Algebra Ib- Mrs. Tilus Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Unit 6-Part 2 Review: System of Equations Applications

1.) The telephone company offers two types of service. With Plan A, you pay $3.50 monthly, plus 75 cents for each min of calls. With Plan B, you pay $4.00 monthly, plus 50 cents for each min. of calls.

a.) Create the equations for both types of services. Then graph the cost of each plan on the grid to the right.

7.00

6.50

6.00

5.50

5.00

4.50

4.00

3.50

 Equation 1:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Equation 2:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b.) Explain when you would purchase each plan.

 1 5 10 15

c.) Use the equations from part 1a and show an algebraic solution to this problem.

2.) Dennis mowed his next door neighbor’s lawn for a handful of dimes and nickels, 80 coins in all. Upon completing the job he counted out the coins and it came to $6.60. How many of each coin did he earn?

 Equation #1:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Equation #2: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3.) At a baseball game, Jose bought five hot dogs and three sodas for $17. At the same time, Allison bought two hot dogs and four sodas for $11. Find the cost of one hot dog and one soda.

 Equation #1:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Equation #2: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4.) Find the value of two numbers is their sum is 12 and their difference is 4.

 Equation #1:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Equation #2: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5.) Matt and Cindy are selling fruit for a school fundraiser. Customers can buy small boxes of oranges and large boxes of oranges. Matt sold 3 small boxes of oranges and 14 large boxes oranges for a total of $203. Cindy sold 11 small boxes of oranges and 11 large boxes of oranges for a total of $220. Find the cost each of one small box of oranges and one large box of oranges.

 Equation #1:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Equation #2: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_