

Systems of Equations: Lesson 3

Introduction to Elimination: Notes

Name: Answer Key!

MATH  ALL

Solve the system of equations:

$$\begin{cases} 2x + y = 0 \\ -2x - 3y = -8 \end{cases}$$

$$\begin{array}{r} 2x + y = 0 \\ + \quad -2x - 3y = -8 \\ \hline -2y = -8 \\ \underline{-2} \quad \underline{-8} \\ y = 4 \end{array}$$

$$\begin{array}{r} 2x + y = 0 \\ + 4 = 0 \\ \hline 2x + 4 = 0 \\ - 4 = -4 \\ \hline 2x = -4 \\ x = -2 \end{array}$$

$(-2, 4)$

Circle the variables that can be eliminated:

$$\begin{cases} -5x + y = 10 \\ 7x - y = 21 \end{cases}$$

$$\begin{cases} -3x + 6y = 2 \\ 3x + 7y = -5 \end{cases}$$

$$\begin{cases} -8x - 5y = 9 \\ -4x + 5y = -8 \end{cases}$$

Solve the system of equations using elimination:

$$\begin{cases} 4x - 11y = 6 \\ 4x + y = 30 \end{cases}$$

$$\begin{array}{r} -1(4x - 11y = 6) \\ 4x + y = 30 \\ \hline -4x + 11y = -6 \\ + y = 24 \\ \hline 12y = 24 \\ y = 2 \end{array}$$

$$\begin{array}{r} 4x - 11y = 6 \\ + 2 = 6 \\ \hline 4x - 9 = 6 \\ + 9 = 15 \\ \hline 4x = 28 \\ x = 7 \end{array}$$

$(7, 2)$