

## Using Substitution to Solve Systems of Equations Activity

**Directions** Match the system of equations with the modified equation that can be used to solve the system of equations by substitution. Draw a line between the system and the equation used to substitute.

$$\begin{aligned}2x + y &= 11 \\ x - y &= 2\end{aligned}$$

$$x = -2y + 6$$

$$\begin{aligned}4x - y &= 7 \\ 5x - 8y &= 2\end{aligned}$$

$$x = -6y + 5$$

$$\begin{aligned}2x + 2y &= 4 \\ 3x - 3y &= 18\end{aligned}$$

$$y = -2x + 1$$

$$\begin{aligned}2x + y &= 1 \\ 10x - 4y &= 2\end{aligned}$$

$$y = 4x - 7$$

$$\begin{aligned}-3x - y &= -13 \\ X + 2y &= 6\end{aligned}$$

$$x = y + 2$$

$$\begin{aligned}2x - 6y &= 4 \\ X + 6y &= 5\end{aligned}$$

$$x = -y + 2$$

## Activity Answers

$$\begin{aligned}2x + y &= 11 \\ x - y &= 2\end{aligned}$$

$$x = y + 2$$

$$\begin{aligned}4x - y &= 7 \\ 5x - 8y &= 2\end{aligned}$$

$$y = 4x - 7$$

$$\begin{aligned}2x + 2y &= 4 \\ 3x - 3y &= 18\end{aligned}$$

$$x = -y + 2$$

$$\begin{aligned}2x + y &= 1 \\ 10x - 4y &= 2\end{aligned}$$

$$y = -2x + 1$$

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$$\begin{aligned}2x - 6y &= 4 \\ X + 6y &= 5\end{aligned}$$

$$x = -6y + 5$$

## Substitution Scavenger Hunt Information Sheet

Use the following systems of equations and solutions to create a Math Scavenger Hunt for the students. The systems in the left column should be placed on the same card as the solutions next to them. **Note** The solutions do not match the systems they are next to!

$$\begin{array}{l} X - 2y = 0 \\ 2x - 5y = -4 \end{array} \quad (12, 17)$$

$$\begin{array}{l} -1/2 x - y = -3 \\ X + 3y = 6 \end{array} \quad (4, 1)$$

$$\begin{array}{l} y = 8 - x \\ 4x - 3y = -3 \end{array} \quad (2, 3)$$

$$\begin{array}{l} x = 8y \\ x - 4y = 12 \end{array} \quad (6, 0)$$

$$\begin{array}{l} y = x + 5 \\ y = 2x - 7 \end{array} \quad (24, 3)$$

$$\begin{array}{l} -x + 2y = 4 \\ 5x - 3y = 1 \end{array} \quad (2, 1)$$

$$\begin{array}{l} -3x - y = -13 \\ x + 2y = 6 \end{array} \quad (3, 5)$$

$$\begin{array}{l} 4x - y = 7 \\ 5x - 8y = 2 \end{array} \quad (4, 4)$$

# Substitution Scavenger Hunt Information Sheet Answers

Use the following systems of equations and solutions to create a Math Scavenger Hunt for the students. The systems in the left column should be placed on the same card as the solutions next to them.

$$\begin{aligned}x - 2y &= 0 \\ 2x - 5y &= -4\end{aligned}$$

$$\begin{aligned}-\frac{1}{2}x - y &= -3 \\ x + 3y &= 6\end{aligned}$$

$$\begin{aligned}y &= 8 - x \\ 4x - 3y &= -3\end{aligned}$$

$$\begin{aligned}x &= 8y \\ x - 4y &= 12\end{aligned}$$

$$\begin{aligned}y &= x + 5 \\ y &= 2x - 7\end{aligned}$$

$$\begin{aligned}-x + 2y &= 4 \\ 5x - 3y &= 1\end{aligned}$$

$$\begin{aligned}-3x - y &= -13 \\ x + 2y &= 6\end{aligned}$$

$$\begin{aligned}4x - y &= 7 \\ 5x - 8y &= 2\end{aligned}$$

$(12, 17)$

$(4, 1)$

$(2, 3)$

$(6, 0)$

$(24, 3)$

$(2, 1)$

$(3, 5)$

$(4, 4)$