Name:_____ Date:_____Period:_____

NOTES: SYSTEMS OF EQUATIONS

Solve by Elimination

Day 1

WHAT IS THE ELIMINATION METHOD?

Add or subtract equations to _____ a variable and create one equation with one variable.

WHEN TO ADD

1. Write both equations so that _____ terms are aligned.
2. _____ the equations to eliminate a variable.
3. Solve for the value of the variable.
4. You have now solved for the value of ONE variable. _____ that value into one of the equations to determine the value of the other variable.

$$\begin{cases} 2x + y = 7 \\ 3x - y = 8 \end{cases}$$

In this case, the y coefficients are opposite; when we add the equations, the y variable is ELIMINATED.

WHEN TO SUBTRACT

1. Write both equations so that _____ terms are aligned.
2. _____ the equations to eliminate a variable **(you will multiply one entire equation by -1 and then add the equations).**
3. Solve for the value of the variable.
4. You have now solved for the value of ONE variable. _____ that value into one of the equations to determine the value of the other variable.

$$\begin{cases} 4x + 2y = 8 \\ 4x + 3y = 2 \end{cases}$$

In this case, the x coefficients are the same; when we subtract the equations, the x variable is ELIMINATED.

YOUR TURN!

1. $\begin{cases} 3x + 2y = 6 \\ 4x - 2y = 22 \end{cases}$

2. $\begin{cases} x + y = 8 \\ 12x = y + 18 \end{cases}$

3. $\begin{cases} 3x + 4y = 12 \\ 3x + 2y = 6 \end{cases}$

4. $\begin{cases} 6x + y = 7 \\ y = -6x + 9 \end{cases}$