



4th Grade

4TH QUARTER CURRICULUM PACKET

**Hayward Community
School District
715-634-2619**

#HurricaneStrong

This packet is for
**YOUR
AWESOME
PARENTS**

Thank you for all that you are doing!

Please reach out to us if you have any questions.

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Name _____

Nosing Around

Our noses are a treat for our senses. They inhale the delicious smells of baking cookies and sizzling bacon. They also alert us to danger, such as toast burning in a toaster.

Animals also use their noses to smell. However, some animals are capable of using their noses in quite different ways. Have you ever wondered why some animals sport odd-shaped noses?

Elephants have a very familiar odd-shaped nose. An elephant's nose, or trunk, is used for touching, tasting, breathing, and drinking. Did you know that an elephant can use its nose to keep cool in the blazing hot sun? The elephant also uses its nose to reach food that is inaccessible otherwise.

You would think by its name that the elephant nose fish has something special or fascinating about its nose. Indeed, an elephant nose fish is much smaller than a large elephant. However, its "nose" is pretty prominent. Elephant nose fish can be found in muddy waters in Africa. This fish actually uses its long "nose" to seek food in the thick, sticky mud.

The hammerhead shark uses its nose to search for food, too, but in this case, its prey. On the menu for this shark's favorite meal: stingrays. A hammerhead maneuvers its snout to dig stingrays out of their hiding places in the sand. So much for getting buried in the sand to avoid capture!

Then there's the star-nosed mole. This animal has one strange nose! Its nose is covered with 22 tentacles. These tentacles do not have sting cells on them like those of a jellyfish. Still, they help the mole to find food quickly. Insects and worms make favorite main courses for moles. Nosing around could not be more important when it comes to finding these delights.

What all of these animals have in common is an extension that sits somewhere on or near their face. How they use their noses may seem funny to humans, but is the difference between death and survival in the wild.



Name _____

A “Coat” of Many Colors

Life can be tough for some animals. Imagine spending most of your life either looking for food or trying to avoid becoming food for predators. Yet one or both of these tasks are necessary for individuals and species to survive.

How does a lion sneak up on its prey without being seen? How can an insect protect itself from birds looking for a tasty snack? How do little fish avoid becoming prey to bigger fish? Whether you are a predator or prey, the ability to seem to disappear into your surroundings is a huge advantage.

The word camouflage comes from a French word meaning “to disguise.” A camouflaged animal takes on the appearance of its surroundings. Lions seem to disappear into the tall grass of the savanna. This allows them to sneak up on their prey without being seen. Squirrel fur is rough, uneven, and a grey-brown color. To a hawk or eagle looking for food, the squirrel looks like tree bark. Some insects have a hard shell that looks like dead leaves or branches.

Reptiles, amphibians, and fish are covered in scales. They produce colored pigments called biochromes. These pigments may be in skin cells or at deeper levels of the body. As some animals move from one background to another, they can quickly change color to match, making them nearly invisible. Also, some sea creatures, such as certain species of nudibranch (NOO duh brangk), change color by changing their diet. Their bodies take on the color of the coral they eat, so they become almost invisible. Imagine what it would be like to possess an ability like that!

What about birds, whose coloring is in their feathers? Birds can't change color quickly, but many birds do change color with the seasons. Varying temperatures or hours of daylight cause these birds to grow a new set of feathers as the background changes. For example, a bird that is mainly brown in summer may change to white in winter.

Camouflage abilities develop gradually through the process of natural selection. For example, if an individual animal's coloring closely matches its surroundings, predators are less likely to devour it. As a result, it survives to produce offspring. These offspring inherit the same coloration, so they also live long enough to pass it on.



Name _____

What Did You Say?

How would you communicate if you couldn't speak, use sign language, or grab the closest hand-held device and start texting? In baseball, players and coaches often use hand signals to communicate about stealing a base, hitting the ball into left field, or throwing a fastball. What do animals do? Animals can't speak, so they use visuals, sounds, and touch to communicate. You may be wondering what an animal possibly has to say—a lot actually!

Peacocks and fireflies use visuals to attract mates. Male peacocks are known for their beautiful, colorful feathers. They fan out their feathers and parade in front of females. Male fireflies light their fire, so to speak. They use light to attract females by signaling to them. Females respond by flashing their own light. Light and color are visuals that allow these animals to communicate.

Under the sea and in the sky, whales and birds communicate using sound. Whales, such as the humpback whale, use sounds called phonations, which are too low or too high for humans to hear. Whales produce these sounds to keep in contact with other whales. The whale sounds travel long distance and then some. They can reach whales that may be swimming as many as 50 miles (80 kilometers) away. Ponder that!

The songs and calls that birds make can be beautiful and melodic. But did you know that birdsong is their way or means to communicate? Birds sing and call for many reasons. They may sing to attract a mate or call to warn off a predator. They may even sing because they are annoyed. Consider this technique the next time someone is bothering you!

Elephants use sound to communicate, but they also use touch. A mother elephant uses her trunk to gently stroke her calf or to discipline it. Two elephants greet each other with their trunks. They place the tip of the trunk in the other's mouth. This greeting can be translated into saying, "Hello!"

Think of how these animals communicate the next time you need to share information with someone. Instead of speaking, using sign language, or texting, try something unique and act like a peacock!



Name _____

Adapting to Survive

If you have ever moved to a new town or city or even another country, you might know how it feels to have to adapt to your new surroundings. Animals face similar challenges. However, their true test is whether they can survive in their environment or become another animal's lunch!

Adaptations are what animals use to help them survive. As their surroundings change, many animals use adaptations to become better suited for their new homes. Did that leaf just move? A leaf frog uses an adaptation called camouflage to blend into its surroundings. Camouflage helps animals survive. An animal's coloring or shape can help it hide in plain sight. Predators have a hard time spying camouflaged animals.

However, predators also use camouflage to sneak up on prey. Leopards' spots help them blend into their surroundings. They wait for their prey in shadows or in shaded grass. Their prey may not notice the leopard until it is too late.

Mimicry is another survival adaptation. Mimicry is when an animal looks like, or copies, another living thing or an object. Some animals are harmless, so they mimic dangerous animals. When an animal uses mimicry, it tricks predators into not wanting to eat it for dinner. For example, the underside of an owl butterfly's wing has a large spot. It looks like an owl's eye. When predators see the butterfly, they are scared off. Without that spot, they might try to pursue the butterfly. The predators are fooled into thinking the butterfly is an owl. Owls might attack them if provoked. By looking like this animal, owl butterflies have a better chance of surviving.

Predators also use mimicry to attract prey. An alligator snapping turtle has a tongue that looks like a juicy worm. Fish like to eat worms, and snapping turtles like to eat fish! The snapping turtles can use their tongues to catch fish. Chomp!

If you were thinking that camouflage might help you to hide from your next chore or homework assignment, you are out of luck. Camouflage and mimicry are adaptations that help animals, not humans, survive. Next time you are outside see what luck you might have finding a camouflaged animal. If you spy one, consider yourself lucky and a great sleuth!



Name _____

Cahokia: The Mystery Behind an Ancient City

Hundreds of years before Columbus landed in the New World, there was a complex culture in southern Illinois. People settled in the rich floodplain near present-day St. Louis beginning about A.D. 700. Over the centuries, they built a planned city. It was later named Cahokia (kuh HO key uh). Between the years 1050 and 1200, the city had between 10,000 and 20,000 people living there.

What was the daily life like at Cahokia? There are no written records to tell us. Scientists have searched for clues as they have dug at the site of this ancient city. They have found pottery, buildings, and burial grounds.

More than 120 earthen pyramids, known as mounds, have been discovered. The largest mound has a base that covers more than 14 acres. It would have been more than ten stories tall! It may have required more than about 14 million baskets of soil to build it. Imagine a powerful leader ordering workers to carry all those baskets, one at a time. Between the mounds, there are large plazas where people may have gathered and played sports.

What were the mounds used for? A large temple or palace on the highest mound may have been where the high priest lived. Homes or burial grounds may have been located in some of the mounds. Scientists have found a circle of cedar posts that may have been used like a calendar. The Cahokian people likely studied the movement of the sun and stars.

