Solving Systems of Linear Equations by Graphing

Using the Intercept Method

- 1. Graph the equations in the same coordinate plane.
- 2. Determine the coordinates of all the points common to the graphs.

Practice Exercises

Find the solutions of the following systems of linear equations graphically.

1.
$$\begin{cases} x+y = 12 \\ x-y = 8 \end{cases}$$

$$2. \begin{cases} 3x + 6y = 4 \\ 6x + 12y = 8 \end{cases}$$

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

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

$$5. \begin{cases} x - 8y = 2 \\ 3x - 24y = 6 \end{cases}$$

Problem Set

Find the solutions of the following systems of linear equations graphically.

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

$$\begin{cases} x+y = 7 \\ x-y = 1 \end{cases}$$

$$3. \begin{cases} 4x - y = 8 \\ 3x + 2y = 6 \end{cases}$$

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

$$5 \cdot \begin{cases} x+y=5 \\ y=5x+\frac{1}{2} \end{cases}$$

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

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

5.
$$\begin{cases} x - 8y = 2 \\ 3x - 24y = 6 \end{cases}$$

Problem Set

Find the solutions of the following systems of linear equations graphically.

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

$$\begin{cases}
x+y = 7 \\
x-y = 1
\end{cases}$$

$$3. \begin{cases} 4x - y = 8 \\ 3x + 2y = 6 \end{cases}$$

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

$$5. \quad \begin{cases} x+y=5\\ y=5x+\frac{1}{2} \end{cases}$$

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$$\begin{cases} x - 8y = x \\ 5 & x = x \\ 3 & x = x \\ 3 & x = x \\ 3 & x = x \\ 4 & x = x \\ 3 & x = x \\ 4 & x = x \\ 4$$

Problem Set

Find the solutions of the following systems of linear equations graphically.

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

$$2. \begin{cases} x+y = 7 \\ x-y = 1 \end{cases}$$

$$3. \begin{cases} 4x - y = 8 \\ 3x + 2y = 6 \end{cases}$$

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

$$5. \quad \begin{cases} x+y=5\\ y=5x+\frac{1}{2} \end{cases}$$

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Using the Intercept Method

- 1. Graph the equations in the same coordinate plane.
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Practice Exercises

Find the solutions of the following systems of linear equations graphically.

1.
$$\begin{cases} x+y = 1 \\ x-y = 8 \end{cases}$$

2.
$$\begin{cases} 3x + 6y = 4 \\ 6x + 12y = 8 \end{cases}$$

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

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

$$5. \quad \begin{cases} x - 8y = 2 \\ 3x - 24y = 6 \end{cases}$$

Problem Set

Find the solutions of the following systems of linear equations graphically.

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

$$2. \begin{cases} x+y = 7 \\ x-y = 1 \end{cases}$$

$$3. \begin{cases} 4x - y = 8 \\ 3x + 2y = 6 \end{cases}$$

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

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