5th Grade

Mathematics

2 Week Instructional Student Packet

Lessons 27 – Finding Volume

Lesson 29 – Locating and Plotting on a Coordinate Plane

Lesson 30 – Problem Solving with Coordinate Planes

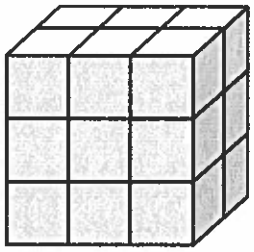
LESSON 27

Name: _____ Date: _____

Pack It, Ship It

Directions: Answer each question.

Percy has a box he wants to fill with cubes. He needs to pack the box tight so that the cubes will not move when he ships it. How can Percy figure out how many cubes will fit inside?



1. What is the area of the base of the box? _____

   Show your work.

2. How many layers high is the box? _____

3. How many cubes will fit inside the box? _____

   Draw a sketch and write an equation to show your work.

How did you use the area of the base and the height of the box to determine the volume? Explain your reasoning.

_____

_____

_____

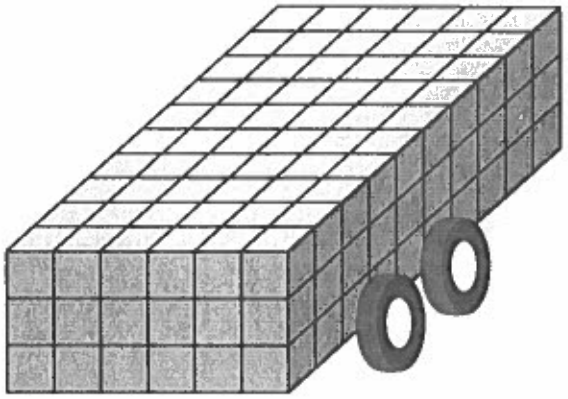
Name:_____ Date:_____

LESSON 27

Clarisse's Comics

Directions: Answer each question. Show your work on a separate sheet of paper.

Clarisse needs to move her collection of comic books from her home to her new store, Clarisse's Comics. She wants to fill a trailer with square boxes of comic books. How many boxes will fit inside the trailer at one time?



1. What is the area of the base of the trailer? _____

2. How many layers high is the trailer? _____

3. How many boxes will fit inside the trailer? Write your equation and solution.

_____

How did you use the area of the base and the height of the trailer to determine the volume? Explain your reasoning.

_____

_____

_____

4. A new trailer was brought to Clarisse's house. The length and the width are the same, but the height is 5 units. What is the volume of this trailer?

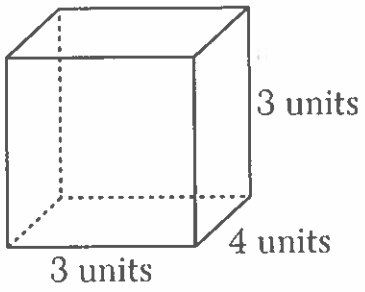
_____

LESSON 27

Name:_____ Date:_____

Quick Check

Directions: Determine if each statement is true or false. Choose the correct answer.



1. The base of the prism is 7 square units.

   True False

2. The height of the prism is 12 units.

   True False

3. The volume of the prism is 48 cubic units.

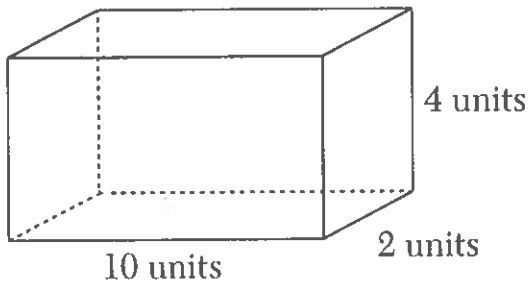
   True False

4. The volume of the prism is 36 cubic units.

   True False

Directions: Solve the problem.

5. What is the volume of the rectangular prism shown below? Show your work. Explain how you found your solution.



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_____

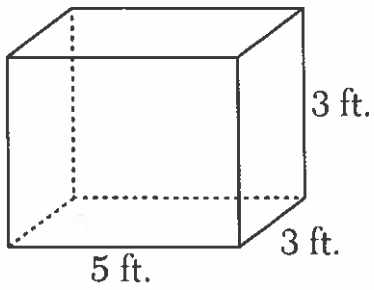
Name: _____ Date: _____

LESSON 27

Refocus

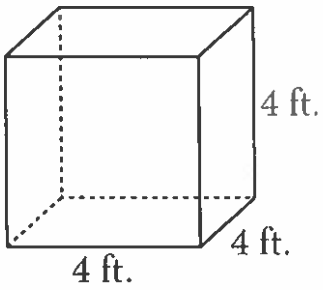
Directions: Find the volume.

1



Volume = _____

2



Volume = _____

Choose Question 1 or 2. Explain your thinking.

_____

_____

_____

_____

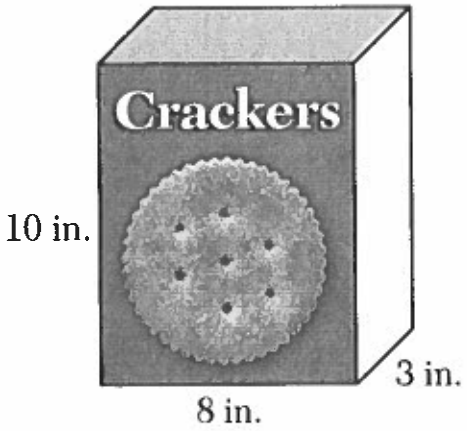
LESSON 27

Name: _____ Date: _____

Independent Practice

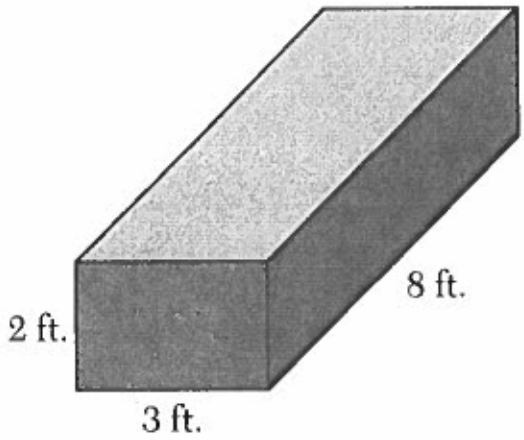
Directions: Find the volume of each rectangular prism.

1



Volume = _____

2



Volume = _____

Name: _____ Date: _____

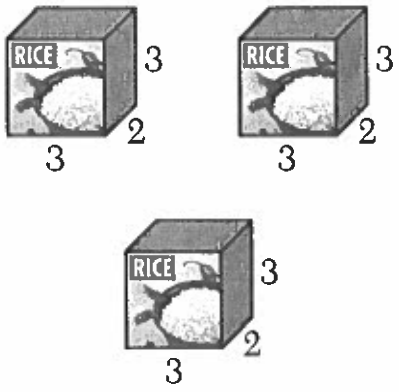
LESSON 27

Math in the Real World

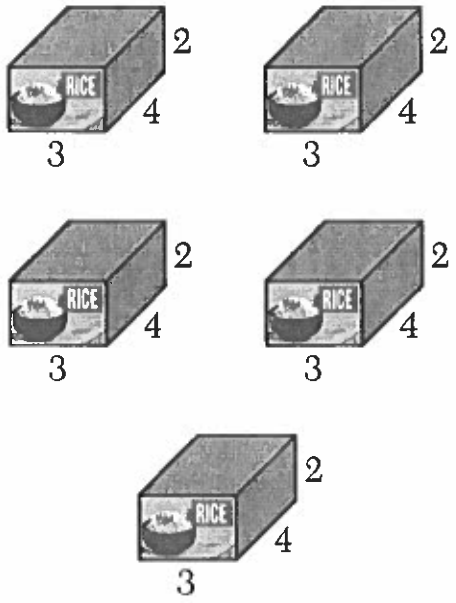
Class Donations

Mr. Chase's and Mrs. Jackson's classes raised money for a local food bank. With the money raised, they each bought bulk-size boxes of rice. Which class donated the most rice by volume? Explain how you know.

