

Name: _____

Date: _____

Ms. Streffacio

Class: _____

I can:

Do Now (3 minutes to complete):

Equation 1: $-4x - 5 = 4x + 11$

Equation 2: $4x - 4 + x = 5x - 4$

Equation 3: $x + 3 + 2x = 3x + 2$

Which equation has infinitely many solutions? Explain.

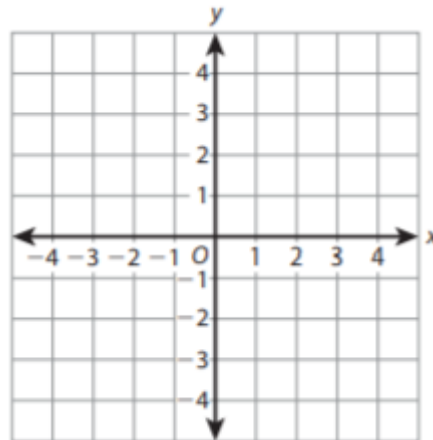
Which equation has no solution? Explain.

Model (10 minutes) You Watch, Listen, Copy:

Graph the system of equations. What ordered pair appears to be the solution?

Solve the system of equations algebraically to check your solution to problem 5.

Show your work.



Solution: _____

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

Graph the system of equations. What ordered pair appears to be the solution?

Solve the system of equations algebraically to check your solution to problem 5.

Show your work.

Solution: _____

Check for Understanding- Did you understand the Model? (2 minutes) Teacher will check!

Tom's work to solve a system of equations is shown. Do you agree with Tom's statement about the solution? Explain. Describe the graph of the system of equations.

System	Using Substitution
$y = -2x + 1$	$2x + (-2x + 1) = 3$
$2x + y = 3$	$1 = 3$

The system has no solution.

We Do Together (10 minutes):

Roberto got \$30 for his birthday. He decides to save that amount and add \$5 to his savings each week. Jack starts saving the same day as Roberto and puts \$8 in his savings each week. After how many weeks will the boys have the same amount in savings?

Show your work.

Solution: _____

Final Check for Understanding before I send you to Independent Practice!
Teacher will Check (4 minutes):

Consider the situation at the right. Write a question and a system of equations for the situation. Then answer your question by solving the system of equations.

Trisha and Yoshi are at the start of a trail. Trisha walks 500 feet before Yoshi starts. Trisha walks 350 feet per minute, and Yoshi walks 430 feet per minute.

Independent Practice (on your own):

Determine the solution to the system of equations below.

$$x - 3y = 1$$

$$3x - 5y = 11$$

Show your work.

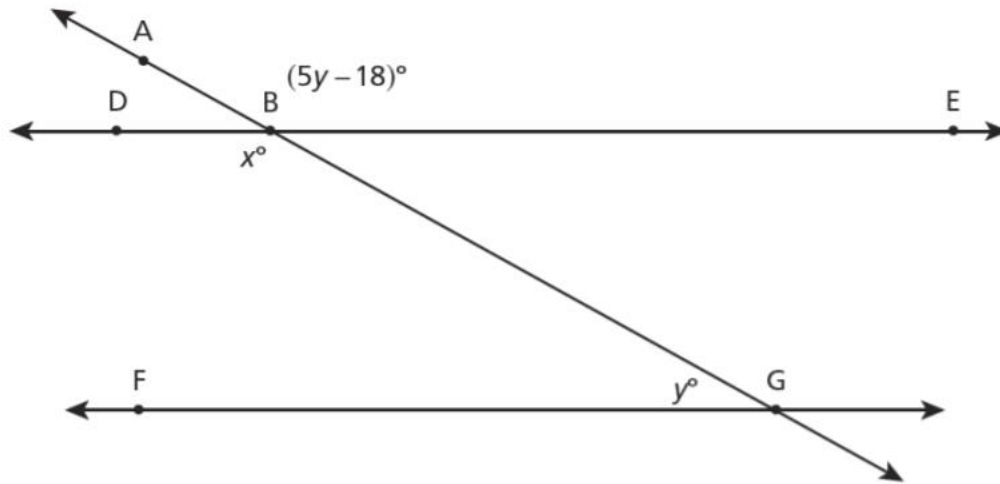
Determine the solution, if any, to the system of equations below.

$$8x - 2y = 1$$

$$-4x + y = 3$$

Show your work.

In the figure below, line DE is parallel to line FG, with transversal AG.



Write and solve a system of linear equations to determine the values of x and y .

Show your work.

A school district transported a total of 409 students and teachers to a zoo in buses and vans.

