 + H2O H3O+ + HCO3-1

H2O + SO32- HSO31- + OH-

H2O + H2O H3O+ + OH-

2. Name the following acids. Are they strong or weak?

 a. HNO3 b. H3PO4

 c. H2S d. HClO3

 e. H2SO3 f. HF

1. Write formulas for the following acids. Are they strong or weak?

 a. Hypophosphorous acid b. Boric acid

 c. Sulfuric acid d. Nitrous acid

 e. Hydrobromic acid f. Nitric acid

OBJECTIVE TWO

1. Calculate the Hydrogen ion concentration given the following hydroxide concentrations.

 a. 2.5 x 10-5 M b. 7.45 x 10-13 M

1. Calculate the pH for the following solutions.

 a. [H+] = 3.5 x 10-4 M b. [H+] = 5.8 x 10-12 M

1. Calculate the [H+] from the following.

 a. pH = 5.5 b. pH = 13.9

OBJECTIVE THREE

1. Titrations and neutralizations

1. What do you get when you mix acids with bases? Know the reactions.
2. What volume of 1.5 M HCl is needed to completely neutralized 150 mL of 0.5 M NaOH?
3. What is the concentration of an HCl solution if it took 245 mL of 0.005 M NaOH to reach the endpoint of a titration of 125 mL of the acid solution?

 2. Know what an anhydride is and its relation to acid rain.

 a. Predict the products for the following anhydride reactions.

 SO2 + H2O -🡪

CaO + H2O -🡪

1. Which one of the anydrides listed above is a basic anhydride?
2. Which one is an acidic anhydride?