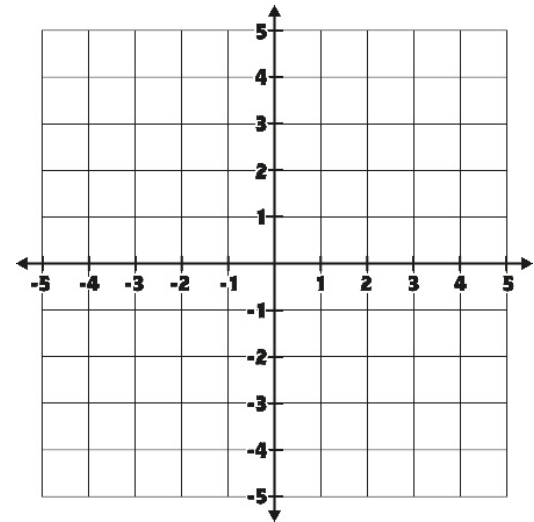


BELL RINGER

1.) The scale on a map is 0.5 inches equals 5 miles. The measured distance from Barker to Edmond is 3 inches. What is the distance in miles?

2.) Simplify $6 - 2 \cdot 5^2 + 3$.

3.) Graph $y = 2x - 5$



Solving Systems of Linear Equations

- **Objective:** Students will be able to solve systems of linear equations using graphing, elimination, and substitution.
- **“I Can” Statement:** I can solve systems of linear equations using graphing, elimination, and substitution.
- **HSA-CED.A.3:** Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context.
- **HSA-REI.C.6:** Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.

Solving Systems of Linear Equations

HSN-REI.C.6

NAME _____

You are starting your own lawn mowing business. You purchase a lawn mower for \$160. It will cost \$3 in gas and oil expenses per lawn that you mow. You are charging \$35 per lawn.



a. How many lawns must you mow to make enough money to break even?

HSN-REI.C.6

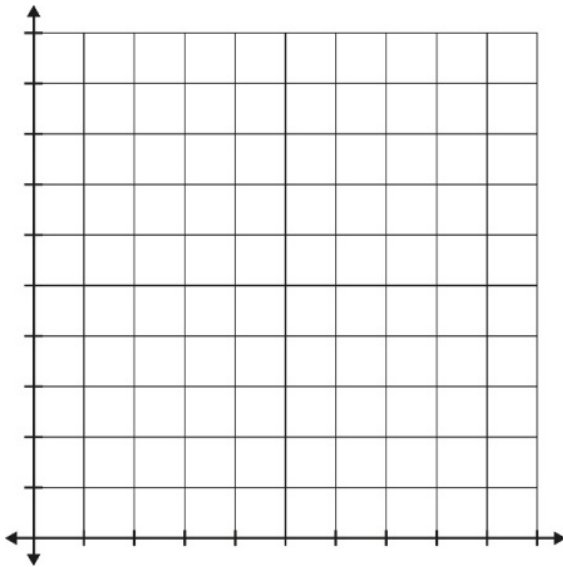
b. How much money will it cost you to mow 6 lawns?

Write an equation to show the cost, C , of mowing n number of lawns.

c. How much revenue (money) will you make mowing 6 lawns? Write an equation to show the revenue, R , of mowing n number of lawns.

d. How much money did you make profit as a result of mowing 6 lawns?

e. Graph your two equations on the coordinate plane below. Describe the meaning of the point of intersection of the two lines in the context of the situation.



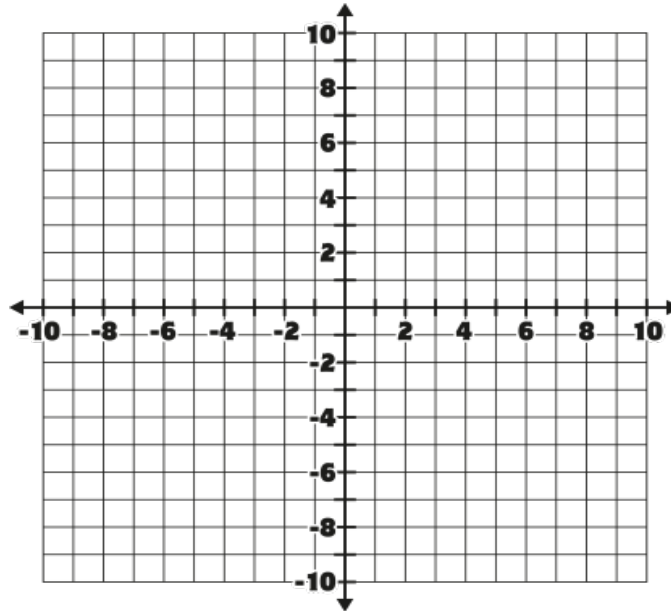
Note Sheet!

A solution to a system of linear equations is the solution(s) that the equations have in **common**.

There are many ways to solve a system of equations. Here are three “quick” methods for solving systems of equations.

Note Sheet!

By graphing: $y = \frac{1}{2}x + 5$
 $y = 2x - 1$



Note Sheet!

By substitution: $x + 2y = -6$

$$y = x + 9$$

Note Sheet!

By elimination: $x - 2y = 10$

$$2x + 2y = -4$$

Gallery Walk Problems

There are 6 systems of linear equations around the room.
Solve each linear system of equations using the method of
your choice.

Gallery Walk Problem Answer Key

- A.) $x + y = 6$ (1,5)
 $x - y = -4$
- B.) $y = 6x + 9$ $(-\frac{13}{5}, -\frac{33}{5})$
 $y = x - 4$
- C.) $y = -x - 3$ no solutions
 $x + y = 7$
- D.) $x = 2y + 10$ (2, -4)
 $3x - y = 10$
- E.) $4x + y = -6$ (-1, -2)
 $4x - y = -2$
- F.) $x + y = 2$ (3, -1)
 $y = x - 4$

EXIT SLIP

Solve the system by substitution.

$$y = x + 5$$

$$3x + y = 9$$

On a scale from 1-5, 5 being the greatest, how well do you understand this standard?