

CLO: Students will review systems of equations in two variables and use their prior knowledge to write the different methods and rules for solving systems of equations to help prepare them for systems of equations in three variables.

Warm - Up

1. Write down the three methods that are used to solve systems of equations in two variables. Write an example of what each method would look like.

Substitution

$$3x + y = 12$$

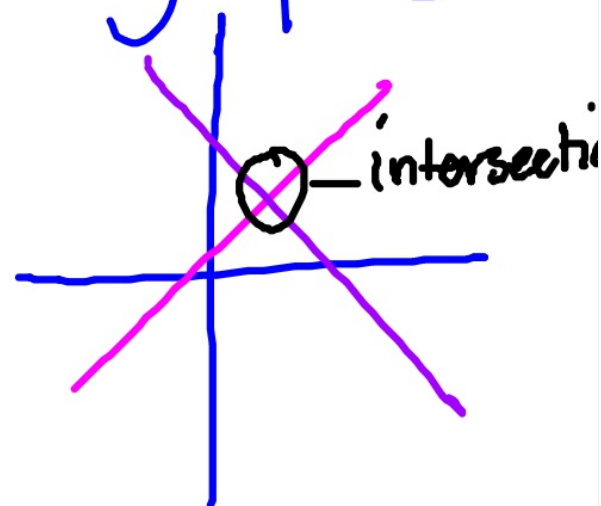
$$y = 4x + 2$$

Elimination

$$12x - 8y = 7$$

$$-12x + 14y = 30$$

Graphing



CLO: Students will review systems of equations in two variables and use their prior knowledge to write the different methods and rules for solving systems of equations to help prepare them for systems of equations in three variables.

What are the essentials to graphing a system of equations in two variables?

Two equations that are in slope intercept form

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

Goal: To find the intersection point = Solution

Parallel lines: No Solutions

Line graphed on top of another line: Infinite Solution

CLO: Students will review systems of equations in two variables and use their prior knowledge to write the different methods and rules for solving systems of equations to help prepare them for systems of equations in three variables.

What are the essentials to solving a system of equations in two variables using substitution?

Two variables

At least one of your two equations needs to have an isolated variable

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

$$\begin{aligned} y &= 2x + 1 \\ 3x + 4y &= 12 \end{aligned}$$

$$\begin{aligned} x &= 4 \\ 2x + 5y &= 10 \end{aligned}$$

CLO: Students will review systems of equations in two variables and use their prior knowledge to write the different methods and rules for solving systems of equations to help prepare them for systems of equations in three variables.

What are the essentials to solving a system of equations in two variables using elimination?

One of the variables should cancel out in both equations

Two variables with same coefficient and opposite signs.

Have to be in standard form $Ax + By = C$

$$\begin{array}{r} -2x + 4y = 12 \\ 2x + 6y = 18 \end{array}$$

$$\begin{array}{r} -1(3x + 2y = 11) \\ 3x - 9y = 15 \\ -3x - 2y = -11 \end{array}$$

CLO: Students will review systems of equations in two variables and use their prior knowledge to write the different methods and rules for solving systems of equations to help prepare them for systems of equations in three variables.

CLASSWORK

Page 160 # 5, 6, 8