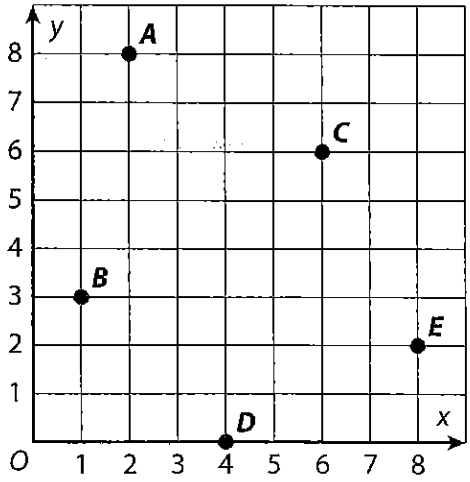
Understanding of the Coordinate Plane

Name: _____

1 Write ordered pairs for the 5 points in the coordinate plane.



Point *A* _____ Point *B* _____

Point *C* _____ Point *D* _____

Point *E* _____

Plot the following points in the same coordinate plane. Label each point with its letter name.

Point *P* (3, 5) Point *Q* (5, 3) Point *R* (0, 7)

Point *S* (3, 1) Point *T* (7, 8)

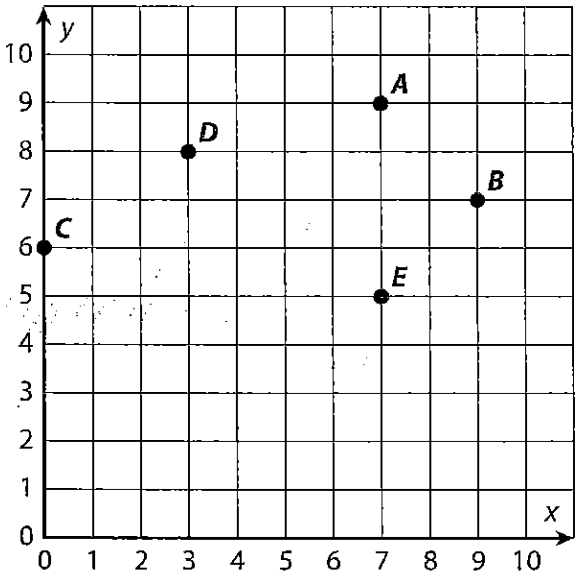
Describe the location of point *P* compared to point *Q* in the coordinate plane.

2 In the table, write the coordinates for points *A*, *B*, *C*, *D*, and *E*, shown in the coordinate plane.

Point	*A*	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*J*	*K*
x						8	6	9	5	2
y						3	0	10	2	5

The coordinates for points *F*, *G*, *H*, *J*, and *K* are also shown in the table. Plot and label the points in the coordinate plane.

Which two points are located on the same horizontal grid line in the coordinate plane? Explain how you can tell by looking at the table.



3 Compare representing points in the coordinate plane and in a table.

Super-Journal Week 4:3

Every night, you should be reading at least 30 minutes of whatever book you have checked out from your assigned reading list. Tape or glue (but do not staple) this sheet into your Super-Journal on the left-side page. Fill in the table below *every day* by recording the required data.

Day	Title	Start Pg.	End Pg.	**Parent Sign.**
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				
Saturday				
Sunday				

On the right-side page of your Super-Journal, answer one of the questions below throughout the week. Be sure that the questions you choose to answer go with the appropriate type of book (Fiction or Nonfiction).

FICTION

1. You will be making **2 whole page colorful illustrations** based off of 2 separate quotes from your reading. Each illustration should take an entire page and should be **colored**. Make sure that you write the quote, and the **page number** you got your quote from at the bottom of each colorful illustration.

NONFICTION

1. What is this text about?
2. Summarize the main ideas in 5 sentences.

RL.3.7/RI.1.2

Super-Journal Week 4:3

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NONFICTION

1. What is this text about?
2. Summarize the main ideas in 5 sentences.

RL.3.7/RI.1.2

Invento-animal project: Due Friday 4/5 NO late turn-ins

PROJECT DESCRIPTION:
For this project you will research different environments (ecosystems) and create an animal that would best survive in that setting. Your animal MUST have **three (3)** structural adaptations and **one (1)** behavioral adaptation. You will draw a picture and write a biography for your animal. Then, you will write an ad explaining WHY your animal would best survive!

PART ONE: **Research**
Using the research guide, you will explore the desert, the marine (ocean or sea), and the grasslands. Be sure to answer all of the questions in your research guide!

You will then pick ONE environment where your animal lives.

PART TWO: **Biography & Picture**
Using the information from your research, the animal adaptation page, and class notes you will complete the biography chart.
Be sure to check spelling! Spelling of Science terms WILL count!!!

Draw a picture of your invento-animal! Your picture MUST show the animal's three structural adaptations.
Follow drawing rules! Pencil first, outline in tracing pen, color last!

PART THREE: **Survivor Ad**
The last part of this project is a paragraph explaining WHY your animal would survive best in its environment.

**Questions to think about as you write an explanation…
What adaptation does the animal have?
How are these adaptations helpful?
What do the adaptations allow the animal to do well?
Does your animal have any weaknesses?

THE GOAL IS TO EXPLAIN, USING DETAILS FROM RESEARCH, WHY YOUR ANIMAL WOULD SURVIVE IN ITS ENVIRONMENT!

Animal Adaptations – Vocabulary

Adaptation: A body part, body covering, or behavior that helps an animal survive in its environment.

Behavior: The actions of an animal.

Camouflage: A color or shape in an animal's body covering that helps it blend into its environment.

Environment: Everything that surrounds and affects a living thing. The environment includes non-living things, such as water and air, as well as other living things.

Habitat: The place where an animal lives. The physical characteristics of an animal's surroundings.

Instinct: A behavior an animal is born with and does not have to learn.

Mimicry: An adaptation in which an otherwise harmless animal looks like a harmful animal in order to protect itself.

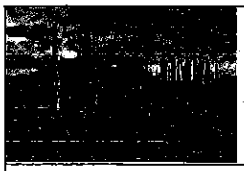
Predator: An animal that hunts and eats other animals for food.

Prey: An animal that is taken and eaten by another animal (predator) for food.

Survive/Survival: Using adaptations to continue to live.

Part One: Internet Research Website Ideas

(Use these sites, or others you find, to complete your research) Hold down Ctrl when clicking to open the link



Desert

- http://www.ducksters.com/science/ecosystems/desert_biome.php
- https://kids.nationalgeographic.com/explore/nature/habitats/desert/
- https://www.enchantedlearning.com/biomes/desert/desert.shtml

Marine (Ocean)

- http://kids.nceas.ucsb.edu/biomes/marine.html
- http://ocean.nationalgeographic.com/ocean/ocean-life/
- http://studyjams.scholastic.com/studyjams/jams/science/ecosystems/aquatic-ecosystems.htm
- http://www.ducksters.com/science/ecosystems/marine_biome.php

Grasslands

- http://kids.nceas.ucsb.edu/biomes/grassland.html
- http://www.enchantedlearning.com/biomes/grassland/grassland.shtml
- http://environment.nationalgeographic.com/environment/habitats/grassland-profile/
- http://www.ducksters.com/science/ecosystems/grasslands_biome.php

Part One *continued*: Inventa-animal Internet/Book Research Guide

Directions:

Complete this packet as you research the desert, the marine (ocean or sea), and the grasslands. Remember, you will be using this research to create an animal. Be sure to answer all the questions so you can make an informed decision about which environment you want your animal to live in!

THINK ABOUT: What types of adaptations would help an animal survive best here?

Internet Research: Desert

1. **What is the desert?**
   -

2. **What is the weather like here? Write 2-3 bullet points to describe the weather.**
   -
   -
   -

3. **What does the land look like? Write 2 descriptions.**
   -
   -

4. **List three animals that live here.**
   -
   -
   -

5. **What adaptations do animals have that help them survive here? List 3-5 adaptations. You will need to use your prior knowledge to help you.**
   -
   -
   -
   -
   -

Part One *continued*: Inventa-animal Internet/Book Research Guide

Directions:

Complete this packet as you research the desert, the marine (ocean or sea), and the grasslands. Remember, you will be using this research to create an animal. Be sure to answer all the questions so you can make an informed decision about which environment you want your animal to live in!

