## 7.5 Solving Systems by Elimination

\* Important: This method is most useful when the \_\_\_\_\_ of one of the variables in both equations is the \_\_\_\_\_

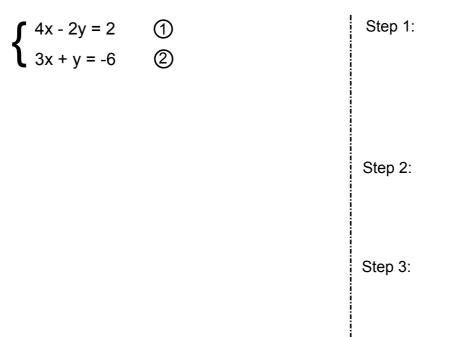
ex. Solve the following system algebraically:

$$\begin{cases} 4x - 2y = 10 & (1) \\ 5x + 2y = 26 & (2) \end{cases}$$
 Step 1:  
Step 2:

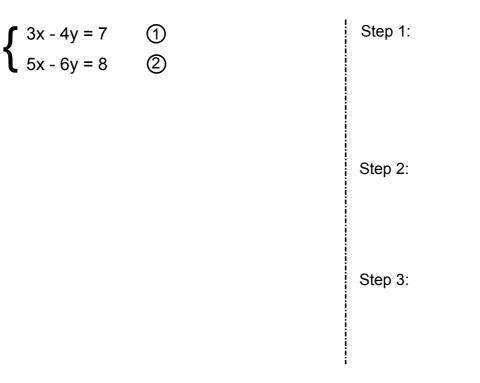
\* Note: If <u>none</u> of the coefficients are the same, this method still works but we need to multiply one, or both, equations by a value that will allow this method to work. If we graph

3x + y = -6 and 6x + 2y = -12 we notice they are the same.

ex. Solve the following system algebraically:



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ex. Lilly sold 5 bouquets of tulips and 2 bouquets of roses for \$80. Kate sold 1 bouquet of tulips and 4 bouquets of roses for \$70. Write a system of equations that models this situation and solve it using elimination.

ex. Solve the following system algebraically:

$$\frac{3x}{2} - \frac{1}{2}y = 4 \quad (1)$$

$$\frac{1}{2}x + \frac{1}{4}y = \frac{5}{2} \quad (2)$$
Step 1:  
Step 2:  
Step 3: