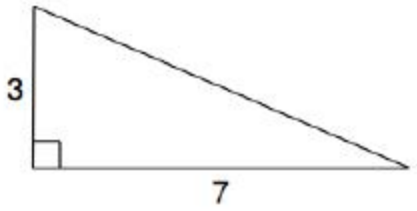
Lesson 5.4 Graphing Linear Equations Day 4

Week 1 Friday Course 3 Warm-up

Eileen saves dimes and quarters. She has 40 coins, which totaled $6.55, in her bank. How many of each coin does she have?

Re-Write Distance Formula

Find each missing length to the nearest tenth.

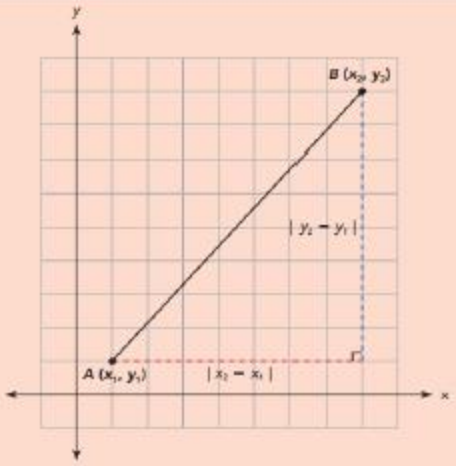


Lesson 5.4 Graphing Linear Equations Day 4

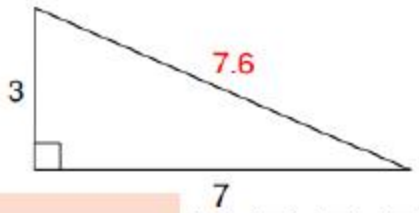
Week 1 Friday Course 3 Warm-up

Eileen saves dimes and quarters. She has 40 coins, which totaled $6.55, in her bank. How many of each coin does she have? 23 dimes; 17 quarters

Distance Formula



Find each missing length to the nearest tenth.



The distance formula:

The distance between points $A\,(x_1, y_1)$ and $B\,(x_2, y_2)$ is $\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$

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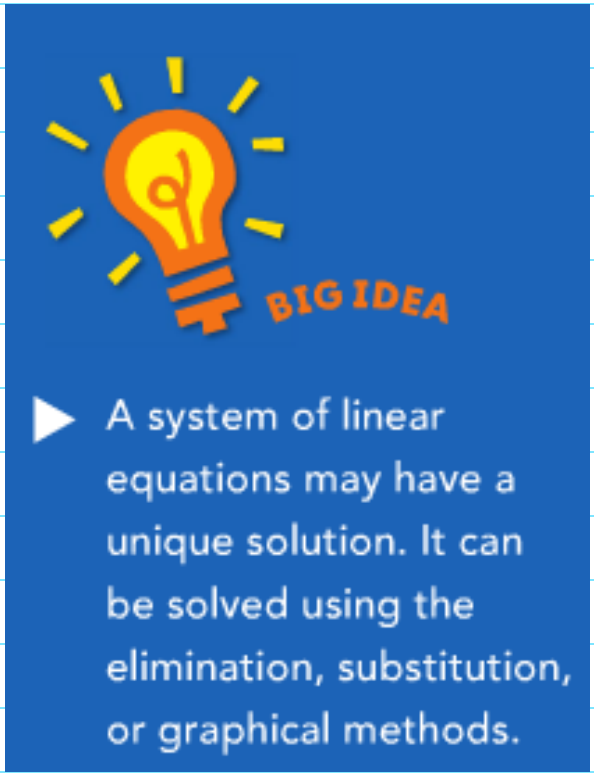
Objective

TSW solve systems of linear equations by finding the unique solution using the following strategy…

*Elimination Method

*Substitution Method

*Graphical Method



Common Core State Standards

8EE 8a Understand that solutions to a system…satisfy both equations simultaneously. 8EE 8 b Solve Systems of two linear equations in two variables algebraically