THINK ABOUT: What types of adaptations would help an animal survive best here?

Internet Research: Marine (Ocean or Sea)

1. **What is the Marine environment?**

•

2. **What is the weather like here? Write 2-3 bullet points to describe the weather.**

•
•
•

3. **What does the land look like? Write 2 descriptions.**

•
•

4. **List three animals that live here.**

•
•
•

5. **What adaptations do animals have that help them survive here? List 3-5 adaptations. You will need to use your prior knowledge to help you.**

•
•
•
•
•

Part One *continued*: Inventa-animal Internet/Book Research Guide

Directions:

Complete this packet as you research the desert, the marine (ocean or sea), and the grasslands. Remember, you will be using this research to create an animal. Be sure to answer all the questions so you can make an informed decision about which environment you want your animal to live in!

THINK ABOUT: What types of adaptations would help an animal survive best here?

Internet Research: Grasslands

1. **What is the Grasslands environment?**
   -
2. **What is the weather like here? Write 2-3 bullet points to describe the weather.**
   -
   -
   -
3. **What does the land look like? Write 2 descriptions.**
   -
   -
4. **List three animals that live here.**
   -
   -
   -
5. **What adaptations do animals have that help them survive here? List 3-5 adaptations. You will need to use your prior knowledge to help you.**
   -
   -
   -
   -
   -

Part One *continued*: Invent-a-Animal Internet/Book Research Guide

Book/Note Research

Remember...

- A physical adaptation is some type of structural modification made to a part of the body.

- A behavioral adaptation is something an animal does—how it acts.

- Different animals have many different ways of trying to stay alive. Their adaptations are matched to their way of surviving.

- Animals have evolved their adaptations. This means a long period of slow change resulted in an animal's adaptation(s).

Part One *continued*: Inventa-animal Internet/Book Research Guide

Book/Note Research

Directions:

Read through the adaptations and vocabulary pages in the research guide. Select 5 adaptations that you are most interested in and complete the chart below.

Adaptation	Description *(What is it, or what does it look like)*	Purpose *(How does this help an animal survive?)*

Post Research Selections

The environment that my animal lives in is.

-

My animal has these structural adaptations:

-
-
-

My animal has this behavioral adaptation:

-

Part One *continued*: Inventa-animal Internet/Book Research Guide

Book/Note Research

Adaptations are any behavioral or physical characteristics of an animal that help it to survive in its environment.

Webbed Feet

In most aquatic animals, swimming is a must. To aid swimming, many animals have adapted and evolved with webbed feet. Webbed feet help animals propel themselves through the water with ease. This can help the animal swim faster to catch prey or escape a predator. Also, if an animal has to swim long distances, webbed feet can help it save energy so it can swim farther.

Sharp Claws

Many land and sea animals alike have developed sharp claws. Sharp claws can be used for many different purposes. For instance, many herbivores use their sharp claws for digging for berries, roots, and herbs or burrowing for shelter. Animals that eat meat may use their claws for killing their prey or tearing meat from their kills. Also, claws can be used to increase traction to run faster, as in the case of the cheetah. Other times, sharp claws have evolved for use in defense. For some animals, showing of claws is enough warning for their predators or competitors to back off.

Whiskers

Although not usually thought of as an adaptation, whiskers serve an important purpose for many animals. In most cases, whiskers around the face, specifically the mouth area, help the animal feel its way through tight spots. In a way, they serve as "feelers," telling the animal whether or not it can fit into a specific area. One example is that of the North American river otter, which can use its whiskers both on land and in water. On land, they are used to feel their way through narrow channels, with a similar purpose for the whiskers under water. They are also useful to sense prey.

Part One *continued*: Inventa-animal Internet/Book Research Guide

Book/Note Research *continued*...

