Honors Chemistry NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Unit 7 Homework 5 Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Period\_\_\_\_\_\_\_\_\_\_\_\_

1. If 86.2 ml of 0.765 M sodium hydroxide neutralizes 30.0 ml of hydrochloric acid, what is the concentration of the acid?
2. If 40.8 ml of 0.106 M sulfuric acid neutralizes 61.8 ml of potassium hydroxide, what is the concentration of the base?
3. If 75.0 ml of 0.823 M HClO4 requires 95.9 ml of barium hydroxide to reach endpoint, what is the concentration of the barium hydroxide solution?
4. Titration of 35.0 ml of calcium hydroxide solution requires 26.3 ml of 0.125 M HCl to reach neutral. What is the concentration of the base?
5. A student placed 0.90 g of magnesium hydroxide into a beaker with enough water to make about 50.0 ml of solution. He then neutralized this with a 0.30 M nitric acid solution. What volume of the nitric acid would have been consumed? (round to the nearest milliliter)
6. If 25.0 ml of 0.100 M hydrochloric acid is necessary to neutralize 55.0 ml of a solution of sodium hydroxide to a phenolphthalein end point. Calculate the molarity of the sodium hydroxide solution.
7. If 32.0 ml of a dilute solution of lime (calcium hydroxide) water required 12,4 ml of 0.100 M hydrochloric acid solution for neutralization to a methyl red endpoint. Calculate the molarity of the lime water.
8. If 20.0 ml of potassium hydroxide solution required 16.4 ml of 0.150 M hydrochloric acid solution for neutralization to a bromthymol blue endpoint. Calculate the molarity of the potassium hydroxide solution.
9. If 37.5 ml of 0.500 M sodium hydroxide is necessary to neutralize 25.0 ml of a hydrochloric acid solution to a phenolphthalein end point, calculate the molarity of the acid.
10. Vinegar is a dilute solution of acetic acid. In the titration of 5.00 ml of vinegar, 37.7 ml of 0.105 M sodium hydroxide solution was required to neutralize the vinegar to a phenolphthalein end point. What is the molarity of the vinegar?
11. If 0.625 g of pure sodium carbonate was dissolved in water and the solution was titrated with 30.8 ml of hydrochloric acid to a methyl orange endpoint, calculate the molarity of the HCl.
12. If 0.200 g of pure sodium hydroxide is titrated with 5.70 ml of hydrochloric acid solution to a phenolphthalein end point, calculate the molarity