Mathematical Practices *2 Reason 3 Construct arguments 4 Model Mathematics*

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Example 9

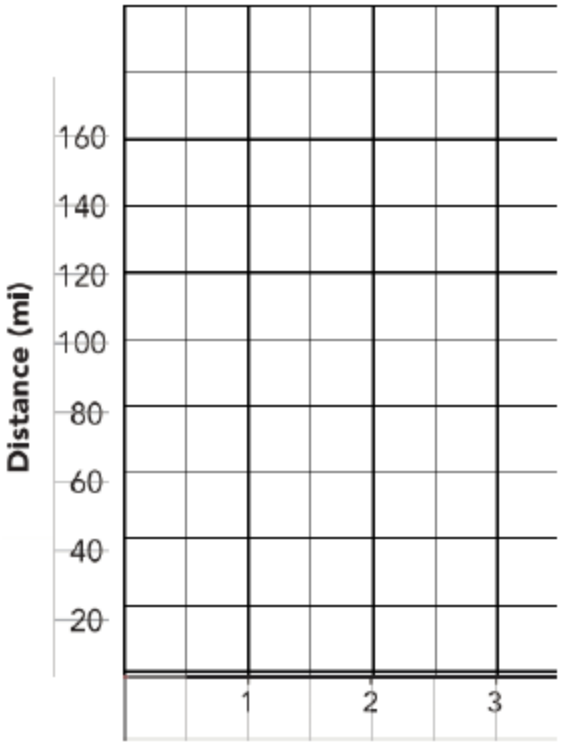
Solve real-world systems of linear equations using the graphical method.

Two cars are traveling along a highway in the same direction. They take x hours to travel y miles from point A on the highway. Their motions are described by the linear equations

$y = 60x$

$y = 50x + 20$

Solve the system of equations graphically. When will the cars meet?



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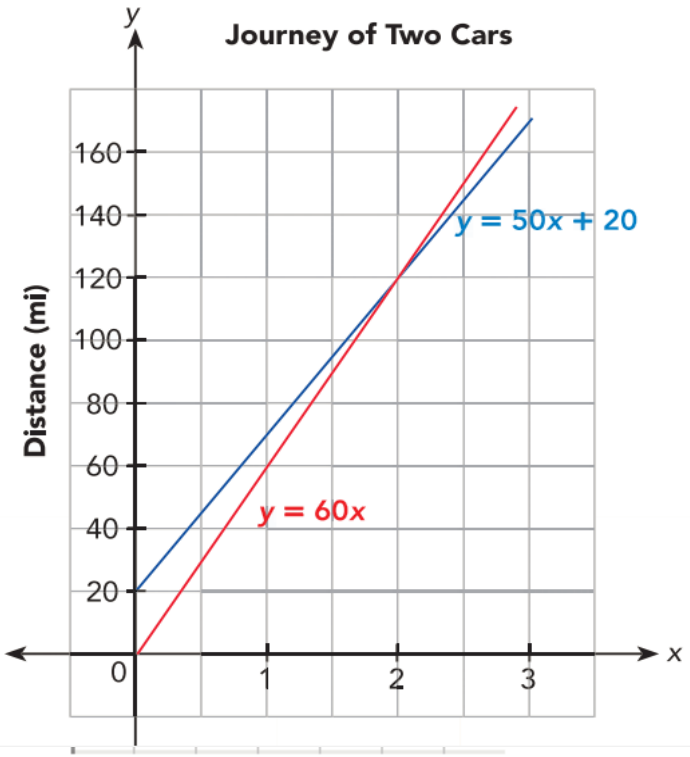

Lesson 5.4 Graphing Linear Equations Day 4

Practice 5.4 #11-15

Name:_____ Date:_____

Practice 5.4

For this practice, unless otherwise stated, use 1 grid square to represent 1 unit on both axes for the interval from −8 to 8. Solve each system of linear equations using the graphical method.

1 $x + y = 6$
$2x + y = 8$

a) Copy and complete the tables of values for the system of linear equations.

$x + y = 6$

x	0	1	2
y	6	?	?

$2x + y = 8$

x	0	1	2
y	?	6	?

b) Graph $x + y = 6$ and $2x + y = 8$ on the same coordinate plane. Find the point of intersection.

c) Use the graph in b) to solve the system of linear equations.

2 $x + y = 5$
$x - y = 2$

a) Copy and complete the tables of values for the system of linear equations.

$x + y = 5$

x	0	1	2
y	5	?	?

$x - y = 2$

x	0	1	2
y	?	−1	?

b) Graph $x + y = 5$ and $x - y = 2$ on the same coordinate plane. Find the point of intersection.

c) Use the graph in b) to solve the system of linear equations.

3 $x + 2y = 5$
$2x - 2y = 1$

a) Graph $x + 2y = 5$ and $2x - 2y = 1$ on the same coordinate plane. Find the point of intersection of the graphs.

b) Use the graph in a) to solve the system of linear equations.

Course 3

Challenge-

*Solve created equations

"Pick a Snowflake"

*Real World Problem (website)

*BuzzMath

Lesson Check #11– Can solve real world systems of linear equations using the graphical method

Ticket Out the Door- Connect, Extend, Challenge

1. How are the ideas and information presented CONNECTED to what you already knew?

2. What new ideas did you get that EXTENDED or pushed your thinking in new directions?

3. What is still CHALLENGING or confusing for you to get your mind around? What questions, wonderings or puzzles do you now have?