Sharp Teeth

One of the most visible adaptations on many animals, sharp teeth helps an animal eat meat. Found primarily on meat-eating animals, or carnivores, sharp teeth are used mainly for the tearing and chewing of an animal's prey. Rather than developing the dull teeth of plant-eaters, or herbivores, carnivores rely on their sharp teeth to allow them to eat and survive. Sharp teeth can serve another purpose: defense. In some animals, bearing a large set of sharp teeth can show power or fear.

Beaks

**See your "Bird Beak Adaptations" worksheet!

Wings/Flying

Wings are another highly visible adaptation on many animals. Although most think of birds when it comes to wings, other animals like the vampire bat also have wing-like structures that help it fly. Of course, the primary function of wings is flight in most animals with wings. Some animals can reach speeds up to and above 60 miles per hour in flight. This flight is used to attack its prey. Other animals do not reach the speeds of other raptors, but still use their wings to travel from place to place. A penguin does not use its wings to fly at all. Instead, it uses its wings as flippers to move through the water.

Hooves

Hooves are another body part that are an important adaptation for many large animals. In most cases, animals with hooves use their specially adapted feet to maneuver in a rocky environment. Hooves protect the feet of these animals and allow for greater mobility than unprotected feet.

Part One *continued*: Inventa-animal Internet/Book Research Guide

Book/Note Research *continued*...

Striped Fur

Striped fur is one variation of a special adaptation called camouflage. Striped fur, in most cases, helps animals blend into their environment. This helps the animal in one of several ways, including hiding from predators and sneaking up on prey. Striped fur, as in the case of a tiger's vertical stripes, serves the animal by helping it match the surrounding vegetation, thus making it nearly invisible to other animals. In other animals, like the skunk, the stripes serve as a warning to predators. In this way, the stripes serve as a defense mechanism.

Brightly Colored Feathers

Found mostly in tropical rain forests, birds with brightly colored feathers are another example of an animal with an adaptive body covering. Brightly colored feathers can serve several purposes, including camouflage, defense, and mating. In some parts of the rain forest, the macaw and its brightly colored feathers can hide amid similarly brightly colored plants and flowers. The male peacock uses its bright feathers for another purpose: attracting a mate. In contrast to the male, the female peafowl has very dull colored feathers. This feature, common among female birds of most species, helps females hide while guarding their nest and protecting their young.

Part One *continued*: Inventa-Animal Internet/Book Research Guide

Book/Note Research *continued*...

Bird Beak Adaptations Worksheet

SHAPE	TYPE	ADAPTATION
	Cracker	Seed eaters like sparrows and cardinals have short, thick conical bills for cracking seed.
	Shredder	Birds of prey like hawks and owls have sharp, curved bills for tearing meat.
	Chisel	Woodpeckers have bills that are long and chisel-like for boring into wood to eat insects.
	Probe	Hummingbird bills are long and slender for probing flowers for nectar.
	Strainer	Some ducks have long, flat bills that strain small plants and animals from the water.
	Spear	Birds like herons and kingfishers have spear-like bills adapted for fishing.
	Tweezer	Insect eaters like warblers have thin, pointed bills.
	Swiss Army Knife	Crows have a multi-purpose bill that allows them to eat fruit, seeds, insects, fish, and other animals.

Part Two: Biography and Picture

Directions: Using the information from your research, the animal adaptation page, and class notes you will complete the biography chart. Be sure to check spelling! Spelling of Science terms WILL count!!!

Biography

Name of Animal:

-

Habitat:

-

Description of its habitat/environment:

-

It has adaptations to help it...

-

My structural adaptations are :

-
-
-

My behavioral adaptation is:

-

Part Two *continued*: Biography and Picture

Directions: Draw a picture of your inventa-animal. Your picture MUST show the animal's three structural adaptations. Follow drawing rules! Pencil first, outline in tracing pen and color last. (Do this on your own paper, take a picture of it, and then insert the picture into the document below)

Picture: (insert below)

Part Three: Survivor Ad

Directions: The last part of this project is a paragraph explaining WHY your animal would survive best in its environment.

**Questions to think about as you write an explanation...

- What adaptation does the animal have?
- How are these adaptations helpful?
- What do the adaptations allow the animal to do well?
- Does your animal have any weaknesses?