Cahokian artifacts that were found hundreds of miles away from Cahokia suggest that a large trade network was in place. Scientists are not certain, but some think that Cahokia may have been the center of the Mississippian culture.

What happened to the Cahokian people? Did disease kill them? Were they forced to move? No one really knows. Perhaps their resources ran out. Why should we care about this long-lost city? Understanding how great civilizations rose and fell may help us to learn from their failures. It may help to ensure the survival of our very own culture.



Name _____

The Strawberry: From Food to Fabric Softener

Do you like eating plump, juicy strawberries? When you think of strawberries, maybe you think of a fruity and crunchy topping on your cereal. Maybe you think of decadent dessert like strawberry shortcake. Have you ever thought of how else a strawberry might be used?

Many Native American cultures have shown how resourceful they could be. On the Great Plains, they hunted buffalo and used every part of it, from head to hoof, to meet their needs. Now their use of strawberries was a bit different. However, they did use them for much more than fuel for their bodies and fun for their taste buds. Native Americans used these succulent berries to make all sorts of things to meet their everyday needs.

Strawberries have a rich, deep red color. Native Americans figured out that they could use its color to produce red dye. Strawberry dye was a beautiful color and very long lasting. Native Americans colored cloth, animal skins, and even used it to paint their own skin.

Native Americans also made medicine from strawberry plants. Some turned the leaves into a tea, which helped people who suffered from stomach and kidney problems. Native Americans also made pastes out of the leaves and deer fat. These pastes healed burns and sores. Crushed berries could even be used to clean teeth! Some Native Americans even used strawberry plants to smell better. They made pads out of the leaves and put the pads inside their clothes to smell fresh. Think along the lines of deodorant, perfume, or even fabric softener!

Of course, Native Americans enjoyed eating strawberries just like we do today. They ate them fresh, used them to make jams, or dried them. Strawberries were not always available year-round. Drying them provided Native Americans with a supply to last all year.

Some Native American groups held a Strawberry Thanksgiving every June. They celebrated this red sweet delight by dancing, singing, and, of course, eating! They wanted to show their thanks for such a special fruit.



Name _____

Learning a New Language

There was a buzz in the classroom. Mrs. Taylor announced that a new student was joining the class soon, and the student was coming from Mexico.

After the announcement, Mrs. Taylor asked everyone to quiet down. “I know you’re excited about our new student,” she said, “but I have some other good news too.”

“Our principal, Mrs. Littlefield, and I have decided that it’d be helpful for us to learn some Spanish. That’ll help us communicate better with Alita. She can learn English while we learn Spanish,” Mrs. Taylor explained.

Mrs. Taylor’s class broke out in cheers of excitement. “I know some Spanish already,” informed Kelly. “My grandparents speak Spanish.”

“Great!” Mrs. Taylor responded. “You can help us learn Spanish too. We have a guest coming today who’s a Spanish tutor. He’s going to teach us some Spanish language basics.”

Just then a man walked in and introduced himself. “Hello, or *hola!* I’m Señor Alvarez, and I’ll be working with you over the next few weeks. Before you know it, you’ll be able to have a simple conversation with Alita.”

Señor Alvarez began the first lesson. “There are a few tips that I’d like to share with you. Remember these, and you’ll have an easier time learning a new language.

“First, you’ll want to spend as much time as you can listening to the language, so I’ll leave some Spanish language CDs for you. Listen to these and practice saying the words with the speaker.

“The second tip is to spend time every day studying. I’ll be here twice a week, and when I’m not here, work together in a small group and practice what you have learned.

“The third, and maybe the most important tip, is not to worry about making mistakes. Sometimes you make mistakes even when you’re speaking English, so don’t worry about making mistakes when you’re trying to learn how to speak Spanish. Don’t be afraid to ask me or Alita, when she arrives, how to say or pronounce something.”

Señor Alvarez then taught the class how to say a few words and phrases in Spanish. After the tutoring session ended, many students were eager to practice. The students were excited about being able to greet Alita in Spanish when she arrived!



Name _____

American Melting Pot?