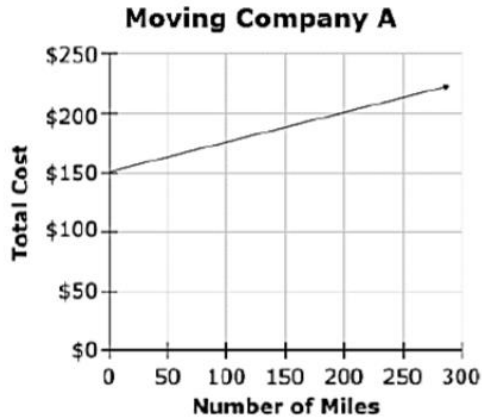
- Each bus transported a total of 55 students and teachers.
- Each van transported a total of 12 students and teachers.
- There were 5 more buses than vans.

What is the total number of students and teachers who rode to the zoo in buses?

What is the total number of students and teachers who rode to the zoo in vans?

Show your work.

The graph represents the cost of renting a truck from Moving Company A. The table represents the cost of renting a truck from moving Company B. Each company charges a one-time rental fee plus a charge for each mile driven.



Moving Company B

One-time Rental Fee	Charger per Mile
\$50	\$0.75

Part A

To the nearest mile, when will the two companies charge the same amount? **Show your work.**

Answer _____

Part B

Tim's upcoming move will span 250 miles. Which company should he hire? Explain how you found your answer.

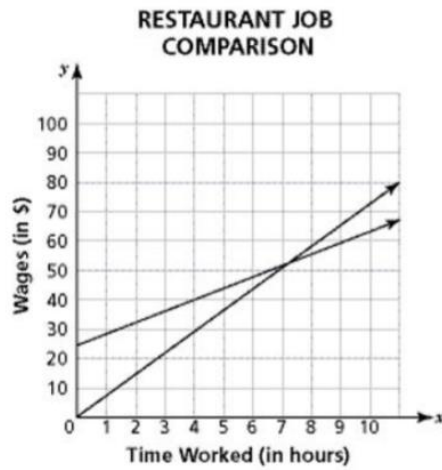
Determine the solution to the system of equations below.

$$y + x = 0$$

$$3y + 6x = -9$$

Show your work.

Mark used a graph to compare the wages from two restaurant jobs. A dishwasher earns \$7.25 per hour, while a waiter earns \$3.75 per hour in addition to \$25 per day.



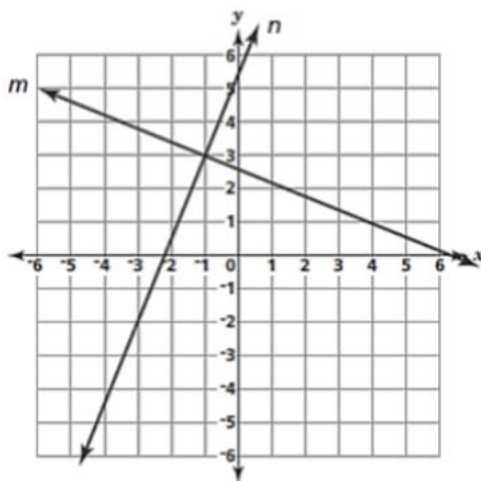
Part A

To the nearest hour, when will the two jobs earn the same amount?

Part B

Explain why your estimate is reasonable.

Line m is perpendicular to line n .



Part A

What point is common to both lines?

Answer _____

Part B

Line m is represented by the equation $2x + 5y = 13$ and line n is represented by the equation $5x - 2y = -11$. Verify that the point of intersection is a solution to both equations.

Show your work.

A cell phone company offers its customers two monthly plans. Plan A costs \$20 per month plus \$0.15 for each minute used. Plan B costs \$15 per month plus \$0.20 for each minute used.

Part A

What equation can be written to represent the cost of each plan?

Plan A _____

Plan B _____

Part B

For how many minutes is the cost the same? **Show your work.**

Show how to use substitution or elimination to solve the following system of equations. Write the solution as an ordered pair.

$$4x - y = 10$$

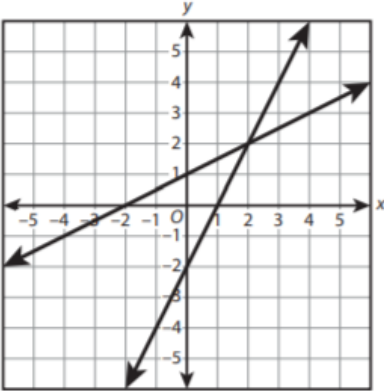
$$y = 2x - 2$$

Show your work.

Amy and Darren each solved the following system of equations using a different method.

$$y = 0.5x + 1$$

$$4x - 2y = 4$$

Amy's Solution	Darren's Solution
$4x - 2(0.5x + 1) = 4$ $4x - x + 1 = 4$ $3x + 1 = 4$ $3x = 3$ $x = 1$ $y = 0.5(1) + 1$ $y = 0.5 + 1$ $y = 1.5$	

Is either of them correct? Explain your reasoning and give the correct solution to the system.