HE GOAL IS TO EXPLAIN, USING DETAILS FROM RESEARCH, WHY YOUR ANIMAL WOULD SURVIVE IN ITS ENVIRONMENT!

Type your Survivor Ad in the space provided below.

Inventa-animal Rubric

Name: _____ #: _____

Criteria	3	2	1	0
Completion of Research	My research guide is complete with detailed information that will be helpful for the next steps of my project.	My research guide is complete with information that will be helpful for the next steps of my project.	My research guide is complete, but the information is not helpful for my project.	My research guide is not complete.
Demonstrates understanding of animal adaptions and how an animal's environment affects its adaptations	I accurately and effectively used a scientist's vocabulary (language) throughout my animal's biography and survivor ad.	I used a scientist's vocabulary (language) throughout my animal's biography and survivor ad.	I did not use a scientist's vocabulary (language) throughout my animal's biography and survivor ad.	I did not use a scientist's vocabulary (language) in my animal's biography and survivor ad.
Supports explanation with evidence	I supported my animal adaptations with insightful evidence. I used multiple, clear examples from my research guide.	I supported my animal adaptations with evidence. I used a few examples from my research guide.	I justified with evidence. I did not cite examples from my research guide.	I did not support with evidence.
Selection of adaptations	I selected realistic physical and behavioral adaptations that allowed me to insightfully support with evidence why these adaptations are important for my animal to survive in its environment.	I selected realistic physical and behavioral adaptations that allowed me to support why these adaptations are important for my animal to survive in its environment.	I selected physical and behavioral adaptations that I could not support with evidence why these adaptations are important for my animal to survive in its environment.	I did not select realistic adaptations for my animal in its environment.

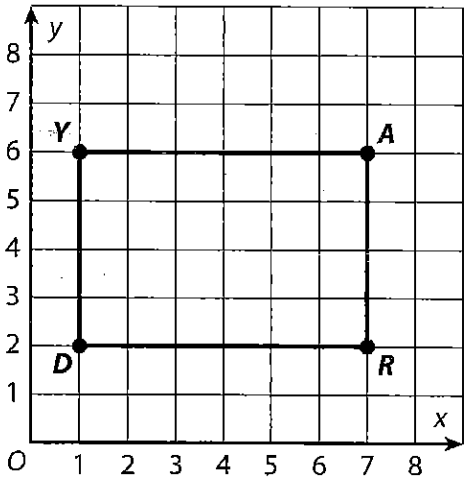
Graphing Points and Finding Distances

32

Name: _____

1 Jason draws a rectangle in the coordinate plane at the right to represent his yard. To get from one corner of his yard to another, Jason travels 4 units down and then 6 units right. Draw arrows on the coordinate plane to show Jason's path. Write the coordinates for his start and end points.

START _____ END _____

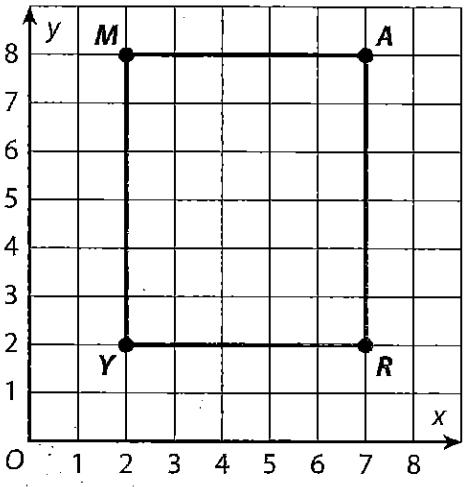


2 Use the coordinate plane in problem 1. What is the perimeter of rectangle *YARD*?

_____ units

3 Mary models her rectangular room in the coordinate plane at the right. She plans to hang strings of lights on two perpendicular walls. What are the lengths of $\overline{MA}$ and $\overline{AR}$?

$\overline{MA}$ _____ units $\overline{AR}$ _____ units

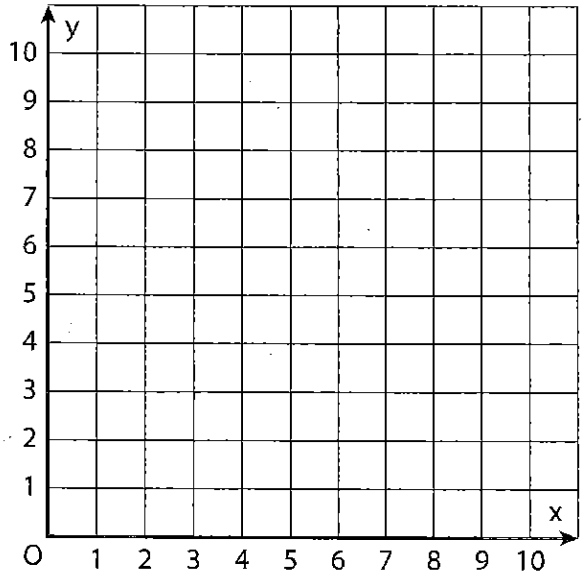


4 Use the coordinate plane in problem 3. What is the area of Mary's room?

_____ square units

5 The coordinate plane at the right models the streets of a city. The points *A*(3, 8), *B*(6, 3), and *C*(3, 3) are connected to form a park in the shape of a triangle. Connect the points to form the triangle. Which two sides of the park form a right angle?

_____ and _____



6 Use the coordinate plane in problem 5. Tyler walks along the two sides of the park that form the right angle. How many blocks does he walk in all?

_____ blocks

7 How can you find distances between points in a coordinate plane?

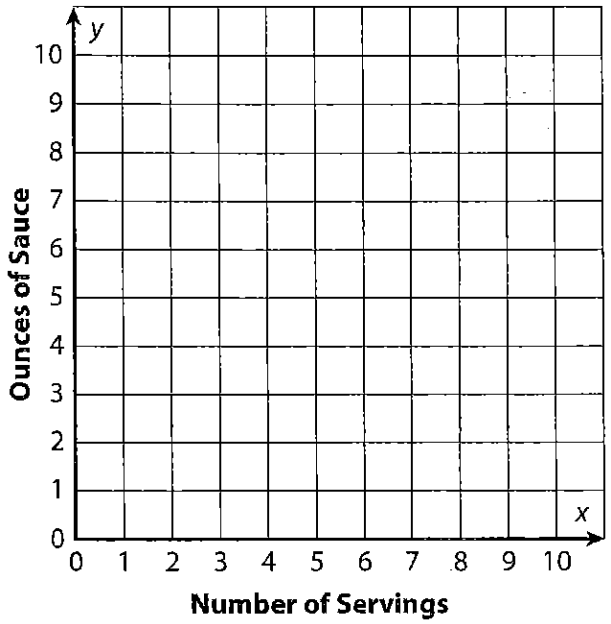
Representing Relationships Between Quantities

32

Name: _____

1 Jorge uses 2 ounces of sauce for every serving of spaghetti he makes. Complete the table below to show the relationship between number of servings and ounces of sauce. Then graph the points (x, y) from the table.

Number of Servings, x	0	1	2	3	4
Ounces of Sauce, y					

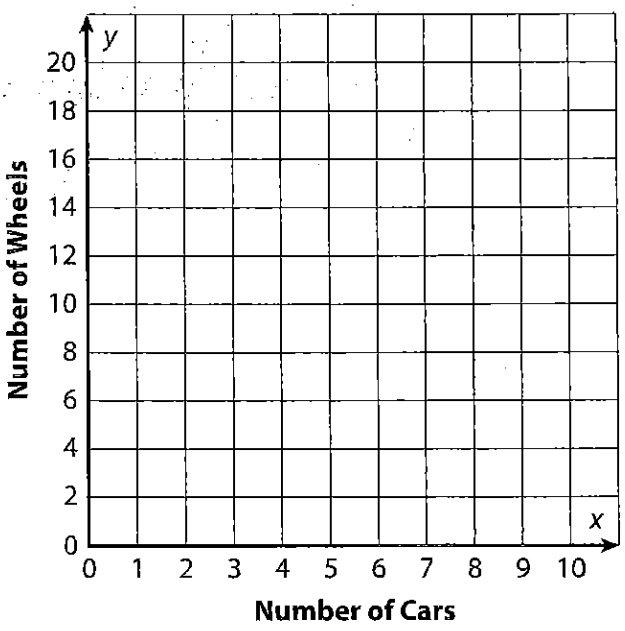


2 Use the table and graph in problem 1. What are the coordinates for a point on the graph to show how many ounces of sauce would be used for 5 servings of spaghetti?

