

## Student Learning Extension Opportunities

### Grade 3-Grade 5

### Week Seven

### Chromebook Access Information




The Clark County School District will continue educating students through distance education for the remainder of the 2019-2020 school year. If your child needs a Chromebook to continue learning, please contact your school via telephone or e-mail, or call (702) 799-3850 for direct assistance.

For additional information regarding Student Learning Extension Opportunities, please visit [ccsdl earns.ccsd.net](https://ccsdl earns.ccsd.net).

Support for all Clark County School District students is available via telephone. Please call **702-799-6644** to access the **Learning Line**. Educators will be available **Monday through Friday from 8:00 a.m. until 4:00 p.m.** to assist students in both English and Spanish during scheduled school days.

**Directions:** These learning activities are provided for practice opportunities. Refreshing your memory of the concepts learned and keeping your mind engaged will help you maintain the skills you have learned. These learning activities are designed to provide practice over the course of the week, so spread out the work.


#### WEEK SEVEN



Reading and Writing (Science and Social Studies Integration):	Online Resources
<p>Week 7, Day 1</p> <ul style="list-style-type: none"> <li>Read a book at your reading level for twenty minutes. Keep track of your daily reading on the reading log below.</li> <li>Read the passage, "Morning Sunshine!"</li> <li>Answer the comprehension questions.</li> </ul>	
<p>Week 7, Day 2</p> <ul style="list-style-type: none"> <li>Read a book at your reading level for twenty minutes. Keep track of your daily reading on the reading log below.</li> <li>Read the passage, "Barometer."</li> <li>Complete the graphic organizer, "Cause and Effect" as you read the passage.</li> <li>Supplemental learning: Watch the video, "Cause and Effect" using the QR code or URL to support the understanding of how to identify cause and effect.</li> </ul>	 <p><a href="https://bit.ly/week7cause">bit.ly/week7cause</a> Video: "Cause and Effect"</p>
<p>Week 7, Day 3</p> <ul style="list-style-type: none"> <li>Read a book at your reading level for twenty minutes. Keep track of your daily reading on the reading log below.</li> <li>Read the passage, "Using a Thermometer."</li> <li>Complete the graphic organizer, "Description" as you read the passage.</li> </ul>	
<p>Week 7, Day 4</p> <ul style="list-style-type: none"> <li>Read a book at your reading level for twenty minutes. Keep track of your daily reading on the reading log below.</li> <li>Read the passage, "What Happens When It Rains?"</li> <li>Answer the comprehension questions.</li> </ul>	




## Student Learning Extension Opportunities

### Grade 3-Grade 5

### Week Seven

<p>Week 7, Day 5</p> <ul style="list-style-type: none"> <li>Read a book at your reading level for twenty minutes. Keep track of your daily reading on the reading log below.</li> <li>Read the passage, "The Jet Stream."</li> <li>Answer the comprehension questions.</li> <li>Supplemental learning: Watch the video, "The 5 Types of Text Structure" using the QR code or URL to support the understanding of how to identify the five common types of text structures.</li> </ul>	 <a href="https://bit.ly/week7structures">bit.ly/week7structures</a> Video: "The 5 Types of Text Structure"
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 <a href="https://bit.ly/pbpflyer">bit.ly/pbpflyer</a> BouncePages flyer in English and Spanish	<p><b>Pearson BouncePages App</b></p> <p>The BouncePages app from Pearson allows students and parents/guardians to watch animated instructional videos by simply scanning the activity page. The linked videos are available in English and Spanish.</p> <p>The activity pages that can be scanned to access the Pearson videos are noted below. Use the QR codes or links in this top section for more information about using the BouncePages app.</p>	 <a href="https://bit.ly/usebouncepages">bit.ly/usebouncepages</a> How to Download, Install, and Use the Pearson BouncePages App
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Mathematics:	Grade 3 Online Resources	Grade 4 Online Resources	Grade 5 Online Resources
<p>Week 7, Day 1</p> <ul style="list-style-type: none"> <li>Complete the appropriate grade-level worksheet(s) labeled <i>Grade 3, 4, or 5</i>.</li> <li>Supplemental learning: Watch the appropriate grade-level video(s).</li> </ul>		<p>Use BouncePages app to watch a video that supports today's learning activity.</p>	 <a href="https://youtu.be/d6vhjpnfd3c">youtu.be/d6vhjpnfd3c</a> Video: "Coordinate Plane and Ordered Pairs Song"
<p>Week 7, Day 2</p> <ul style="list-style-type: none"> <li>Complete the appropriate grade-level worksheet(s) labeled <i>Grade 3, 4, or 5</i>.</li> <li>Supplemental learning: Watch the appropriate grade-level video(s).</li> </ul>	 <a href="https://youtu.be/vb1xchy2vSM">youtu.be/vb1xchy2vSM</a> Video: "Partitioning rectangles using rows and columns"		<p>Use BouncePages app to watch a video that supports today's learning activity.</p>
<p>Week 7, Day 3</p> <ul style="list-style-type: none"> <li>Complete the appropriate grade-level worksheet(s) labeled <i>Grade 3, 4, or 5</i>.</li> <li>Supplemental learning: Watch the appropriate grade-level video(s).</li> </ul>	 <a href="https://youtu.be/bN3HDNXeLxI">youtu.be/bN3HDNXeLxI</a> Video: "Exploring the Length Model of Fractions"		

## Student Learning Extension Opportunities

### Grade 3-Grade 5

### Week Seven

Mathematics:	Grade 3 Online Resources	Grade 4 Online Resources	Grade 5 Online Resources
Week 7, Day 4 <ul style="list-style-type: none"> <li>Complete the appropriate grade-level worksheet(s) labeled <i>Grade 3, 4, or 5</i>.</li> <li>Supplemental learning: Watch the appropriate grade-level video(s).</li> </ul>	 <a href="https://youtu.be/4gR1iKbNlJw">youtu.be/4gR1iKbNlJw</a> Video: "Fractions as Numbers - Unit Fractions"	 <a href="https://youtu.be/F3eHcpOofKM">youtu.be/F3eHcpOofKM</a> Video: "Angles Part 1 - Naming and Classifying Angles"	Use BouncePages app to watch a video that supports today's learning activity.
Week 7, Day 5 <ul style="list-style-type: none"> <li>Complete the appropriate grade-level worksheet(s) labeled <i>Grade 3, 4, or 5</i>.</li> <li>Supplemental learning: Watch the appropriate grade-level video(s).</li> </ul>		 <a href="https://youtu.be/NVuMULQjb3o">youtu.be/NVuMULQjb3o</a> Video: "Angles Song   Acute, Obtuse, & Right Angles"	

### Reading Log

Keep track of your daily reading.

Beginning Page	Ending Page	Title

## Oportunidades de Continuación para Aprendizaje del Estudiante del 3<sup>er</sup> al 5<sup>o</sup> Grado Semana Siete

### Información de Acceso Chromebook




El Distrito Escolar del Condado de Clark continuará educando a los estudiantes a través de la educación a distancia para el resto del año escolar 2019-2020. Si su hijo necesita un Chromebook para continuar aprendiendo, por favor contacte a su escuela por teléfono o correo electrónico o llame al (702) 799-3850 para asistencia directa.


Para obtener información adicional sobre las Oportunidades de Continuación de Aprendizaje del Estudiante, por favor visite: [ccsdearns.ccsd.net/?lang=es](https://ccsdearns.ccsd.net/?lang=es).



El apoyo a todos los estudiantes del Distrito Escolar del Condado de Clark está disponible por teléfono. Por favor llama al **702-799-6644** para acceder a la **Línea de Aprendizaje**. Los educadores estarán disponibles de **lunes a viernes de 8:00 a.m. a 4:00 p.m.** para ayudar a los estudiantes tanto en inglés como en español durante los días de clases.



**Instrucciones:** Estas actividades de aprendizaje se ofrecen como oportunidades de práctica. Refrescar tu memoria de los conceptos aprendidos y mantener tu mente ocupada te ayudará a mantener las habilidades que has aprendido. Estas actividades de aprendizaje están diseñadas para proporcionar práctica en el transcurso de la semana, así que distribuye el trabajo.

SEMANA SIETE	
Lectura y Escritura (Integración de las Ciencias y Estudios Sociales):	Recursos en Línea
Semana 7, día 1 <ul style="list-style-type: none"> <li>• Lee un libro a tu nivel de lectura durante veinte minutos. Lleva la cuenta de tu lectura diaria en el registro de la parte inferior.</li> <li>• Lee el texto, "Morning Sunshine!"</li> <li>• Contesta las preguntas de comprensión.</li> </ul>	
Semana 7, día 2 <ul style="list-style-type: none"> <li>• Lee un libro a tu nivel de lectura durante veinte minutos. Lleva la cuenta de tu lectura diaria en el registro de la parte inferior.</li> <li>• Lee el texto, "Barometer."</li> <li>• Completa el organizador gráfico, mientras lees el texto, "Cause and Effect" as you read the passage.</li> <li>• Aprendizaje suplementario: Ve el video, "Cause and Effect" usando el código QR o URL para apoyar la comprensión de cómo identificar la causa y el efecto.</li> </ul>	 <a href="https://bit.ly/week7cause">bit.ly/week7cause</a> Video: "Cause and Effect"
Semana 7, día 3 <ul style="list-style-type: none"> <li>• Lee un libro a tu nivel de lectura durante veinte minutos. Lleva la cuenta de tu lectura diaria en el registro de la parte inferior.</li> <li>• Lee el texto, "Using a Thermometer."</li> <li>• Completa el organizador gráfico, mientras lees el texto, "Description".</li> </ul>	

## Oportunidades de Continuación para Aprendizaje del Estudiante del 3<sup>er</sup> al 5<sup>o</sup> Grado Semana Siete

<p>Semana 7, día 4</p> <ul style="list-style-type: none"> <li>• Lee un libro a tu nivel de lectura durante veinte minutos. Lleva la cuenta de tu lectura diaria en el registro de la parte inferior.</li> <li>• Lee el texto, "What Happens When It Rains?"</li> <li>• Contesta las preguntas de comprensión.</li> </ul>	
<p>Semana 7, día 5</p> <ul style="list-style-type: none"> <li>• Lee un libro a tu nivel de lectura durante veinte minutos. Lleva la cuenta de tu lectura diaria en el registro de la parte inferior.</li> <li>• Lee el texto, "The Jet Stream."</li> <li>• Contesta las preguntas de comprensión.</li> <li>• Aprendizaje suplementario: Ve el video, "The 5 Types of Text Structure" usando el código QR o URL para apoyar la comprensión de cómo identificar los cinco tipos comunes de estructuras de texto.</li> </ul>	 <a href="http://bit.ly/week7structures">bit.ly/week7structures</a> Video: "The 5 Types of Text Structure"