Mr. Chase's Class



Mrs. Jackson's Class



Unpack the Problem

Make a Plan

Solution

Look Back and Explain

LESSON 27

Name: _____ Date: _____

Reflection

1. How do you calculate the volume of a rectangular prism? Include a drawing to illustrate your answer.

LESSON 29

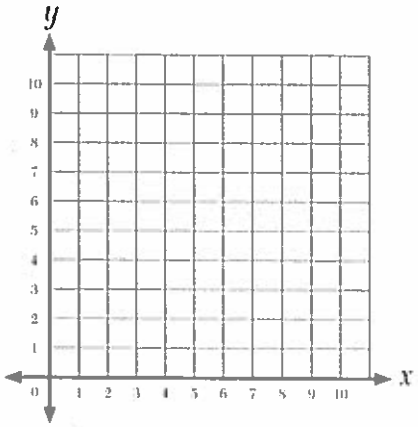
Name: _____ Date: _____

Shape Up

Directions: Answer each question.

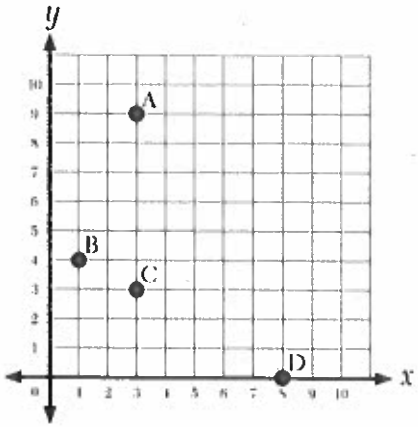
1. Plot the following points on the coordinate plane. Connect the points in the order they are written. Then, connect the last point to the first point.

   (6, 2), (10, 2), (10, 4), (10, 6), (8, 6), (4, 6), (2, 6), (2, 4), (2, 2)



2. What shape do the dots form? _____

3. Find the ordered pair for each point.



A = _____ B = _____ C = _____ D = _____

How were you able to determine the location of a point on the coordinate plane? Explain.

_____

_____

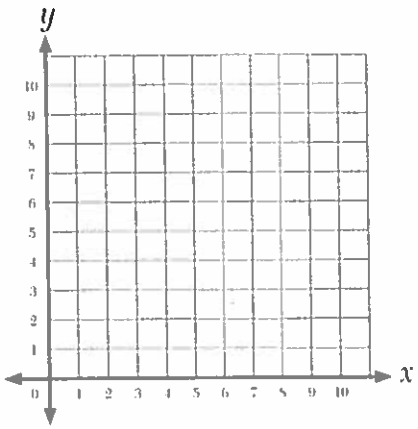
Name: _____ Date: _____

LESSON 29

Coordinating Points

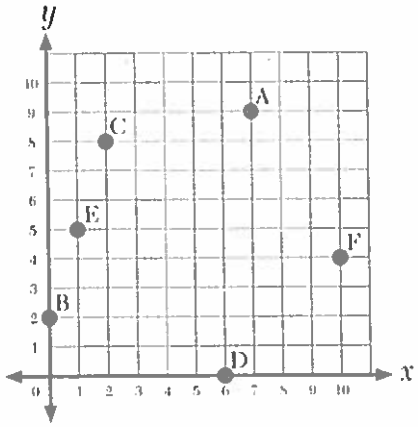
Directions: Answer each question.

1. Plot the following points on the coordinate plane. Label each point with the corresponding letter.



A = (4, 8) B = (1, 9) C = (6, 3) D = (7, 0) E = (5, 2) F = (0, 6)

2. Find the ordered pair for each point.



A = _____ B = _____ C = _____ D = _____ E = _____ F = _____

How were you able to determine the location of a point on the coordinate plane? Explain.

_____

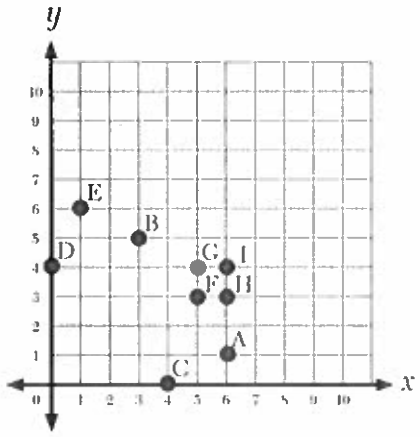
_____

LESSON 29

Name: _____ Date: _____

Quick Check

Directions: Choose the correct answer.

