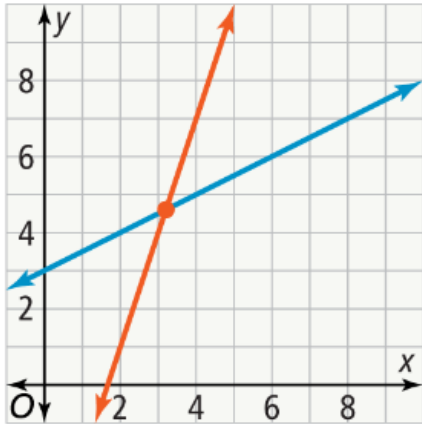


Linear Systems

The graph shows two lines that intersect at one point.

- What are the approximate coordinates of the point of intersection?
- Is the point the solution to the equations of both lines?



- Is there a better way to solve this system?

Solve by Substitution

Example 1: Find the solution to the system $\begin{cases} x = 3 - 2y \\ x - 2y = 4 \end{cases}$

Example 2: Find the solution to the system $\begin{cases} y = -2x - 1 \\ 5y - 6x = 7 \end{cases}$

Example 3: Find the solution to the system $\begin{cases} 4x - 3y = 4 \\ x = 2y - 5 \end{cases}$

Solve by Elimination

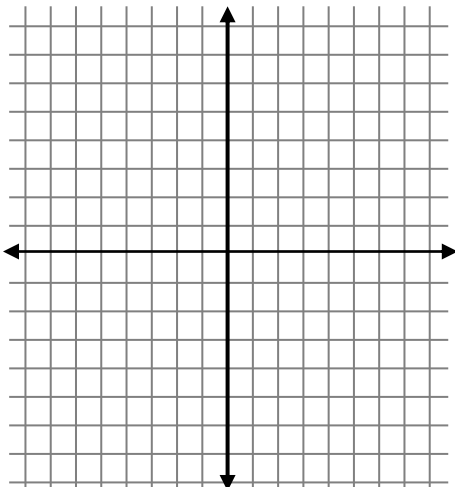
Example 4: Find the solution to the system $\begin{cases} 2x + 6y = 10 \\ -3x - 6y = 9 \end{cases}$

Example 5: Find the solution to the system $\begin{cases} 3x + 2y = 5 \\ x + 4y = -10 \end{cases}$

Example 6: Solve $\begin{cases} -4y - 11x = 36 \\ 20 = -10x - 10y \end{cases}$

Example 7: Write a system of linear equations that has the solution shown.

a) $(-3, 5)$



b) $(6, -1)$