 <a href="http://bit.ly/pbpflyer">bit.ly/pbpflyer</a> El folleto BouncePages en inglés y español	<p><b>Aplicación Pearson BouncePages</b></p> <p>La aplicación BouncePages de Pearson permite que los estudiantes y padres/tutores vean videos educativos animados simplemente escaneando la página de actividad. Los videos conectados están disponibles en inglés y en español.</p> <p>Las páginas de actividad se pueden escanear para tener acceso a los videos Pearson mencionados a continuación. Use los códigos QR o enlaces en la sección superior para más información sobre cómo usar la aplicación BouncePages.</p>	 <a href="http://bit.ly/usebouncepages">bit.ly/usebouncepages</a> Cómo Descargar, Instalar y Utilizar la Aplicación Pearson BouncePages
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<b>Matemáticas:</b>	<b>3<sup>er</sup> Grado Recursos En Línea</b>	<b>4<sup>o</sup> Grado Recursos En Línea</b>	<b>5<sup>o</sup> Grado Recursos En Línea</b>
<p>Semana 7, día 1</p> <ul style="list-style-type: none"> <li>• Completa las hojas de trabajo correspondientes al nivel de grado, marcadas, 3<sup>er</sup>, 4<sup>o</sup>, o 5<sup>o</sup> Grado.</li> <li>• Aprendizaje suplementario: Ve los videos correspondientes al nivel de grado.</li> </ul>		<p>Utiliza la aplicación BouncePages para ver un video que apoye la actividad de aprendizaje de hoy.</p>	 <a href="http://youtu.be/d6vhjpnfd3c">youtu.be/d6vhjpnfd3c</a> Video: "Coordinate Plane and Ordered Pairs Song"
<p>Semana 7, día 2</p> <ul style="list-style-type: none"> <li>• Completa las hojas de trabajo correspondientes al nivel de grado, marcadas, 3<sup>er</sup>, 4<sup>o</sup>, o 5<sup>o</sup> Grado.</li> <li>• Aprendizaje suplementario: Ve los videos correspondientes al nivel de grado.</li> </ul>	 <a href="http://youtu.be/vb1xchy2vSM">youtu.be/vb1xchy2vSM</a> Video: "Partitioning rectangles using rows and columns"		<p>Utiliza la aplicación BouncePages para ver un video que apoye la actividad de aprendizaje de hoy.</p>

## Oportunidades de Continuación para Aprendizaje del Estudiante del 3<sup>er</sup> al 5<sup>o</sup> Grado Semana Siete

Mathematics:	3er Grado Recursos En Línea	4º Grado Recursos En Línea	5º Grado Recursos En Línea
Semana 7, día 3 <ul style="list-style-type: none"> <li>Completa las hojas de trabajo correspondientes al nivel de grado, marcadas, 3<sup>er</sup>, 4<sup>o</sup>, o 5<sup>o</sup> Grado.</li> <li>Aprendizaje suplementario: Ve los videos correspondientes al nivel de grado.</li> </ul>	 <a href="https://youtu.be/bN3HDNXeLxI">youtu.be/bN3HDNXeLxI</a> Video: "Exploring the Length Model of Fractions"		
Semana 7, día 4 <ul style="list-style-type: none"> <li>Completa las hojas de trabajo correspondientes al nivel de grado, marcadas, 3<sup>er</sup>, 4<sup>o</sup>, o 5<sup>o</sup> Grado.</li> <li>Aprendizaje suplementario: Ve los videos correspondientes al nivel de grado.</li> </ul>	 <a href="https://youtu.be/4gR1iKbNIJw">youtu.be/4gR1iKbNIJw</a> Video: "Fractions as Numbers - Unit Fractions"	 <a href="https://youtu.be/F3eHcpOofKM">youtu.be/F3eHcpOofKM</a> Video: "Angles Part 1 - Naming and Classifying Angles"	Utiliza la aplicación BouncePages para ver un video que apoye la actividad de aprendizaje de hoy.
Semana 7, día 5 <ul style="list-style-type: none"> <li>Completa las hojas de trabajo correspondientes al nivel de grado, marcadas, 3<sup>er</sup>, 4<sup>o</sup>, o 5<sup>o</sup> Grado.</li> <li>Aprendizaje suplementario: Ve los videos correspondientes al nivel de grado.</li> </ul>		 <a href="https://youtu.be/NVuMULQjb3o">youtu.be/NVuMULQjb3o</a> Video: "Angles Song   Acute, Obtuse, & Right Angles"	

### Registro de Lectura

Lleva un registro de tu lectura diaria.

Página inicial	Página final	Título



# Morning Sunshine!

by ReadWorks



Rise and shine! It's morning, and the sun is rising. When we watch sunrises and sunsets, we may just think of the pretty colors in the sky. But sunrises and sunsets can tell us a lot about Earth and the different seasons.

When we watch the sun go up or down in the sky, we are actually seeing how the earth is rotating. We can't feel the earth turning, because everything is moving with us. When a specific part of the earth's surface faces the sun, the sky is bright for the day until that part of the earth's surface turns away from the sun at night.

Our planet is always spinning around its axis. The axis is the invisible line through the center of the earth around which the planet turns. Imagine spinning a basketball on your finger. Now, imagine a line going from the tip of your finger, where it touches the basketball, straight through the center of the ball. That line would be the ball's axis.

While the earth spins around its axis, it also moves around the sun in an ellipse, or an oval. It

takes 365  $\frac{1}{4}$  days for the earth to complete one revolution around the sun. That's how we measure one year. Mars takes 687 days to make one revolution around the sun; therefore, a year on Mars is longer than a year on Earth.

The earth's axis is not straight up and down, but instead leans towards one side. This axial tilt causes our seasons, where one half of the planet gets more direct sunlight than the other half. As the earth revolves around the sun, the earth's axis tilts toward the sun when it is summer in the Northern Hemisphere. It tilts away from the sun when it is winter in the Northern Hemisphere. North America is in the Northern Hemisphere (the top half of Earth), which leans away from the sun during December and January. When the top half of the earth leans away from the sun, the lower half of the earth leans towards the sun. The sun shines directly on the hemisphere leaning towards it and indirectly on the hemisphere leaning away from it. This is why when it is winter in North America it is summer in lower parts of the world, like Australia. Isn't that interesting?

Every day, the time of sunrise and sunset changes. This is also because of Earth's axis. In the winter, you can see how the days are shorter. The sun doesn't stay in the sky for very long. The shortest day of the year is called the winter solstice. This happens around December 21 in the Northern Hemisphere. In the summer, it's the opposite-the days are longer. The longest day of the year is called the summer solstice. This happens around June 21 in the Northern Hemisphere.

So, we can guess when our seasons will start. When the days are getting shorter, we know that winter is coming. When the days are getting longer, we know that summer is on its way! From observing and determining the patterns we find in sunrises and sunsets, we can predict the seasons in the future.



## **“Morning Sunshine!” Comprehension Questions**

Answer the following questions.

1) How can we predict the seasons? Remember to cite evidence from the passage.

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2) Explain what causes the seasons. Remember to cite evidence from the passage.

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3) Explain why the seasons are opposite in the Northern and Southern Hemispheres. Remember to cite evidence from the passage.

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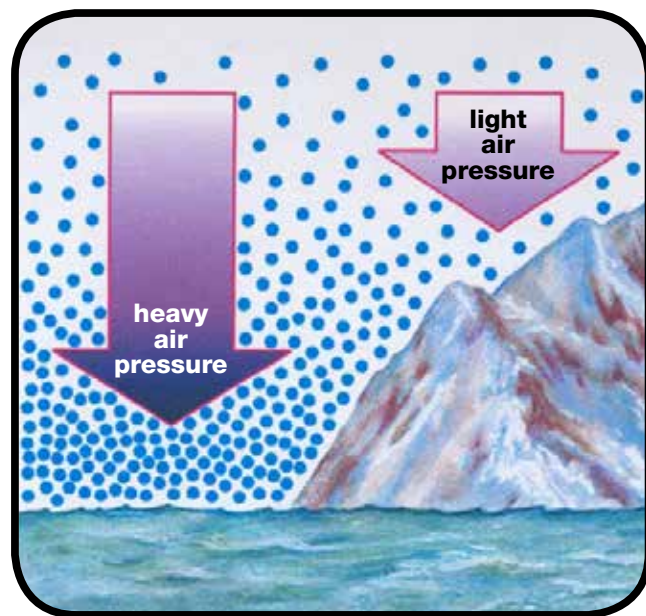
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# Barometer

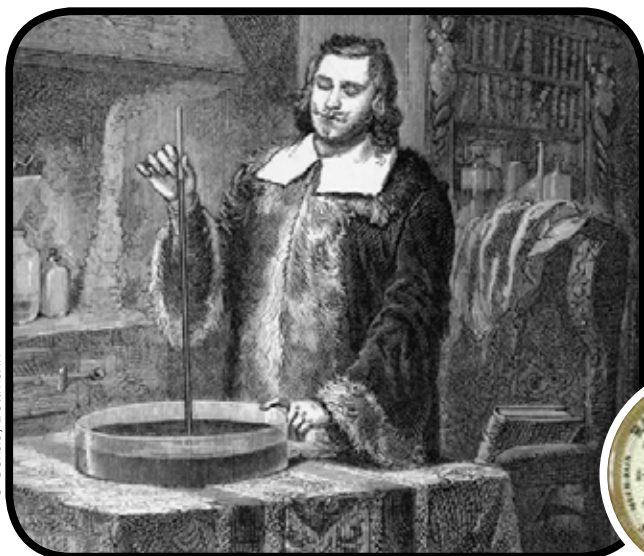
People have always tried to predict the weather, but until recently they had few tools to help them. Ancient people watched the sky and noticed weather patterns to see what the weather would soon be like. But they had no way to tell what the weather would be like in a few days, a week, or more. Then in the 1600s, scientists invented a tool that helped them predict the weather.

Scientists found out that air has weight, and gravity pulls it down toward the ground. This puts pressure on Earth's surface, so they called this phenomenon **air pressure**. At the same time, scientists discovered that the amount of air pressure could change the level of mercury in a tube.



There is more air, and air pressure, on the ocean than on a mountain.

They used this fact to create a tool called a *barometer*, which measures changes in air pressure with the level of mercury in a tube. The amount of air pressure can help predict the weather for the next few days. For instance, high pressure (low mercury) means fair weather is coming, and low pressure (high mercury) usually means that stormy weather is on its way. This discovery was a big step in weather forecasting.