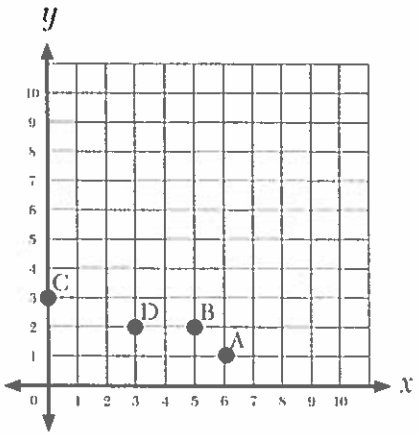


1. Which letter represents (3, 5)?
   - (A) Point A
   - (B) Point B
   - (C) Point E
   - (D) Point F

2. Which letter represents (0, 4)?
   - (A) Point A
   - (B) Point B
   - (C) Point C
   - (D) Point D

Directions: Answer the question.

3. What is the ordered pair for each letter?



A = _____

B = _____

C = _____

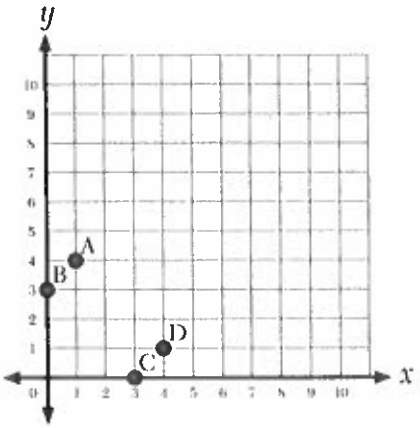
D = _____

Name: _____ Date: _____

LESSON 29

Refocus

Directions: Find the points on the coordinate plane.



1. Which point represents (0, 3)?

   Solution: _____

Explain your thinking.

_____

_____

_____

2. Which point represents (1, 4)?

   Solution: _____

Explain your thinking.

_____

_____

_____

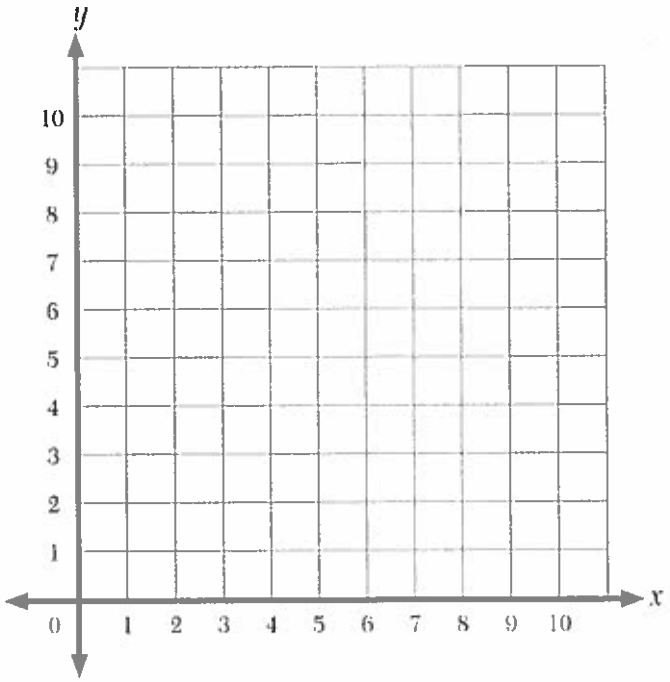
LESSON 29

Name:_____ Date:_____

Independent Practice

Directions: Answer each question.

1. Plot the following points on the coordinate grid.



Start.	Start.	Start.
(2, 2)	(3, 4)	(5, 7)
(10, 2)	(4, 3)	Stop.
(10, 9)	(8, 3)	Start.
(2, 9)	(9, 4)	(7, 7)
Stop. Connect the points.	Stop. Connect the points.	Stop.