How would you feel if your family decided to move to China, Egypt, or Spain? You might not speak the language. The food could be different. You would face a very different culture. Would you expect teachers in your new school to speak English? Or would you need to learn the language and customs as fast as possible?

Except for Native Americans, every person living in the United States can trace his or her **ancestry** back to a different country. About 12.5% of Americans today were born in other countries. Some people think that those who come here should learn the customs and language of this country. In the early twentieth century, Israel Zangwill wrote a play called *The Melting Pot*. In it, he said America is like a melting pot. He suggested that **immigrants are blended together and transformed into "Americans."**

Many have disagreed with that view. Former New York Representative Shirley Chisholm said, "We are nobody's melting pot!" She said, "We are a beautiful, giant salad bowl." She thought that the character and strength of America lies in the contributions of its people. The people are from many different racial, ethnic, and cultural groups. In the "salad bowl" idea, each ingredient (people of a different culture) keeps its own identity.

So, how can a person stay true to his or her **heritage** and still be "American"? How can and should schools promote the roles of various racial, ethnic, and cultural groups in society? **Should the school cafeteria take into account religious and cultural food restrictions? Should the dress code allow for cultural differences? Should teachers be required to teach in several languages?**

Educators, politicians, parents, and students debate these questions. Fear and prejudice and an "us versus them" **mentality** occur when different groups don't understand one another. Schools might be an ideal place to get to know people from other cultures. What do you think? How should schools encourage students to focus on what people have in common while still valuing and respecting their differences?



Name _____

Crater Lake

What images come to mind when you think of a volcano? Perhaps you think of molten lava spewing from one, or smoke pouring into the sky and covering the earth with ash. You probably wouldn't think of a fresh lake with the clearest and bluest water, would you?

Thousands of years ago the top of a volcano named Mount Mazama collapsed due to a powerful eruption. This resulted in a crater on top of the now inactive volcano. Lava sealed the bottom of the crater creating a basin. This basin gradually filled with water from rain and snowmelt. This crater is now called Crater Lake.

Nestled high in the Cascade Mountains of Oregon, Crater Lake is one of the deepest lakes in the world. The walls of old Mount Mazama tower above the lake, rising from 500 to 2,000 feet (152 to 610 meters). At its widest point, Crater Lake is about 6 miles (9 km) across.

Crater Lake is known for its blue color. The lake is so blue because it is very deep. In fact, this lake was once called Deep Blue Lake. The water is also nearly pure, which is a reason why the water is clear. Its purity and clarity are due to the fact that no rivers or streams flow into the lake.

If you visit Crater Lake, you will notice two islands: Wizard Island and Phantom Ship. You may also see a mountain hemlock log floating upright in the lake. What's so special about this log? It's known as the "Old Man" of Crater Lake, and it has been floating around the lake for over 100 years!

Today Crater Lake sits in Crater Lake National Park. Thanks to William Gladstone Steel, the lake and the surrounding area have been protected and preserved as a national park since 1902. Tourists can enjoy camping, fishing, and hiking during the warm months. However, from October to June, the park is buried under snow. No matter the season, Crater Lake is considered a place of great beauty.

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Students read text closely to determine what the text says.

Name _____

An Amazing Discovery

“Marcus, get your mother!” Aldo yelled. “I have something to show her!” It was a sizzling hot day. Aldo had risen early so he and his son could work in the coolness of the morning. They raised olives and grapes on a quaint farm in Italy in the early 1700s. These crops flourished in the fertile soil, made rich by volcanic ash.

That morning Aldo was digging a new well. As he was digging, his shovel hit something hard. He put the shovel down and started scraping at the dirt with his hands. When Marcus returned with his mother, Gina, they found Aldo looking into the eyes of a beautiful face. They helped him continue digging until they had uncovered an entire statue carved from marble.

“Aldo, my sister told me about a neighbor who found something like this when he dug his well,” Gina said. “Do you think this is part of the same collection of ruins?”

The family met with their neighbors. Soon everyone was comparing items they had found in their own farm fields. People had unearthed coins, jewelry, bowls, and bricks. Some had even found bones.