_____

3 Casey builds model cars. Each car needs 4 wheels. Complete the table below to show the relationship between number of cars and number of wheels. Then graph the points (x, y) from the table.

Number of Cars, x	1	2	3	4	5
Number of Wheels, y					



4 Use the table and graph in problem 3. What is the meaning of the ordered pair (4, 16) in this situation?

_____

_____

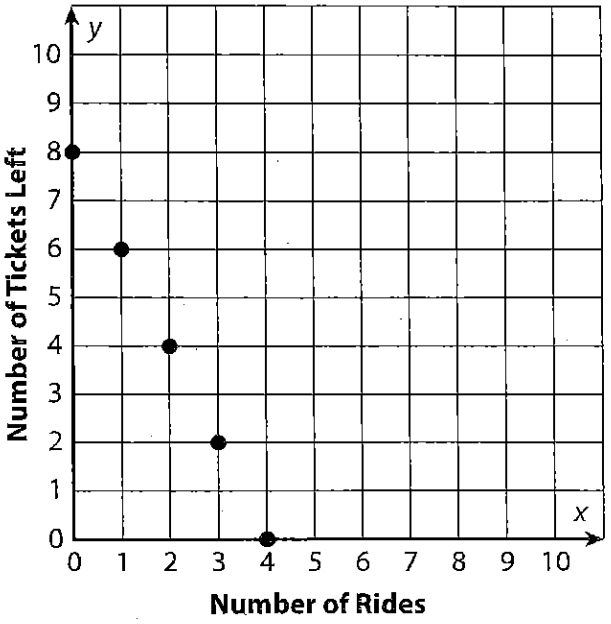
Representing Relationships Between Quantities *continued*

32.

Name: _____

5 The graph at the right shows the relationship between the number of tickets Kristin has left and the number of rides she goes on. How many tickets does she use for each ride?

