

Name:

Ready, Set, Go!

Ready

Topic: Solving Systems by Substitution and Elimination

Solve each system of equations using any algebraic method.

1.
$$\begin{cases} 3x - y = 1 \\ 3x + 2y = 16 \end{cases}$$

2.
$$\begin{cases} x + 2y = 5 \\ 3x + 5y = 14 \end{cases}$$

3.
$$\begin{cases} 4x + 2y = -8 \\ x - 2y = -7 \end{cases}$$

4.
$$\begin{cases} 2x + 3y = 2 \\ 3x - 4y = -14 \end{cases}$$

5.
$$\begin{cases} x + 2y = 11 \\ x - 4y = 2 \end{cases}$$

6.
$$\begin{cases} 2x + y = 0 \\ 5x + 3y = 1 \end{cases}$$



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Set

Topic: Row reductions in Matrices

7. Create a matrix to match each step in the solving of the system of equations given. Also, write a description of what happened to the equation and the matrix between steps.

	<u>System of Equations</u>	<u>Description</u>	<u>Matrix</u>
<i>Given System</i>	$\begin{cases} 3x + 2y = 40 \\ x - 7y = -2 \end{cases}$		$\left[\begin{array}{cc c} 3 & 2 & 40 \\ 1 & -7 & -2 \end{array} \right]$
	↓	$-3R_2 \rightarrow R_2$	↓
<i>Step 1</i>	$\begin{cases} 3x + 2y = 40 \\ -3x + 21y = 6 \end{cases}$	↓	$\left[\begin{array}{cc c} 3 & 2 & 40 \\ -3 & 21 & 6 \end{array} \right]$
	↓		↓
<i>Step 2</i>	$\begin{cases} 3x + 2y = 40 \\ 0x + 23y = 46 \end{cases}$	↓	$\left[\begin{array}{cc c} 3 & 2 & 40 \\ 0 & 23 & 46 \end{array} \right]$
	↓		↓
<i>Step 3</i>	$\begin{cases} 3x + 2y = 40 \\ 0x + y = 2 \end{cases}$	↓	$\left[\begin{array}{cc c} 3 & 2 & 40 \\ 0 & 1 & 2 \end{array} \right]$
	↓		↓
<i>Step 4</i>	$\begin{cases} 3x + 0y = 36 \\ 0x + y = 2 \end{cases}$	↓	$\left[\begin{array}{cc c} 3 & 0 & 36 \\ 0 & 1 & 2 \end{array} \right]$
	↓		↓
<i>Step 5</i>	$\begin{cases} x + 0y = 12 \\ 0x + y = 2 \end{cases}$		$\left[\begin{array}{cc c} 1 & 0 & 12 \\ 0 & 1 & 2 \end{array} \right]$

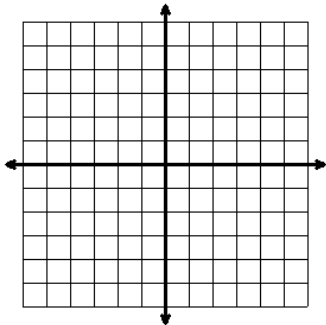


Go

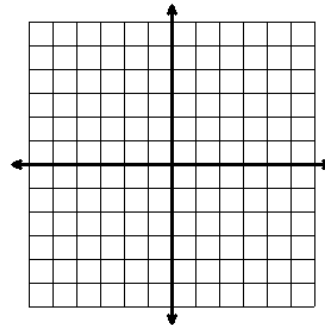
Topic: Solving Systems of Equations by Graphing

Solve each system of equations by graphing.

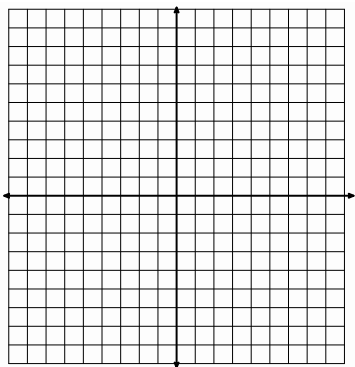
8.
$$\begin{cases} y = 3x - 3 \\ y = -3x + 3 \end{cases}$$



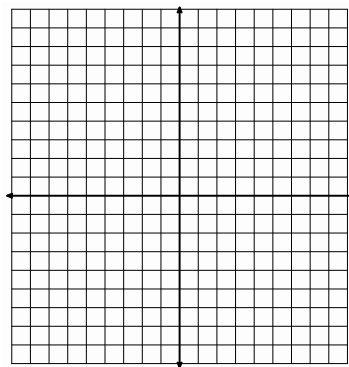
9.
$$\begin{cases} y = 4x - 1 \\ y = -x + 4 \end{cases}$$



10.
$$\begin{cases} y = -2x + 7 \\ -3x + y = -8 \end{cases}$$



11.
$$\begin{cases} 4x - y = 7 \\ 3x + 2y = 8 \end{cases}$$



Need help? Check out these related videos:

<http://www.khanacademy.org/math/algebra/ck12-algebra-1/v/solving-linear-systems-by-substitution><http://patrickjmt.com/row-reducing-a-linear-system-of-equations/><http://www.khanacademy.org/math/algebra/systems-of-eq-and-ineq/v/graphings-systems-of-equations>