WODSS SCIENCE Name: _____

SCH 3UI Date: _____

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 (HC_2H_3OO) would be neutralized by 300.0 mL of 2.90 M sodium hydroxide?

$$HC_2H_3OO_{(aq)} + NaOH_{(aq)} \rightarrow NaC_2H_3OO_{(aq)} + H_2O_{(l)}$$

5. What mass of iron (III) hydroxide would be neutralized by 2.20 L of 4.70 M oxalic acid ($H_2C_2O_4$)?

$$3\ H_2C_2O_{4\ (aq)} + 2\ Fe(OH)_{3\ (s)} \rightarrow Fe_2(C_2O_4)_{3\ (aq)} + 6H_2O_{(l)}$$

6. 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