2. What design did you make by connecting the points?

_____

Name: _____ Date: _____

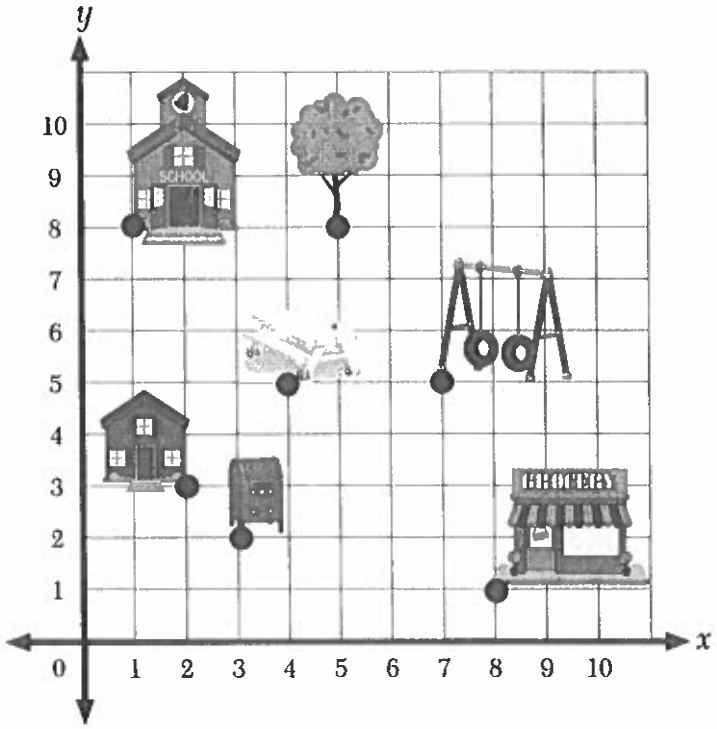
LESSON 29

Math in the Real World

Hidden Treasure

Jim drew a map of his neighborhood to show where he has hidden three treasures. He gave his map and a set of ordered pairs to his friend Paul. Paul must collect all three treasures. Where are the treasures located?

Treasure 1: (5, 8) Treasure 2: (3, 2) Treasure 3: (4, 5)



Unpack the Problem

Make a Plan

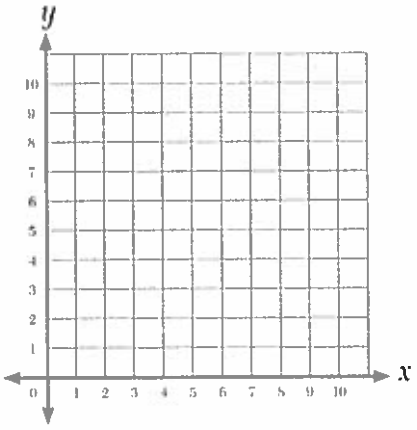
Solution

Look Back and Explain

LESSON 29

Reflection

1. Explain why the order of the coordinates in an ordered pair is important. Explain your answer with an example.



2. What are the similarities and differences of plotting points on a number line and plotting points on a coordinate grid?

Similarities:

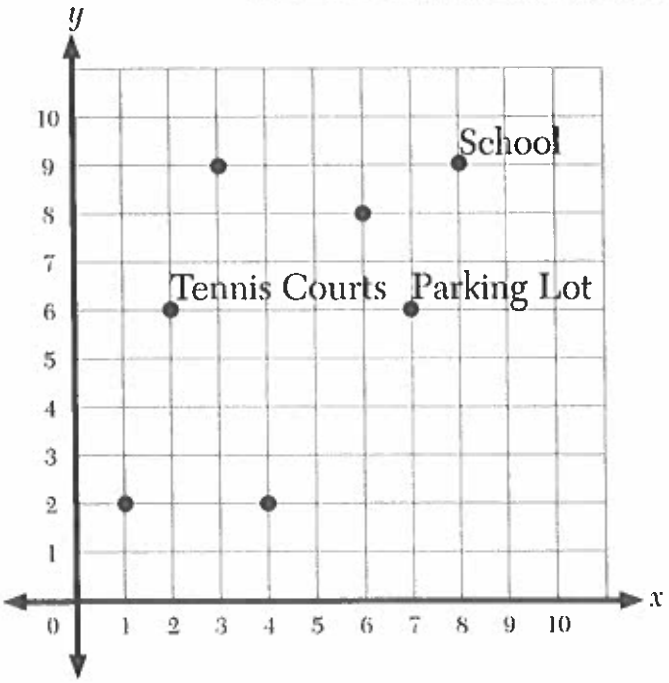
Differences:

Name:_____ Date:_____

LESSON 30

School Campus

Directions: Answer each question.



1. Hector drew a map of his school campus. He forgot to label a few locations on the map. Use the ordered pairs below to graph and label the points on the map.

   Locate the soccer field at (4, 2). Locate the football field at (3, 9).

   Locate the playground at (6, 8). Locate the forest at (1, 2).

2. What is the ordered pair of the following locations?

   The tennis courts are located at _____. The school is located at _____.

   The parking lot is located at _____.

3. What route would you take to get from the school to the forest?

   _____

   _____

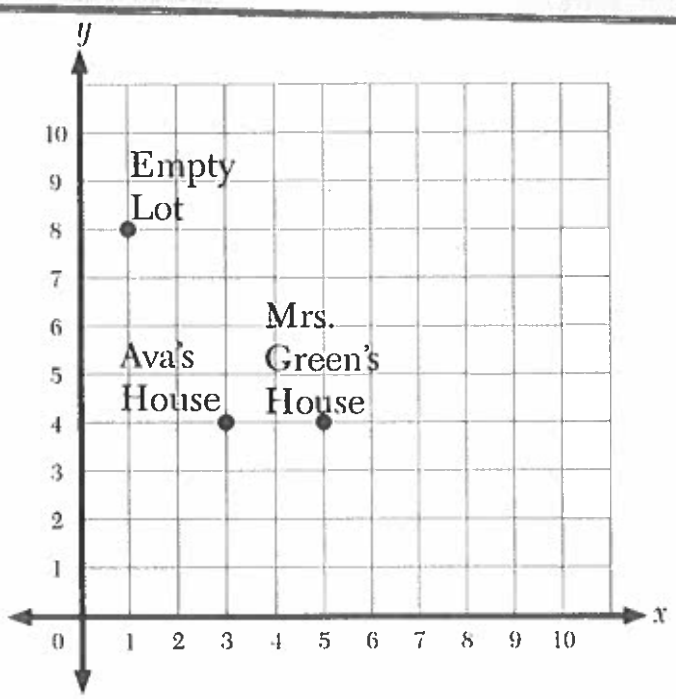
   _____

LESSON 30

Name:_____ Date:_____

Meet the Neighbors

Directions: Answer each question.



1. Hattie sketched a map of her new neighborhood. She wants to meet her new neighbors and keep track of where they live. Use the ordered pairs below to label the map.

   Linda lives at (3, 8).

   Lewis lives at (5, 8).

   The Pendanski family lives at (7, 4).

   The Bell family lives at (7, 8).

2. What is the ordered pair of the following locations?

   Ava lives at _____.

   Mrs. Green lives at _____.

   The empty lot is located at _____.

3. Explain a route to get from Ava's house to the Bell family's house.

   _____

   _____

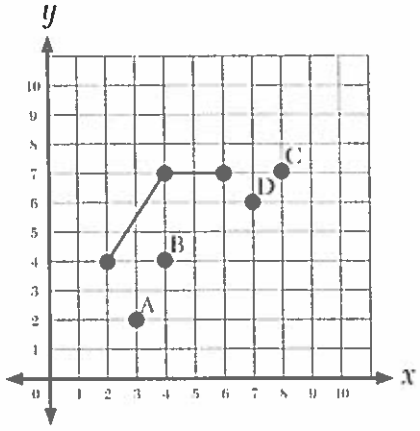
   _____

Name:_____ Date:_____

LESSON 30

Quick Check

Directions: Choose the correct answer.



1. What is the ordered pair for point C?
   - (A) (7, 8)
   - (B) (9, 6)
   - (C) (8, 7)
   - (D) (8, 8)

2. What is the ordered pair for point A?
   - (A) (3, 2)
   - (B) (2, 4)
   - (C) (0, 3)
   - (D) (3, 3)

3. What point is located at (7, 6)?
   - (A) A
   - (B) B
   - (C) C
   - (D) D

4. What point will complete the line segments to create a parallelogram?
   - (A) A
   - (B) B
   - (C) C
   - (D) D

Directions: Answer the question.

