Chemistry 141 Name

Dr. Cary Willard

Quiz 4A (20 points) February 25, 2008

Suppose that 3.50 g of solid Mg(OH)2 is added to 30.0 mL of 0.500 M H2SO4 solution. Write and balance the equation for the reaction that occurs. Use an IE table to solve the problem.

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1. Which reactant is limiting?
2. What is the value of x?
3. Determine the mass of Mg(OH)2 remaining after reaction.
4. Determine the number of moles and the concentrations of the following ions in solution

Mol Mg+2 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [Mg+2] = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Mol H+1 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [H+1] = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Mol SO4-2 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [SO4-2] = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Determine the pH of the final solution.

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Dr. Cary Willard

Quiz 4B (20 points) February 25, 2008

Suppose that 4.00 g of solid Mg(OH)2 is added to 35.0 mL of 0.500 M H2SO4 solution. Write and balance the equation for the reaction that occurs. Use an IE table to solve the problem.

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1. Which reactant is limiting?
2. What is the value of x?
3. Determine the mass of Mg(OH)2 remaining after reaction.
4. Determine the number of moles and the concentrations of the following ions in solution

Mol Mg+2 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [Mg+2] = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Mol H+1 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [H+1] = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Mol SO4-2 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [SO4-2] = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Determine the pH of the final solution.