Lesson 1.8.1: Graphing Systems of Linear Equations

Typeset by Jonathan Rufo Bacolod using LaTeX

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-intercepts and y-intercepts.

Practice Exercises 1.8.1

Graph the following systems of linear equations.

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. $\begin{cases} x + 4y = 8 \\ x - 2y = 2 \end{cases}$
5. $\begin{cases} x + y = 5 \\ y = 5x + \frac{1}{2} \end{cases}$

Activity 1.8.1

Graph the following systems of linear equations.

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

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