5. Explain your reasoning for Question 4.

_____

_____

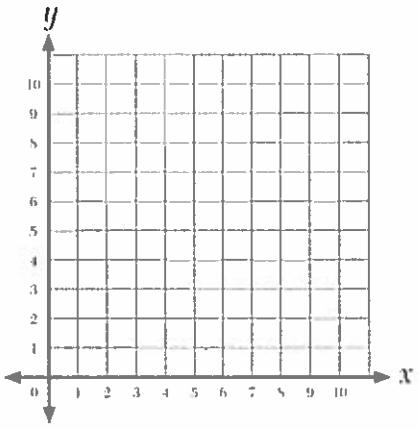
LESSON 30

Name: _____ Date: _____

Refocus

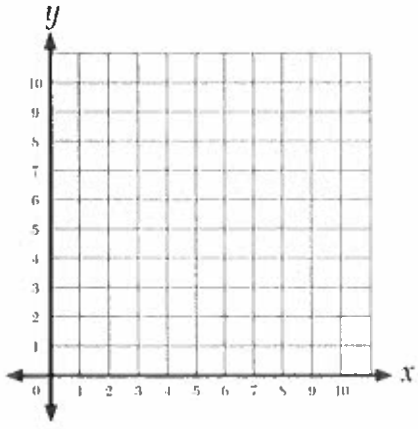
Directions: Answer each question.

1. Create a polygon on a geoboard. Draw your polygon on the coordinate grid. Write the ordered pairs for each corner of the polygon.



_____

2. Create a different polygon on a geoboard. Draw your polygon on the coordinate grid. Write the ordered pairs for each corner of the polygon.



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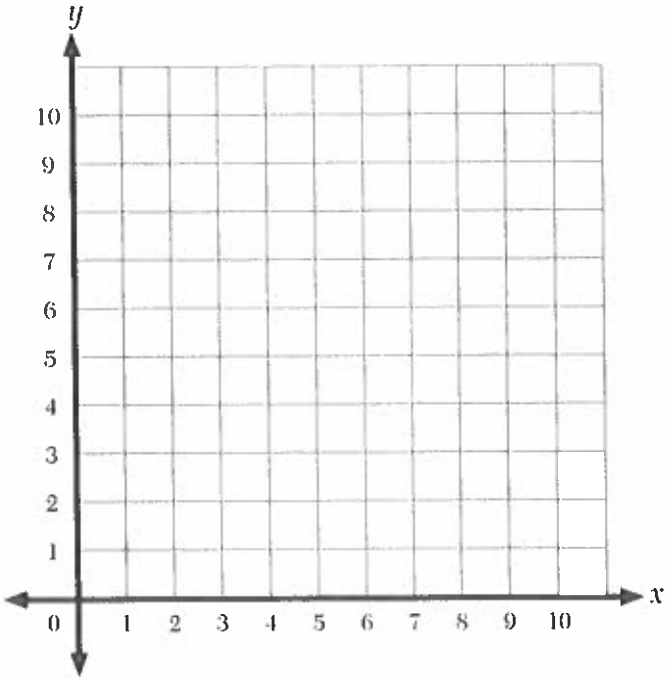
Name:_____ Date:_____

LESSON 30

Independent Practice

Directions: Answer each question.

1. Make a map. Plot four locations on the coordinate grid. Label each point. For example, you may label one point *School*.



2. What are the ordered pairs for each location?

Point 1: _____ Point 2: _____ Point 3: _____ Point 4: _____

3. Choose two locations. Explain how you would get from one location to the other.

_____

_____

_____

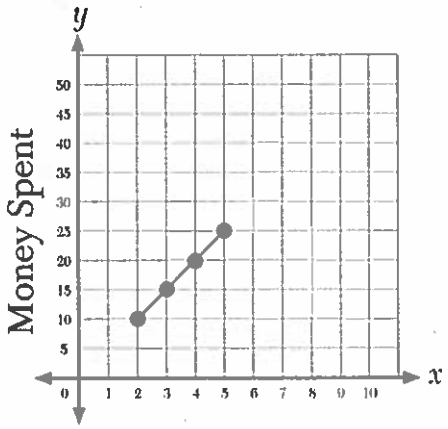
LESSON 30

Name: _____ Date: _____

Math in the Real World

Green Lake Grill

At the Green Lake Grill, the owner has made a graph showing the average amount each customer spends. How much has he determined that each customer spends? If he has 10 people at the restaurant, how much does he think they will spend altogether?



Unpack the Problem

Make a Plan

Solution

Look Back and Explain

Name:_____ Date:_____

LESSON 30

Reflection

1. How can coordinate grids be used as a tool in real-world situations?

2. Provide real-world examples in which a coordinate grid can be used to solve a problem.