AGS 1   Name: _____ Period: _____ Date: _____

Assignment 6.2 – System of equations

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

1.
$$\begin{cases} y = 2x + 1 \\ 3x + 2y = 23 \end{cases}$$

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

3.
$$\begin{cases} -6x + 5y = 16 \\ x = 5 - 3y \end{cases}$$

4.
$$\begin{cases} 4x - 3y = -15 \\ x + y = 5 \end{cases}$$

5.
$$\begin{cases} -2x = y \\ 7x + 3y = 3 \end{cases}$$

6.
$$\begin{cases} 2x + 8y = 6 \\ -5x - 20y = -15 \end{cases}$$

7. $\begin{cases} x + 3y = 5 \\ 4x - 2y = -9 \end{cases}$

8. $\begin{cases} y + 2x = 3 \\ y - x = -9 \end{cases}$

9. Reese picked two numbers, x and y. She told her friend that the sum of the two numbers is 9 and the difference of the two numbers is 17.

   a. Write two different linear equations that model what Reese told her friend.

   b. Solve the system of linear equations using the substitution method. What two numbers did Reese pick?

Refresh your memory

Find the exponential equations from two consecutive points (lesson 2.4).

10. $(3,16)\ (4,8)$

11. $(1,12)\ (2,48)$