CHM 151 Quiz 5 25 Pts Spring 2014 Review of Solutions. Name:_____

This is a "Bring Back Quiz". It is due March 7th. Show all work to receive credit.

1. (3 Pts) What is the resulting concentration when 455.8 mL of a 0.0786 M Na_2SO_4 solution is evaporated to a volume of 50.00 mL?

2. (3 Pts) What concentration H_3PO_4 results when 50.00 mL of 0.355 M H_3PO_4 solution is diluted to 400.0 mL?

3. (4 Pts) How many grams of HNO_3 are present in 450.0 mL of 0.0550 M HNO_3 solution?

4. 25.00 mL of 0.505 M hydrochloric acid solution is reacted with 20.50 mL of 0.303 M barium hydroxide solution.

a. (4 Pts) Determine how many moles of the excess reactant is present when the reaction is done.

b. (3 Pts) Determine the concentration (in moles per liter) of the remaining (excess) reactant.

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5. (4 Pts) A barium hydroxide solution is being standardized with potassium hydrogen phthalate (KHP). If it took 33.25 mL of the barium hydroxide solution to neutralize 0.5728 grams KHP, what was the molarity of the barium hydroxide solution?

6. (2 Pts) If 145 grams of potassium sulfate were added to water to make 1,500 mL of solution, what would be the molarity of the resulting solution?_____ What is the molarity of the potassium ions?_____

7. (2 Pts) What is the molar concentration of chloride ions in a solution prepared by mixing 200. mL of 2.0 M KCl with 500. mL of a 1.5 M $CaCl_2$ solution?