Evangelista Torricelli invented the barometer, using mercury and a glass tube, in 1644.



a modern barometer

## ✓ Brain Check

- ☐ How did ancient people try to predict weather?
- ☐ How can a barometer help forecast the weather?

Directions: After reading the passage, "Barometer" identify the causes and effects throughout the passage. Remember to cite evidence from the passage.

Title: \_\_\_\_\_

## Cause and Effect

cause	→	effect
cause	→	effect
cause	→	effect
cause	→	effect
cause	→	effect

# Using a Thermometer

A **thermometer** is a tool that measures temperature. Temperature is how hot or cold something is. We use thermometers to measure many things, such as the air, our bodies, and food.

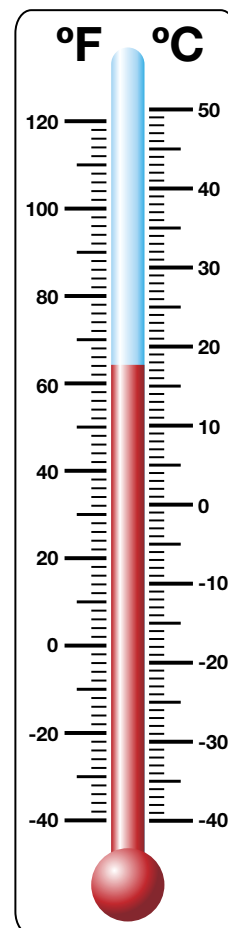
Most thermometers are made of a closed glass tube with red liquid inside, such as water, alcohol or mercury. When the liquid gets warmer, it expands and moves up the tube. When the liquid gets cooler, it contracts and moves down the tube. Marks, or a **scale**, on the glass show what the temperature is.

Many thermometers have two scales—a Celsius scale and a Fahrenheit scale. The Fahrenheit scale is used in the United States. Most other countries use the Celsius scale. The Celsius scale is based on the freezing and boiling temperatures of water. So on the Celsius scale, water freezes at 0° and boils at 100°. On the Fahrenheit scale, water freezes at 32° and boils at 212°.



The Fahrenheit scale was developed by Daniel Fahrenheit in 1724, and the Celsius scale was developed by Anders Celsius in 1742.

Read this thermometer in degrees Fahrenheit. First, find the °F scale on the left side of the thermometer. Then, read the number where the liquid ends. (Remember that each mark stands for two degrees.) This thermometer reads 64°F.



© Illustration by Casey Jones

Let's find out what 64°F is in Celsius. Find the number where the liquid ends on the Celsius scale on the right side of the thermometer. Can you see that 64°F is the same as 18°C? Good job!

What are some benefits to using thermometers?

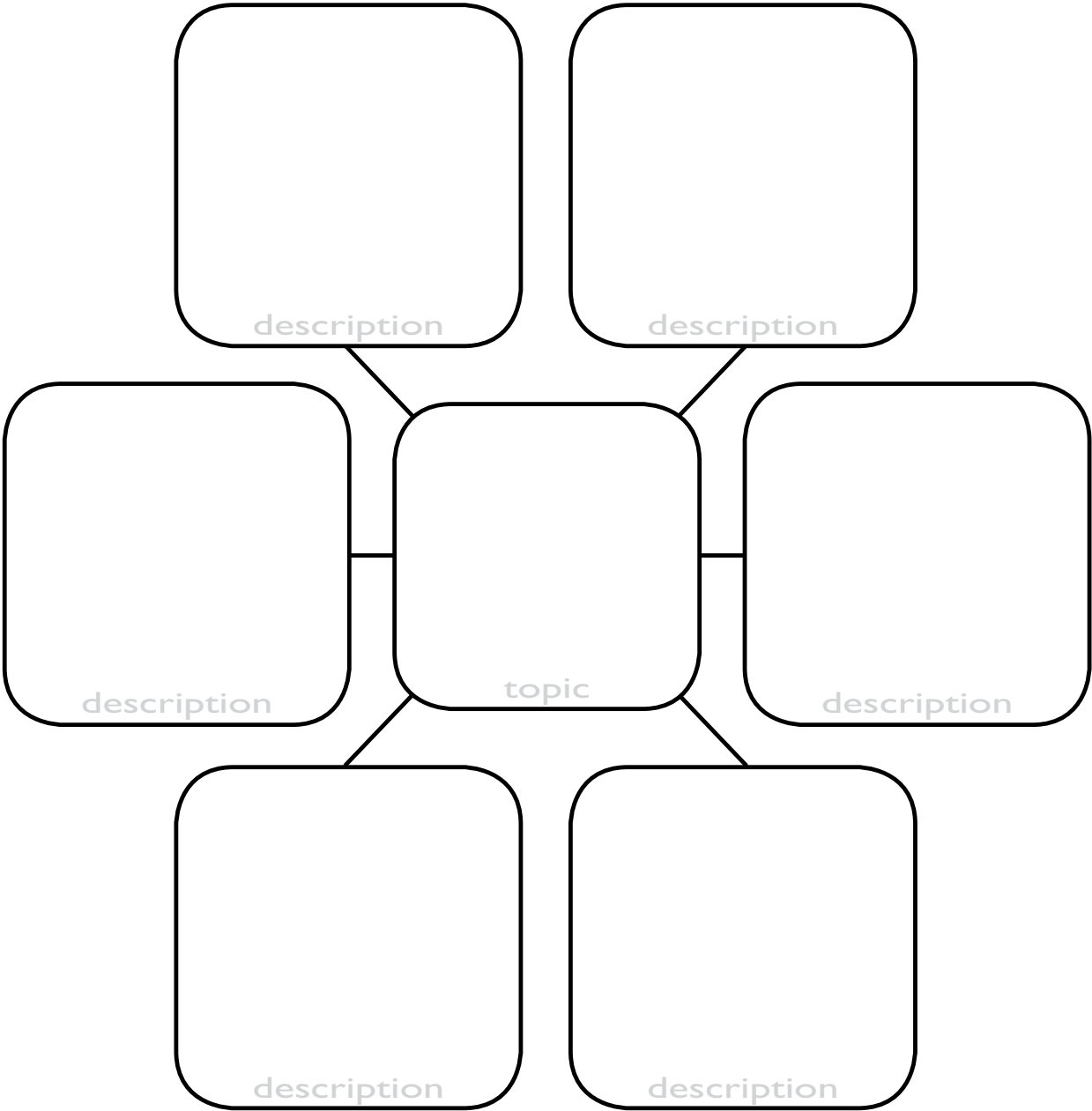
## ✓ Brain Check

- ☐ What do thermometers measure?
- ☐ What happens as liquid in a thermometer gets warmer?
- ☐ How many degrees does each mark stand for?

Directions: After reading the passage, "Using a Thermometer" identify the topic and six descriptions about the topic in the boxes below.

Title: \_\_\_\_\_

Description



# What Happens When It Rains?

by Vinnie Rotondaro



The next time you see storm clouds off in the distance, stop what you're doing if you're able, and take a look outside.

Try to spot some dirt. If you're in the city, look for a flower-bed along the sidewalk. If you're in the suburbs, look out onto your backyard. If you're in the countryside, just look out any-old-where.

You can see the flashes of lightning. You can hear the bursts of thunder. Pretty soon, it starts - the pitter-patter of the rain hitting the leaves, and the ground and the roof above your head. The storm cloud nears. The rain falls harder. Now look back at that dirt.

It's turning into mud. Maybe you can't see it so well if there's grass on top, but wait till the rain

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stops, then go outside and stick your finger into it if you have any doubts. You'll see. It's wet, squishy, and it's moving all around. It's mud.

Before it rains, a flower bed or tree bed might be bumpy and craggy, with clumps of dry soil. But give it a few minutes in the rainstorm, let it turn into mud. It'll even out. Your backyard might have a hole in the ground. If it rains hard enough, that hole might not be there too long. It might fill up with water and soil. And out in the country, out where there's dirt everywhere, the whole landscape can change. Over a very long time, mountains can wear down and ravines can fill up with rocks and soil. And there's a name for this process.

It's called erosion. Erosion is when rocks and soil of the earth's surface are moved to other locations after having been broken into smaller and smaller pieces by wind or water flow.

It is a good thing that it rains, even though it means we can't play outside sometimes. Every living thing on the planet needs water to survive, and many animals rely on the rain for their drinking water.

Some birds rely on the rain to make puddles for their drinking water. But get this... Birds also rely on the rain for their food. Have you ever noticed that when it rains and the ground gets muddy, earthworms start to come out? Earthworms like being wet and stay deep down in the ground when it's not raining because there is more moisture down there. In fact, they wouldn't come up to the surface when it's not raining because the soil near the surface is too dry for them. But when it rains, earthworms wiggle their way up, through the mud and water. They move around on the surface to another location. And that's precisely when the birds swoop down to feast.

Rain benefits many animals, and it plays a role in changing the surface of the earth. Maybe during the next rainstorm, you can spot a bird swooping down to get some earthworms; or maybe after years of rainstorms, you can see a change in the landscape from the rain.



## **“What Happens When It Rains?” Comprehension Questions**

Answer the following questions.

1) Without rain, animals would not survive.

Use evidence from the passage to support this statement.

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2) How can erosion change a landscape over time?

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3) After a rainstorm we can see how water is important to the landscape and the animals that live there. Describe some ways the water left by the rain impacts the landscape and animals.

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# The Jet Stream

High above Earth's surface, up where planes fly—or higher—is a mass of wind that moves like a roaring river of air. This river of wind is called the **jet stream**. Wind speeds in the stream's center can reach 485 kilometers (300 mi.) per hour. The jet stream has a big impact on Earth's weather.

## WOWSER!

### Jet Stream Facts:

**Altitude**— 6 to 11 kilometers (4 to 7 mi.) above Earth's surface

**Width**— 160 to 645 kilometers (100 to 400 mi.)

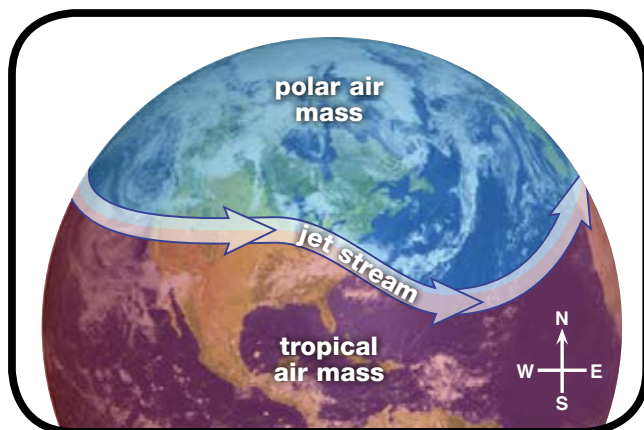
**Thickness**— 1.6 to 4.8 kilometers (1 to 3 mi.), top to bottom

**Wind Speed**— 240 to 485 kilometers (150 to 300 mi.) per hour

The jet stream forms when the Sun heats Earth's air. The air near the tropics gets very warm, whereas the air near the North and South Poles stays cold. This creates two **air masses**, or two large areas of air—one warm, one cold. Where these two air masses meet, the warm, tropical air rises, and the cold polar air

## Do You Know?

The jet stream is very important to airplane pilots. If pilots fly from west to east, the jet stream can push them along. If a plane has to fly from east to west, against the jet stream, the same trip can take much longer.



© Stockphoto, Jan Ryssav

rushes in to replace it, creating winds. As Earth spins, the rising, warm air and the cooler air get twirled together into a narrow band blowing from west to east. This is the jet stream.

The jet stream pushes weather across Earth's surface. If you watch weather radar, you'll often see masses of air moving from west to east. As the jet stream spins across Earth, it may form large storms, such as winter storms that dump tons of snow over large areas. Or, it may just as easily bring unseasonably warm air or unseasonably frigid air. Though we never feel the jet stream, it makes a big difference in our weather!

## ✓ Brain Check

- ☐ What is the jet stream?
- ☐ What does the jet stream form between?
- ☐ What are two effects of the jet stream on our weather?

## "The Jet Steam" Comprehension Questions

Answer the following questions.

1)

What are some of the text features?	What clues do these features give you about the structure of the text?
<input type="checkbox"/> Print variations (e.g., italics, bold, underline)	
<input type="checkbox"/> Pictures, illustrations, graphics, diagrams, captions, maps	
<input type="checkbox"/> Text boxes	
<input type="checkbox"/> Other _____	

2) List the signal words that give clues about the structure of the text.

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3) What is the text about?

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4) Based on the information above and the text, write a "✓" in the box that best describes the text structure. Why did you select that text structure? Remember to cite evidence from the passage.

- |                                           |                                               |
|-------------------------------------------|-----------------------------------------------|
| <input type="checkbox"/> Cause and effect | <input type="checkbox"/> Compare and contrast |
| <input type="checkbox"/> Description      | <input type="checkbox"/> Problem and solution |
| <input type="checkbox"/> Sequence         |                                               |

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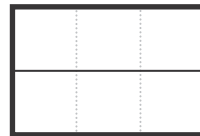
**A-Z Vocabulary**

1. You can divide a rectangle into **equal shares**.

The equal shares can be different shapes.

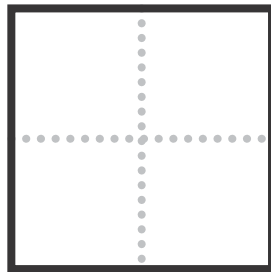
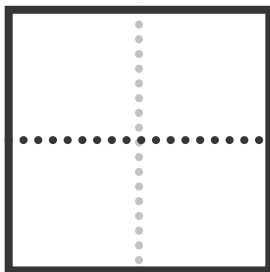
For shares to be equal, they must be the same size.

Both rectangles show 2 equal shares.

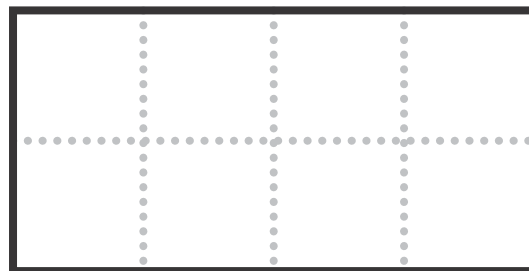
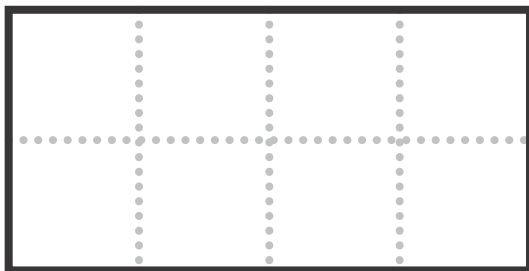


How many squares are in each equal share? \_\_\_\_\_

2. Draw lines to show two different ways to divide the same shape into 2 equal shares.



How many squares are in each equal share? \_\_\_\_\_



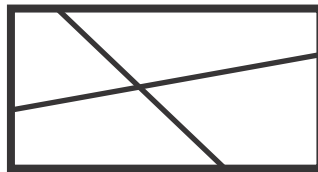
How many squares are in each equal share? \_\_\_\_\_

**On the Back!**

3. Draw a large rectangle. Cover the rectangle with 12 smaller squares. Draw lines to show a way to divide the rectangle into 3 equal shares. Tell how many squares are in each equal share.

**A-Z Vocabulary**

1. **Equal shares** have the same size and shape.



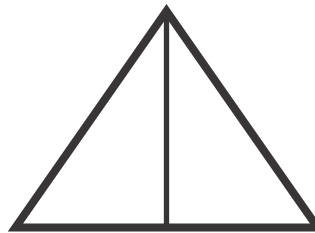
Both shapes have \_\_\_\_ shares.  
Circle the shape that has equal shares.

2. Count the equal shares.

This triangle has 2  
equal shares.

The shares are called \_\_\_\_\_.

Each equal share is a \_\_\_\_\_ the whole.



**Names for  
equal shares:**

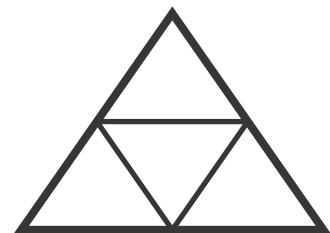
halves  
thirds  
fourths

3. Count the equal shares.

This triangle has \_\_\_\_ equal shares.

The shares are called \_\_\_\_\_.

Each equal share is a \_\_\_\_\_ the whole.

**On the Back!**

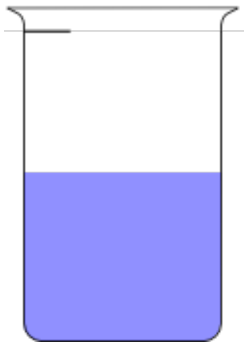
4. Show 2 equal shares of a circle.  
Show 3 equal shares of a square.  
Show 4 equal shares of a rectangle.  
Write the names for the equal shares.



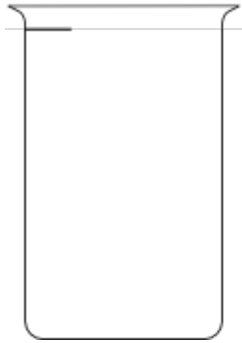
Name \_\_\_\_\_

Date \_\_\_\_\_

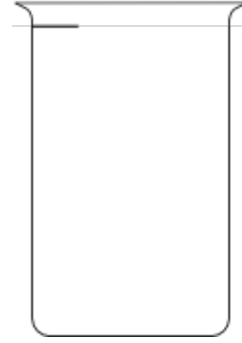
1. A beaker is considered full when the liquid reaches the fill line shown near the top. Estimate the amount of water in the beaker by shading the drawing as indicated. The first one is done for you.



1 half



1 fifth



1 sixth

2. Danielle cut her candy bar into equal pieces as shown in the rectangles below. In the blanks below, name the fraction of candy bar represented by the shaded part.



\_\_\_\_\_

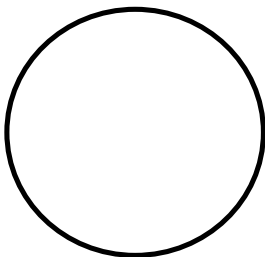


\_\_\_\_\_

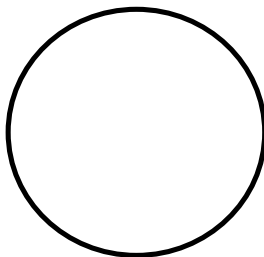


\_\_\_\_\_

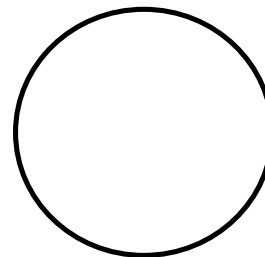
3. Each circle represents 1 whole pie. Estimate to show how you would cut the pie into fractional units as indicated below.



halves

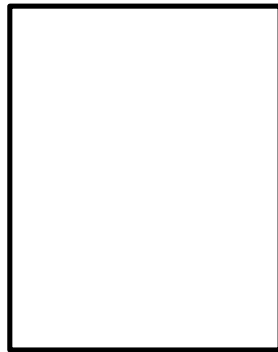


thirds



sixths

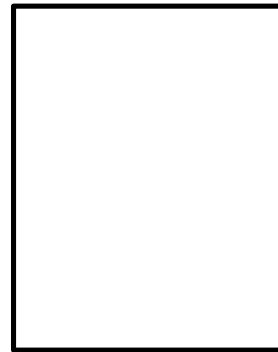
4. Each rectangle represents 1 sheet of paper. Estimate to draw lines to show how you would cut the paper into fractional units as indicated below.



halves

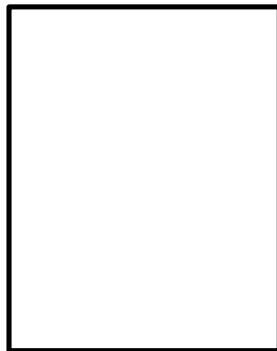


fourths



eighths

5. Each rectangle represents 1 sheet of paper. Estimate to draw lines to show how you would cut the paper into fractional units as indicated below.



sixths



thirds

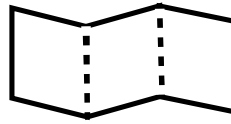
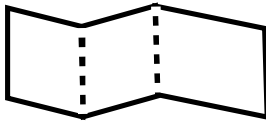
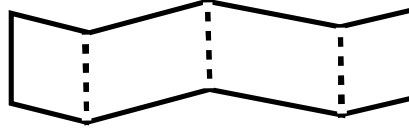
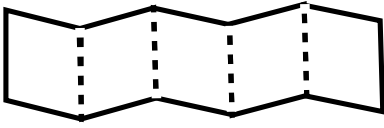
6. Yuri has a rope 12 meters long. He cuts it into pieces that are each 2 meters long. What fraction of the rope is one piece? Draw a picture. (You might fold a strip of paper to help you model the problem.)
7. Dawn bought 12 grams of chocolate. She ate half of the chocolate. How many grams of chocolate did she eat?



Name \_\_\_\_\_

Date \_\_\_\_\_

1. Circle the strips that are folded to make equal parts.



2.



- a. There are \_\_\_\_\_ equal parts in all. \_\_\_\_\_ are shaded.



- b. There are \_\_\_\_\_ equal parts in all. \_\_\_\_\_ are shaded.



- c. There are \_\_\_\_\_ equal parts in all. \_\_\_\_\_ are shaded.

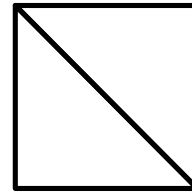
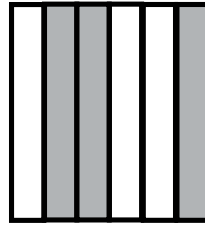
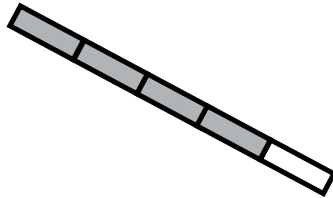
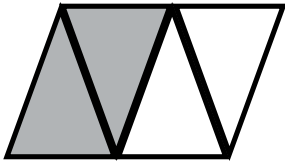


- d. There are \_\_\_\_\_ equal parts in all. \_\_\_\_\_ are shaded.

Name \_\_\_\_\_

Date \_\_\_\_\_

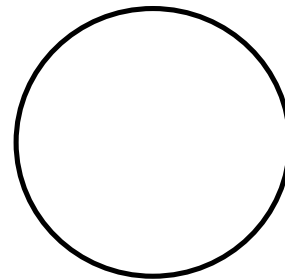
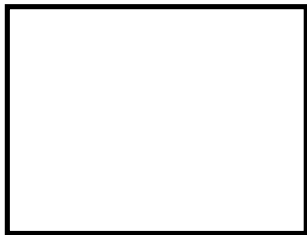
1. Each shape is a whole divided into equal parts. Name the fractional unit, and then count and tell how many of those units are shaded. The first one is done for you.



Fourths

2 fourths are shaded.

2. Each shape is 1 whole. Estimate to divide each into equal parts. Divide each whole using a different fractional unit. Write the name of the fractional unit on the line below the shape.





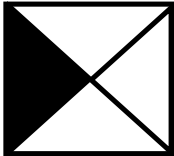
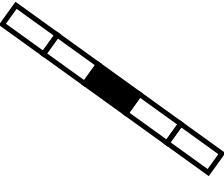
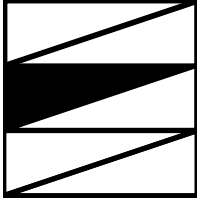
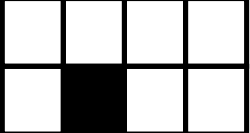
3. Anita uses 1 sheet of paper to make a calendar showing each month of the year. Draw Anita's calendar. Show how she can divide her calendar so that each month is given the same space. What fraction of the calendar does each month receive?

Each month receives \_\_\_\_\_.

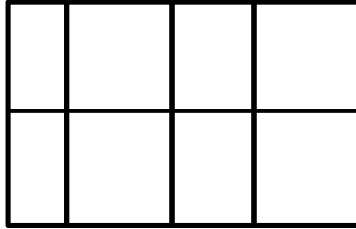
Name \_\_\_\_\_

Date \_\_\_\_\_

1. Fill in the chart. Then, whisper the fractional unit.

	Total Number of Equal Parts	Total Number of Equal Parts Shaded	Unit Form	Fraction
a. 	2	1	1 half	$\frac{1}{2}$
b. 				
c. 				
d. 				
e. 				
f. 				

2. Andre's mom baked his 2 favorite cakes for his birthday party. The cakes were the exact same size. Andre cut his first cake into 8 pieces for him and his 7 friends. The picture below shows how he cut it. Did Andre cut the cake into eighths? Explain your answer.



3. Two of Andre's friends came late to his party. They decide they will all share the second cake. Show how Andre can slice the second cake so that he and his nine friends can each get an equal amount with none leftover. What fraction of the second cake will they each receive?



4. Andre thinks it's strange that  $\frac{1}{10}$  of the cake would be less than  $\frac{1}{8}$  of the cake, since ten is bigger than eight. To explain to Andre, draw 2 identical rectangles to represent the cakes. Show 1 tenth shaded on one and 1 eighth shaded on the other. Label the unit fractions and explain to him which slice is bigger.

Name \_\_\_\_\_

Date \_\_\_\_\_

1. Complete the number sentence. Estimate to partition each strip equally, write the unit fraction inside each unit, and shade the answer.

Sample:

$$3 \text{ fourths} = \frac{3}{4}$$



- a. 2 thirds =

--

- b. 5 sevenths =

--

- c. 3 fifths =

--

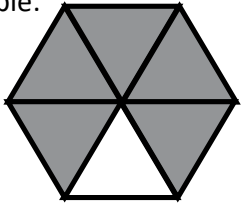
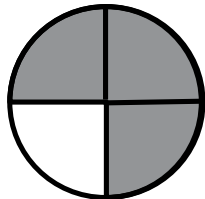
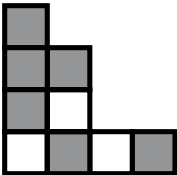
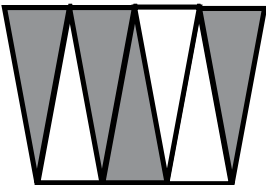
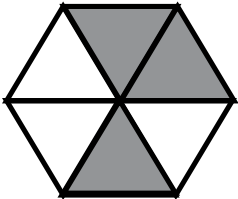
- d. 2 eighths =

--

2. Mr. Abney bought 6 kilograms of rice. He cooked 1 kilogram of it for dinner.
- a. What fraction of the rice did he cook for dinner?

- b. What fraction of the rice was left?

3. Fill in the chart.

	Total Number of Equal Parts	Total Number of Shaded Equal Parts	Unit Fraction	Fraction Shaded
Sample: 	6	5	$\frac{1}{6}$	$\frac{5}{6}$
a. 				
b. 				
c. 				
d. 				



## Additional Practice 15-2

### Understand Angles and Unit Angles

#### Another Look!

You can find the measure of an angle using fractions of a circle.

The angle shown is  $\frac{2}{5}$  of a circle.

What is the measure of this angle?

Remember that  $\frac{2}{5} = \frac{1}{5} + \frac{1}{5}$ .

Divide to find the angle measure of  $\frac{1}{5}$  of a circle.

$$360^\circ \div 5 = 72^\circ$$

An angle that turns through  $\frac{1}{5}$  of a circle measures  $72^\circ$ .

$$72^\circ + 72^\circ = 144^\circ$$

The measure of this angle is  $144^\circ$ .



Fractions of a circle can help with the understanding of angle measures.



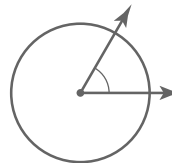
For **1–4**, find the measure of each angle.

1. The angle turns through  $\frac{1}{9}$  of the circle.



2. A circle is divided into 6 equal parts. What is the total angle measure of 1 part?

$$\underline{\hspace{2cm}} \div 6 = \underline{\hspace{2cm}}$$



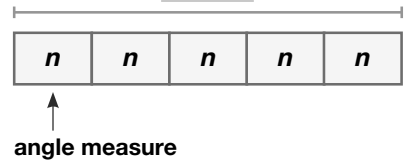
3. A circle is divided into 5 equal parts. What is the total angle measure of 4 parts?

4. A circle is divided into 8 equal parts. What is the total angle measure of 4 parts?





5. Noah used a bar diagram to find the measure of an angle that turns through  $\frac{1}{5}$  of a circle. Write an equation to find the measure of the angle.



6. **Number Sense** Miguel cut  $\frac{1}{4}$  from a round pie. Mariah cut a piece from the same pie with an angle measure of  $60^\circ$ . Who cut the larger piece? Explain.

7. **Construct Arguments** Janie served 4 same-size pizzas at the class party. Explain how to find how many slices of pizza Janie served if the angle for each slice turns through a right angle.

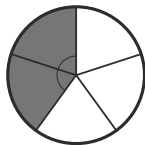
8. Wendy's older brother is buying a car. He can make 24 payments of \$95 or 30 payments of \$80 each. Which costs less? How much less?

9. **Higher Order Thinking** A circle is divided into 18 equal parts. How many degrees is the angle measure for each part? How many degrees is the angle measure for 5 of those parts? Break apart 18 to solve. Explain.

### Assessment Practice

10. Which angle measure is represented by the shaded part of the circle?

- (A)  $90^\circ$
- (B)  $120^\circ$
- (C)  $144^\circ$
- (D)  $60^\circ$



11. Which angle measure is represented by the clock hands?

- (A)  $90^\circ$
- (B)  $120^\circ$
- (C)  $144^\circ$
- (D)  $60^\circ$



Name \_\_\_\_\_

## Another Example!

Find the fraction of a circle that an angle with a measure of  $45^\circ$  turns through.

A  $45^\circ$  angle turns through  $\frac{45}{360}$  of a circle.

$45^\circ \times 8 = 360^\circ$ , so  $45^\circ$  is  $\frac{1}{8}$  of  $360^\circ$ .

One  $45^\circ$  angle is  $\frac{1}{8}$  of a circle.



$45^\circ = \frac{1}{8}$  of a  $360^\circ$  circle

## ★ Guided Practice ★

### Do You Understand?

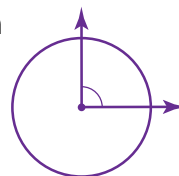
1. What fraction of the circle does a  $120^\circ$  angle turn through?
2. **MP.4 Model with Math** Mike cuts a pie into 4 equal pieces. What is the angle measure of each piece? Write and solve an equation.

### Do You Know How?

3. A circle is divided into 9 equal parts. What is the angle measure of one of those parts?



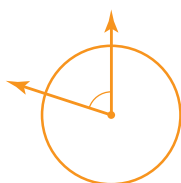
4. An angle turns through  $\frac{2}{8}$  of the circle. What is the measure of this angle?



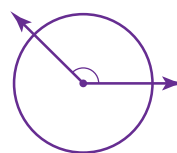
## ★ Independent Practice ★

For **5–8**, find the measure of each angle.

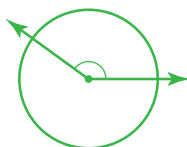
5. The angle turns through  $\frac{1}{5}$  of the circle.



6. The angle turns through  $\frac{3}{8}$  of the circle.



7. The angle turns through  $\frac{2}{5}$  of the circle.



8. The angle turns through  $\frac{2}{6}$  of the circle.

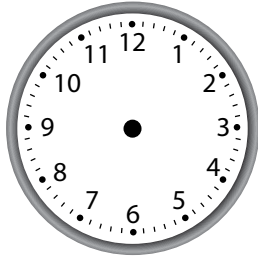


\*For another example, see Set B on page 809.

# Math Practices and Problem Solving

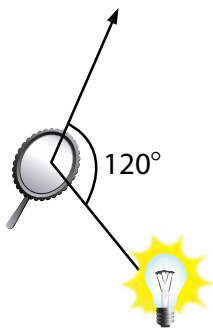
9. **MP.2 Reasoning** Use the clock to find the measure of the smaller angle formed by the hands at each time.

- a. 3:00
- b. 11:00
- c. 2:00



10. **Algebra** Jacey wrote an equation to find an angle measure. What do the variables  $a$  and  $b$  represent in Jacey's equation?  
 $360^\circ \div a = b$

11. **Math and Science** A mirror can be used to reflect a beam of light at an angle. What fraction of a circle would the angle shown turn through?



12. Malik paid \$32.37 for three books. One book cost \$16.59. The second book cost \$4.27. How much did the third book cost? Use bills and coins to solve.

\$32.37		
\$16.59	\$4.27	$b$

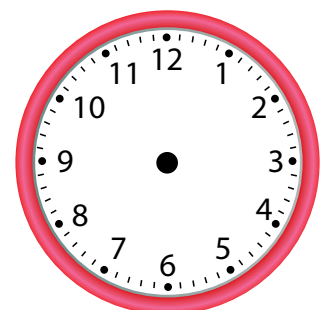
13. **MP.1 Make Sense and Persevere**  
 A pie was cut into equal parts. Four pieces of the pie were eaten. The 5 pieces that remained created an angle that measured  $200^\circ$ . What was the angle measure of one piece of pie?

14. **Higher Order Thinking** Jake cut a round gelatin dessert into 8 equal pieces. Five of the pieces were eaten. What is the angle measure of the dessert that was left?

## Common Core Assessment

15. Draw a line from the time to the smaller angle the time would show on a clock. Use the clock to help.

3:00	180°
10:00	60°
6:00	120°
4:00	90°

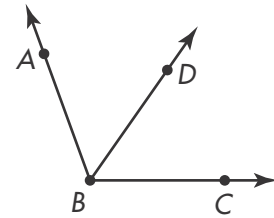


**A-Z Vocabulary**

1. An **angle** is formed by two rays that have the same endpoint. Two angles can share a common ray.

$\angle ABD$  and  $\angle DBC$  share a common ray.

Name the common ray. \_\_\_\_\_



2. Find the measure of  $\angle KJM$ .

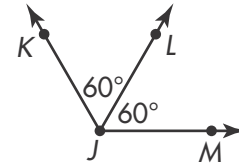
$\angle KJL$  and  $\angle LJM$  do not overlap, so the measure of  $\angle KJM$  is equal to the sum of its parts.

Write and solve an equation.

measure of  $\angle KJM$  = measure of  $\angle KJL$  + measure of  $\angle LJM$

measure of  $\angle KJM$  =  $60^\circ$  + \_\_\_\_\_

measure of  $\angle KJM$  = \_\_\_\_\_



3. The measure of  $\angle AKC$  is  $70^\circ$ . Find the measure of  $\angle AKB$ .

$\angle AKC$  is decomposed into two non-overlapping angles,  $\angle AKB$  and  $\angle BKC$ .

Write an equation.

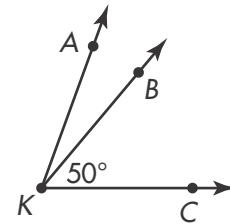
measure of  $\angle AKB$  + measure of  $\angle BKC$  = measure of  $\angle AKC$

measure of  $\angle AKB$  +  $50^\circ$  = \_\_\_\_\_

Find the missing angle measure.

measure of  $\angle AKB$  =  $70^\circ - 50^\circ$

measure of  $\angle AKB$  = \_\_\_\_\_

**On the Back!**

4. Two non-overlapping angles that share a common ray form a right angle. One of the angles has a measure of  $55^\circ$ . What is the measure of the other angle?

Name \_\_\_\_\_

# ★ Guided Practice ★

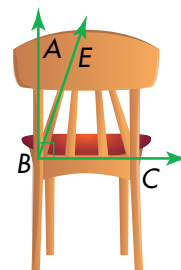
## Do You Understand?

1. **MP.4 Model with Math** Use the information below to draw and label a diagram.  
 $\angle PQR$  measures  $45^\circ$ .  
 $\angle RQS$  measures  $40^\circ$ .  
 $\angle PQR$  and  $\angle RQS$  do not overlap.  
Write and solve an equation to find the measure of  $\angle PQS$ .

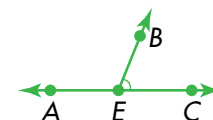
## Do You Know How?

For 2–3, use the diagram to the right of each exercise. Write and solve an equation to find the missing angle measure.

2. What is the measure of  $\angle EBC$  if  $\angle ABE$  measures  $20^\circ$ ?



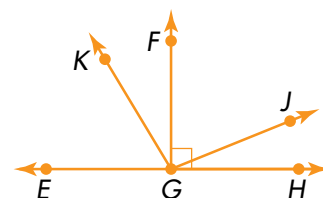
3. What is the measure of  $\angle AEB$  if  $\angle CEB$  measures  $68^\circ$ ?



# ★ Independent Practice ★

For 4–7, use the diagrams to the right. Write and solve an addition or subtraction equation to find the missing angle measure.

4. What is the measure of  $\angle FGJ$  if  $\angle JGH$  measures  $22^\circ$ ?
5. What is the measure of  $\angle KGF$  if  $\angle EGK$  measures  $59^\circ$ ?
6. Use the angle measures you know to write an equation to find the angle measure of  $\angle EGH$ . What kind of angle is  $\angle EGH$ ?
7. Which two non-overlapping angles that share a ray make an obtuse angle? Use addition to explain.



\*For another example, see Set E on page 810.

# Math Practices and Problem Solving

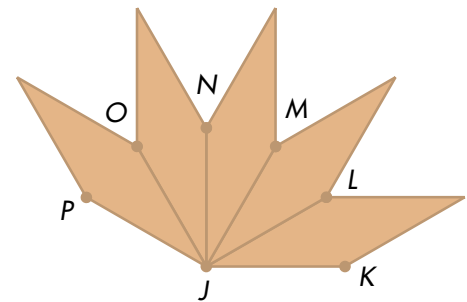
8. Shane says a straight angle always has  $180^\circ$  degrees. Is Shane correct? Explain.

9. **MP.4 Model with Math** Talla earns 85¢ for cans she recycles. If she gets a nickel for each can, how many cans does Talla recycle? Draw a bar diagram to represent how to solve the problem.

10. Alex draws an angle that measures  $110^\circ$ . He then draws a ray that divides the angle into 2 equal parts. What is the measure of each smaller angle?

11. Six angles share a vertex. Each of the angles has the same measure. The sum of the measures of the angles is  $330^\circ$ . What is the measure of one angle?

12. **Higher Order Thinking** Li uses pattern blocks to make a design. He puts 5 pattern blocks together, as shown in the diagram. The measure of  $\angle LJK$  is  $30^\circ$ . Name all the  $60^\circ$  angles shown that have point  $J$  as a vertex.



## Common Core Assessment

13. Carla drew two acute nonoverlapping angles that share a ray and labeled them  $\angle JLK$  and  $\angle KLM$ . The two angles have different measures. Carla says  $\angle JLM$  is greater than a right angle.



An acute angle is open less than a right angle.

### Part A

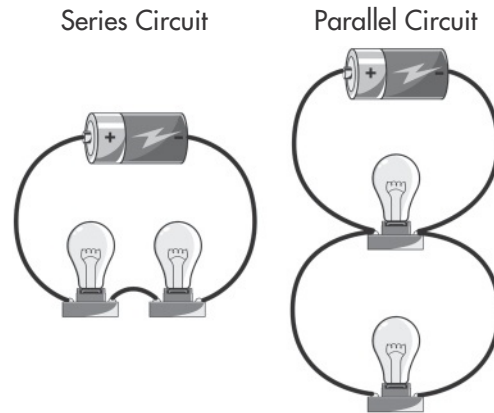
Is it possible for Carla to be correct? Write to explain.

### Part B

Write an equation showing one possible sum for Carla's angles.

# Electric Circuits

**Did You Know?** A flashlight, an electric stove, and the engine in a car all involve electric circuits. For these items to work, electricity has to flow through a circuit. There are two types of circuits: series and parallel. A series circuit is a single-loop circuit. A parallel circuit has multiple loops, allowing the electrical current to split in different paths.



During a science experiment, a class tested various circuits. The diagram shows one of the circuits the class tested.

- 1  $\angle ACE$  is a right angle. What is the measure of  $\angle BCE$ ? Write and solve an equation.

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- 2 The measure of  $\angle CBD$  is  $65^\circ$ . What is the measure of  $\angle ABD$ ? Write and solve an equation.

---

- 3 **Extension** Classify each of the angles as straight, obtuse, right, or acute.

$\angle ABC$  is an \_\_\_\_\_ angle.

$\angle CBD$  is an \_\_\_\_\_ angle.

$\angle BDE$  is an \_\_\_\_\_ angle.

$\angle EDF$  is an \_\_\_\_\_ angle.

$\angle ACE$  is a \_\_\_\_\_ angle.

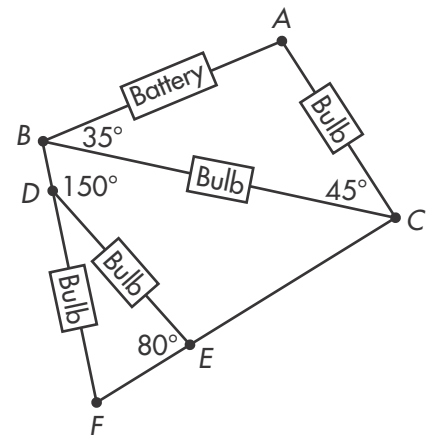
$\angle FED$  is an \_\_\_\_\_ angle.

$\angle DEC$  is an \_\_\_\_\_ angle.

$\angle ECB$  is an \_\_\_\_\_ angle.

$\angle BCA$  is an \_\_\_\_\_ angle.

$\angle FEC$  is a \_\_\_\_\_ angle.





**Vocabulary**

1. A **table** can be used to organize data. Sometimes the data represents the  $x$ - and  $y$ -coordinates of ordered pairs.

<b>x</b>	1	3	5
<b>y</b>	4	6	8

Use the data from the table to write ordered pairs.

(1, 4)      (\_\_\_\_\_, 6)      (\_\_\_\_\_, \_\_\_\_\_)

Julia makes lawn ornaments using 3 different molds. The plaster takes 2 hours to harden, so she can make 3 lawn ornaments every 2 hours. How many lawn ornaments will Julie have after 12 hours?

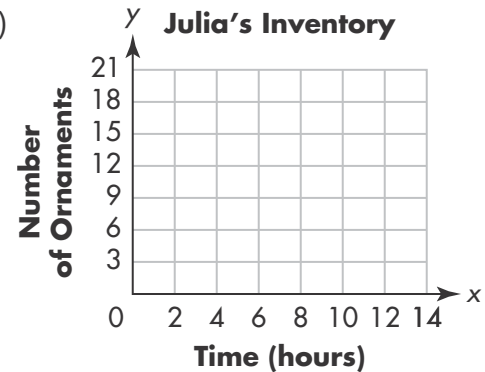
2. Use the table to write the ordered pairs for this situation.

<b>Time (hours)</b>	2	4	6	8
<b>Number of Ornaments</b>	3	6	9	12

(2, 3)      (\_\_\_\_\_, 6)      (6, \_\_\_\_\_)      (\_\_\_\_\_, \_\_\_\_\_)

3. Graph the ordered pairs.
4. Draw a line through the points, extending it to where the  $x$ -coordinate is 12, and plot a point.

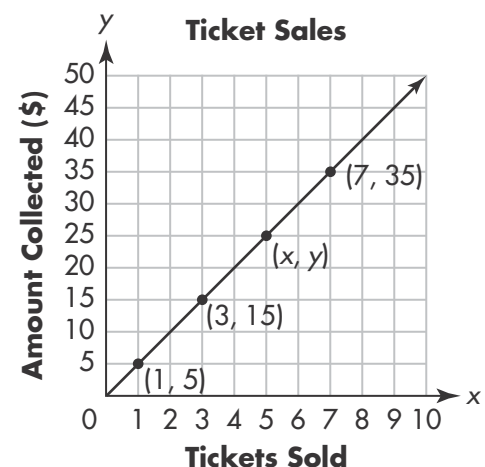
What is the  $y$ -coordinate of the point on the line where  $x = 12$ ? \_\_\_\_\_



5. So, Julia will have \_\_\_\_\_ lawn ornaments after 12 hours.

**On the Back!**

6. Find the missing coordinates and tell what the point represents.



## ☆ Guided Practice ☆

### Do You Understand?

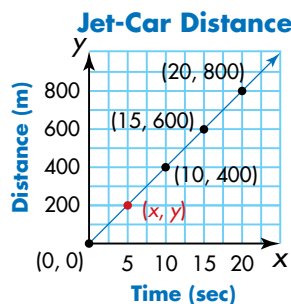
1. In the example on page 790, find another point on the line. What does this point represent?

2. **Algebra** In the example on page 790, write an equation to show the relationship between Ann's earnings and Bill's earnings. Remember to let  $x$  = Ann's earnings and  $y$  = Bill's earnings.

### Do You Know How?

Write the missing coordinates and tell what the point represents.

3.

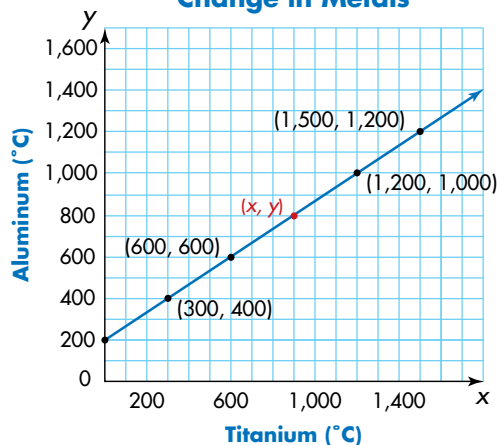


## ☆ Independent Practice ☆

In 4 and 5, find the missing coordinates and tell what the point represents.

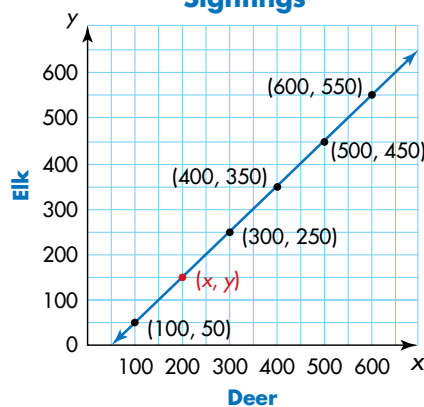
4.

**Comparing Temperature Change in Metals**



5.

**Yosemite Wildlife Sightings**



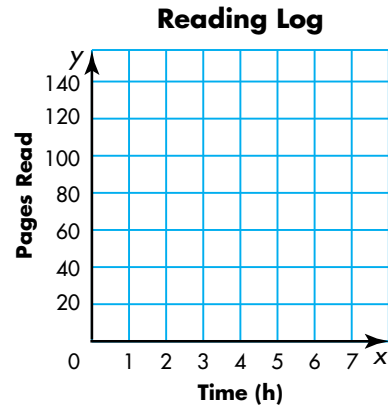
6. For Exercise 5, find two other points on the line. Then graph and label them. Describe the relationship between deer sightings and elk sightings.

# Math Practices and Problem Solving

In 7 and 8, use the table at the right.

7. Graph the points in the table on the grid at the right. Then draw a line through the points.
8. **MP.7 Look for Relationships** If the pattern continues, how many pages will have been read after 6 hours? Extend your graph to solve.

Reading Log					
Time (h)	1	2	3	4	5
Pages Read	20	40	60	80	100

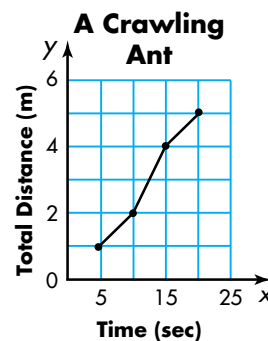


9. **Higher Order Thinking** Suppose you have a graph of speed that shows a lion can run four times as fast as a squirrel. Name an ordered pair that shows this relationship. What does this ordered pair represent?
10. **Number Sense** Candace drives a total of 48 miles each day to get to work and back home. She works 5 days a week. Her car gets 21 miles per gallon of gas. About how many gallons of gas does she need to drive to work and back home each week?

## Common Core Assessment

11. What does the point (15, 4) represent on the graph at the right?

- (A) The ant crawled 15 meters in 19 seconds.
- (B) The ant crawled 15 meters in 4 seconds.
- (C) The ant crawled 4 meters in 19 seconds.
- (D) The ant crawled 4 meters in 15 seconds.



12. What does the point (20, 5) represent on the graph?

- (A) In 20 seconds, the ant crawled 5 centimeters.
- (B) In 20 seconds, the ant crawled 5 meters.
- (C) In 5 seconds, the ant crawled 20 meters.
- (D) In 5 seconds, the ant crawled 15 meters.

# Additional Practice 14-3

## Solve Problems Using Ordered Pairs

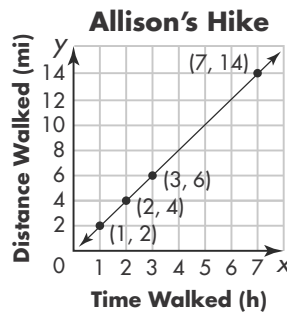
### Another Look!

Allison can hike 2 miles in an hour. At that speed, how far would she walk in 7 hours?

DATA	Time (h)	1	2	3
	Distance (mi)	2	4	6

Plot the ordered pairs from the table. Draw a line to show the pattern. Then extend the line to where the  $x$ -coordinate is 7. Read the  $y$ -coordinate when the  $x$ -coordinate is 7. The  $y$ -coordinate is 14.

So, Allison can hike 14 miles in 7 hours.

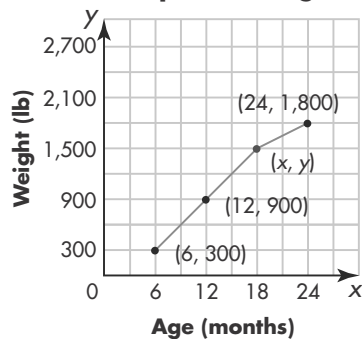


Let  $x$  be the number of hours Allison walks and let  $y$  be the number of miles she walks.

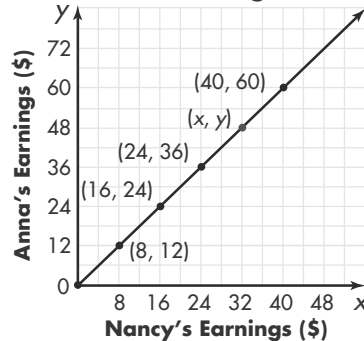


In **1** and **2**, find the missing coordinates and tell what the point represents.

#### 1. Elephant Weight



#### 2. Earnings



**3.** Write the coordinates of another point on the line in Exercise 2. Then plot and label the point on the graph.

**4.** What does the ordered pair for the point you found in Exercise 3 represent?



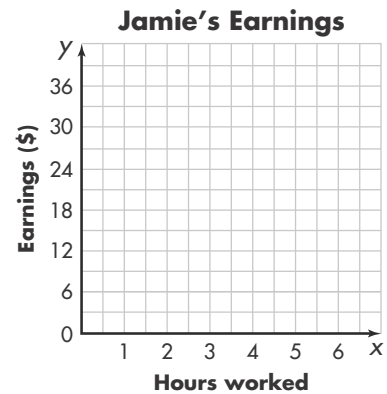
In 5–7, use the graph at the right.

5. Jamie is making a graph to show her total earnings,  $y$ , after babysitting for  $x$  hours. Graph Jamie's first four points below on the grid at the right. Use a ruler to draw a line connecting the points.

(1, 6) (2, 12) (3, 18) (4, 24)

6. Describe what one of the points represents.

7. **Higher Order Thinking** Write a rule to describe the relationship shown in the graph. Then name two other points that would be on the graph if the line were extended.



8. **Vocabulary** Complete the sentence using one of the terms below.

**x-axis y-axis origin**

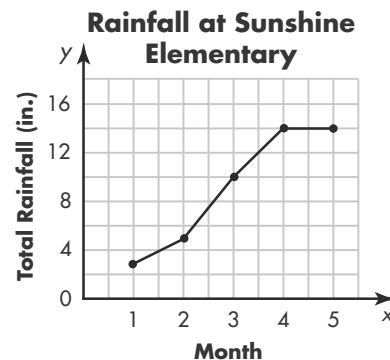
On a coordinate grid, the \_\_\_\_\_ is horizontal.

9. **Be Precise** The area of a rectangle is 105 square centimeters. The width of the rectangle is 7 centimeters. What is the perimeter of the rectangle?

