**Acid-Base Reactions**

**Neutralization Reaction** – a double displacement reaction in which an acid and a base combine to form water and a salt

e.g.

**Calculations Involving Neutralization Reactions**

Ex. 1 What volume of 0.250 mol/L sulfuric acid is needed to react completely with 37.2 mL of 0.650 mol/L potassium hydroxide?

**Neutralization Worksheet**

1. 100.0 mL of 1.50 M sulfuric acid reacts to neutralize solid sodium hydroxide. What mass of sodium hydroxide neutralized?
2. 100.0 mL of 1.5 M sulfuric acid reacts to neutralize 50.0 mL of aluminum hydroxide. Calculate the molarity of the aluminum hydroxide.
3. What is the molarity of 5.67 L of sulfuric acid that neutralizes 1560 g of potassium hydroxide?
4. What mass of acetic acid (HC2H3OO) would be neutralized by 300.0 mL of 2.90 M sodium hydroxide?

HC2H3OO *(aq) +* NaOH (aq) 🡪 NaC2H3OO (aq) + H2O *(l)*

1. What mass of iron (III) hydroxide would be neutralized by 2.20 L of 4.70 M oxalic acid (H2C2O4)?

3 H2C2O4 *(aq)* + 2 Fe(OH)3 *(s)* 🡪 Fe2(C2O4)3 *(aq)* + 6H2O *(l)*

1. What mass of hydrofluoric acid is required to neutralize 1700 mL of 2.0 M barium hydroxide?

Answers : 1.12.0 g 2. 2.0 M 3. 2.45 M 4. 52.3 g 5. 737 g 6. 140 g