How to Graph Systems of Linear Equations Using the Intercepts?

1. Identify the x-intercept and y-intercept of each equation in the system.
2. Plot the intercepts of both equations on the same Cartesian plane.
3. Connect the x-intercept and y-intercept.

Practice Exercises 1.8.1

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

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

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

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

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

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

Activity 1.8.1

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

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

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