**Assessment Practice**

10. What does the point (3, 10) represent on the graph at the right?

- (A) After 3 months, the total rainfall was 7 inches.
- (B) After 3 months, the total rainfall was 10 inches.
- (C) After 10 months, the total rainfall was 3 inches.
- (D) After 10 months, the total rainfall was 7 inches.



**Another Look!**

A blue swimming pool contains 5 inches of water. It is filled with 2 more inches of water each hour. A red swimming pool contains 25 inches of water. The water is drained 3 inches each hour. How much water will be in the red pool when the blue pool has 19 inches of water?

You can use a table and graph to model the math.

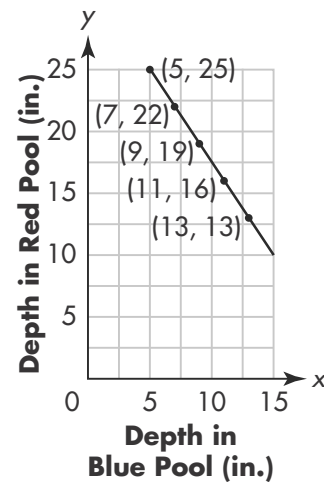
Depth of Water (in.)					
Hour	Start	1	2	3	4
Blue Pool	5	7	9	11	13
Red Pool	25	22	19	16	13

The ordered pairs show a pattern. Each hour, the x-coordinate increases by 2, and the y-coordinate decreases by 3.

Extend the pattern until the x-coordinate is 19:  
(15, 10), (17, 7), (19, 4)

When the blue pool has 19 inches of water, the red pool will have 4 inches of water.

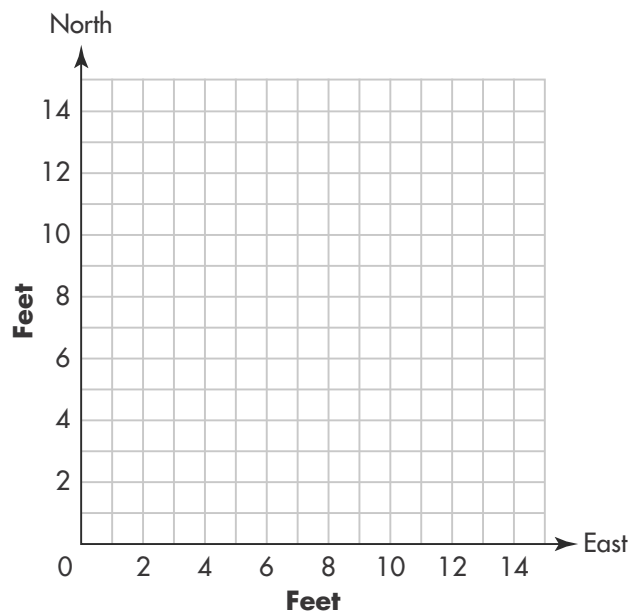
## Additional Practice 14-4 Reasoning

**Reasoning**

A tree farm owner uses a grid to mark where to plant trees in the spring. The first tree is planted at (2, 3). Each of the other trees is planted 3 feet east and 2 feet north of the previous tree.

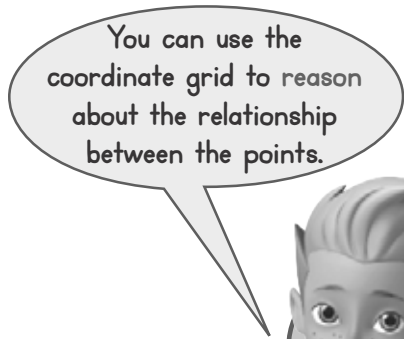
1. Draw and label the locations of the first four trees on the grid.
2. Describe the pattern of the points that represent the tree's locations.

3. What is the location of the seventh tree?  
Explain how you determined your answer.



### Apple Picking

The Bransen Family picked 20 red apples, 28 yellow apples, and  $\frac{1}{2}$  bushel of green apples. Starting the following day, they ate 2 red apples and 3 yellow apples every day. When 6 red apples are left, how many yellow apples will be left?



- 4. Make Sense and Persevere** Complete the table to show how many red and yellow apples there are every day for the first 4 days.

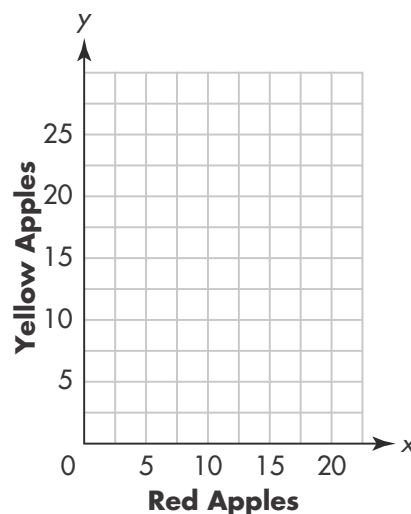
Number of Apples					
Day	Start	1	2	3	4
Red Apples	20				
Yellow Apples	28				

- 5.** Label the graph and then plot the data points from your table.

- 6. Reasoning** Can you draw a line through the plotted points? If so, what does that mean?

- 7. Look for Relationships** Is there a pattern? If so, describe it.

- 8. Reasoning** When 6 red apples are left, how many yellow apples will there be? Explain how you determined your answer.

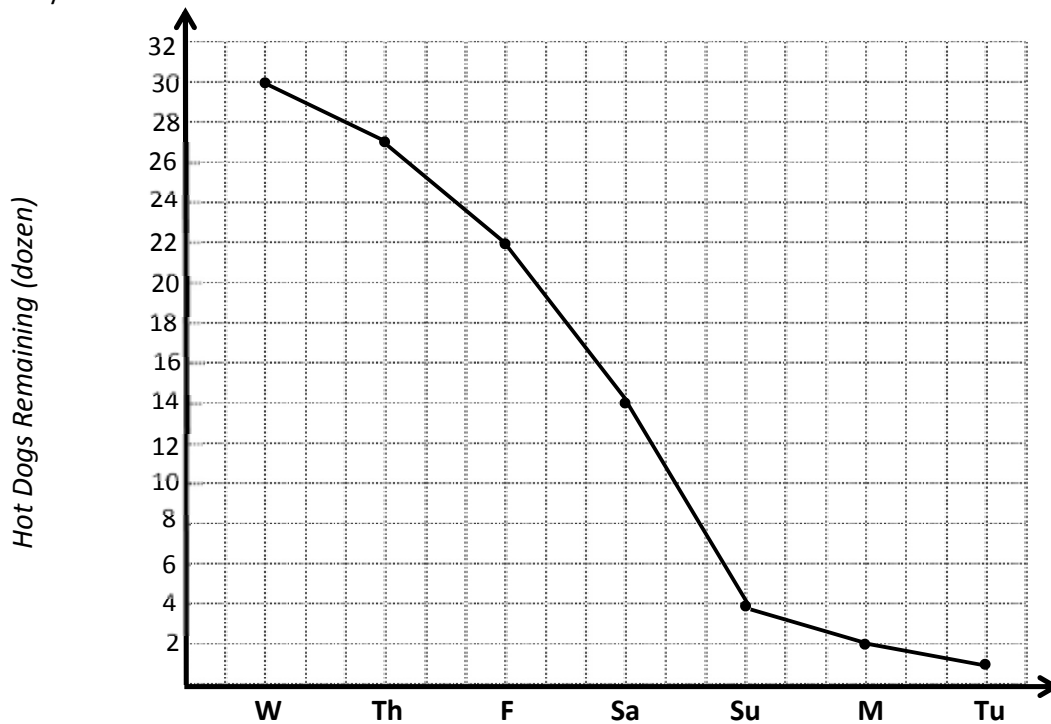


Name \_\_\_\_\_

Date \_\_\_\_\_

1. Use the following information to complete the line graph below. Then answer the questions that follow.

Harry runs a hot dog stand at the county fair. When he arrived on Wednesday, he had 38 dozen hot dogs on his stand. The graph shows the number of hot dogs (in dozens) that remained unsold at the end of each day of sales.



- How many dozen hot dogs did Harry sell on Wednesday? How do you know?
- Between which two-day period did the number of hot dogs sold change the most? Explain how you determined your answer.
- During which three days did Harry sell the most hot dogs?
- How many dozens of hot dogs were sold on these three days?

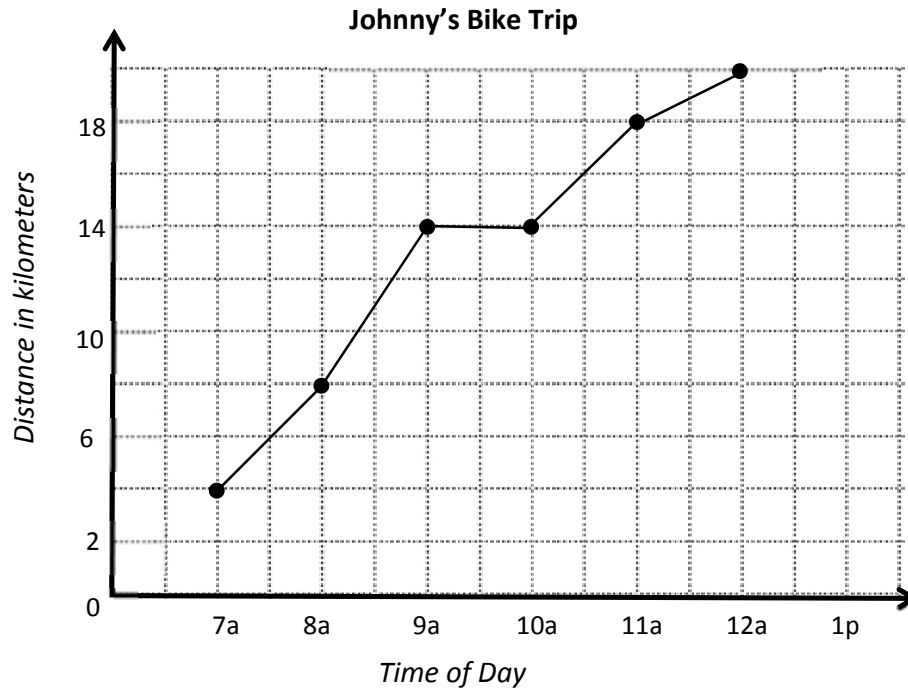


Name \_\_\_\_\_

Date \_\_\_\_\_

1. Use the graph to answer the questions.

Johnny left his home at 6 a.m. and kept track of the number of kilometers he traveled at the end of each hour of his trip. He recorded the data in a line graph.



- a. How far did Johnny travel in all? How long did it take?
- b. Johnny took a one-hour break to have a snack and take some pictures. What time did he stop?  
How do you know?