AGS 1   Name: _____ Period: _____ Date: _____

Assignment 6.4 – System of equations

Solve the system of equations using the substitution method. Check your solutions.

1.   The difference of two numbers is 3. Their sum is 13.

        a.   Write two different linear equations that model the above situation.

        b.   Solve the system of linear equations.

2.   Emma went to the movie theater for her birthday. A mix of adults and children attended,
        making a total of 19 people. Each adult ticket was $9 and each child's ticket was $5.50 for a
        total cost of the party being $150.

        a.   Write two different linear equations that model the above situation.

        b.   Solve the system of linear equations.

3.   Matt and Ming 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 of oranges for a total of $203. Ming sold 11 small boxes of oranges and 11 large boxes of oranges for a total of $220.

   a.   Write two different linear equations that model the above situation.

   b.   Solve the system of linear equations.

Refresh your memory

Solve the system of equations

4.   Solve by graphing

$$\begin{cases} y = 3x - 4 \\ x + 2y = 6 \end{cases}$$

5.   Solve by elimination or substitution.

$$\begin{cases} y = 4x + 3 \\ x + y = -2 \end{cases}$$