_____ tickets

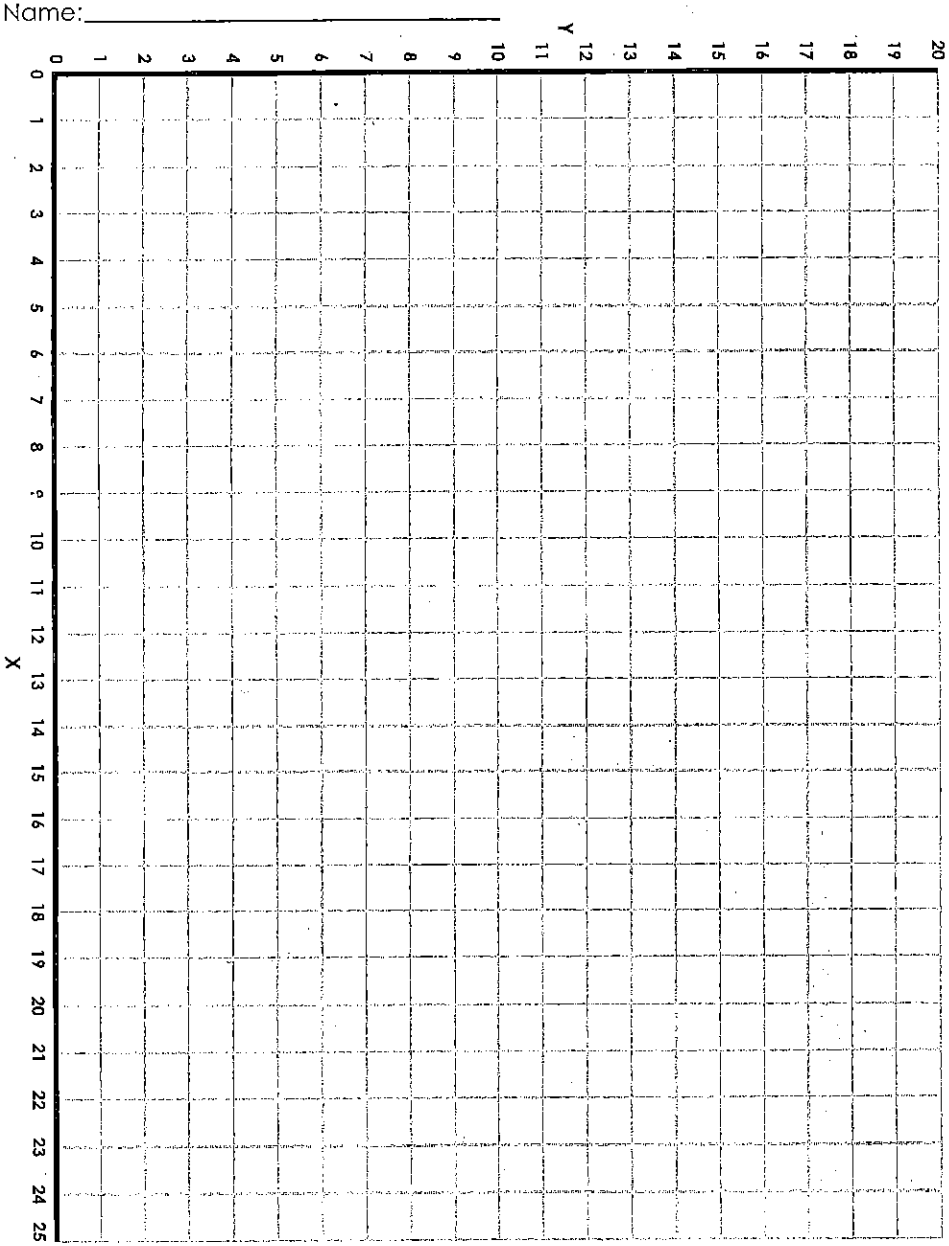


6 Use the graph in problem 5. Which point on the graph shows that Kristin has run out of tickets?

_____

7 How does using a coordinate plane help you solve problems? Give an example.

Name:_____



River Riding

Name:_____

River Riding

NOTE: In each section, do NOT connect the last point back to first point.

(X, Y)	(X, Y)	(X, Y)	(X, Y)
☐ (0, 1)	☐ (4, 17)	☐ (3, 18)	☐ (9, 5)
☐ (2, 3)	☐ (5, 16)	☐ (2, 17)	☐ (9, 19)
☐ (4, 3)	☐ (6, 17)	☐ (1, 18)	☐ (17, 6)
☐ (3, 2)	STOP	STOP	☐ (9, 6)
☐ (4, 1)			STOP
STOP	☐ (8, 5)	☐ (14, 5)	
	☐ (9, 19)	☐ (14, 6)	☐ (2, 16)
☐ (24, 17)	STOP	STOP	☐ (3, 15)
☐ (24, 18)			☐ (4, 16)
☐ (23, 19)	☐ (20, 1)	☐ (12, 1)	STOP
☐ (22, 19)	☐ (22, 3)	☐ (11, 2)	
☐ (21, 18)	☐ (24, 3)	☐ (12, 3)	☐ (20, 1)
☐ (21, 17)	☐ (23, 2)	☐ (10, 3)	☐ (19, 2)
☐ (22, 16)	☐ (24, 1)	☐ (8, 1)	☐ (20, 3)
☐ (23, 16)	☐ (25, 2)	☐ (7, 2)	☐ (18, 3)
☐ (24, 17)	STOP	☐ (8, 3)	☐ (16, 1)
STOP		☐ (6, 3)	STOP
	☐ (7, 3)	☐ (4, 1)	
☐ (14, 11)	☐ (3, 5)	STOP	Now color your picture
☐ (14, 18)	☐ (23, 5)		
☐ (21, 6)	☐ (22, 3)		
☐ (17, 6)	STOP		
STOP			
☐ (12, 1)			
☐ (14, 3)			
☐ (16, 3)			
☐ (15, 2)			
☐ (16, 1)			
STOP			