Aldo and his neighbors worked their lands, and uncovered many other interesting artifacts buried in the soil. Soon, however, they were told to stop. They found out their farms were located near where the ancient city of Herculaneum had once been. To continue digging might damage the ruins and make it impossible to learn their secrets from the past.

Many centuries earlier, Herculaneum and Pompeii had been thriving cities. Yet one horrific day in A.D. 79, they were destroyed by a volcanic eruption. That day the nearby volcano known as Mount Vesuvius (vee ves) erupted. It buried the cities of Herculaneum and Pompeii under rock and ash. Thousands of people died, and everything in the cities was burned or buried.

Since the discovery of ruins that remain from the two cities, historians and archaeologists from all over the world have come to the area to excavate and see what else they can find. Today tourists flock to Pompeii and Herculaneum to see the ruins.

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Students read text closely to determine what the text says.

Name _____

The Layering Effect

The surface of Earth is constantly being changed. Rocks are constantly being formed, destroyed, or changed. The changes to Earth's surface might be caused by erosion, weathering, volcanic eruptions, or the actions of humans. Do you think there is a lot of activity on Earth's surface? What happens deep inside the Earth can affect what happens where we live.

The layer we walk and live on is called the crust. It is Earth's thinnest layer. There are two kinds of crust, continental crust and oceanic crust. Continental crust makes up all of Earth's land. Oceanic crust lies beneath most of the ocean floor. The thickest part of the crust is about 25 miles (40 km) deep. The thinnest part is about 3 miles (5 km) deep. This leaner layer is at the bottom of the ocean.

Below the crust is a layer called the mantle. It is the thickest layer—almost 1,864 miles (3,000 km) thick and made up of nearly solid rock. It is much hotter than the crust. In fact, it is so hot that rocks can move, bend, and even melt! Sometimes, the melted rock can flow onto the crust as lava and volcanoes form.

The top of the mantle and the crust above it form the lithosphere. Under the mantle, in Earth's center is a super-hot core. The core is made of iron and nickel: the outer part of the core is liquid and the inner part is solid. Scientists think that heat rising up from the core may be one cause of earthquakes. They also think the inner core spins in place. It creates an invisible magnetic shield that protects us from the sun.

The lithosphere covers Earth in a thin layer, which is split into sections called plates. The plates float on the molten rock of the mantle. Earth's plates are slowly moving. Sometimes the plates grind together, and sometimes they move apart. Some of the changes occur slowly, such as the formation of mountains. A change that happens quickly can cause an earthquake. The places where plates meet are often where earthquakes strike, mountains form, and volcanoes erupt.

Scientists keep digging to learn how Earth's lower layers affect our world and what they teach us about the past. They can use Earth's layers to learn about the ages of fossils by studying the layers in which they were found.



Name _____

Rocking It

“Patrick, your room looks like a rock quarry,” Mom said as she stepped over a pile of rocks.

“I know,” Patrick said. “It’s awesome!”

“It’s a neat collection, Patrick, but it’s taking over your room. Maybe it’s time to start weeding some out.”

“I wouldn’t know which ones to discard,” Patrick complained.

That afternoon Patrick and his mom were gardening when their neighbor Mrs. Simpson stopped by. Mrs. Simpson worked at the nature center and always had interesting facts to share about plants.

“What are you planting today?” she asked.

Patrick spoke up. “Mom’s planting peppers, and I’m digging for rocks.”

“Patrick’s rock collection keeps expanding, and he’s running out of space to store them,” Mom added. “Why don’t you show Mrs. Simpson your collection, Patrick?”

Patrick led Mrs. Simpson his room. Mrs. Simpson’s eyes grew big when she saw all the rocks.

“Wow, Patrick, this is quite a collection!” she said. “Do you know what kind of rocks you have?”

“No, they’re just rocks,” Patrick said. “My mom just wants me to get rid of some of them.”

“Well, it may be interesting to know which minerals are in those rocks. Minerals are the building blocks of rocks. Minerals can be identified by their physical properties, such as **color**, **hardness**, **luster**, and **streak**.”

“That sounds really cool, Mrs. Simpson. I’d love to learn how to identify minerals.”

“Rocks also go through many changes. Over time, rocks can *erode* from storms and water currents. Look at this one that you have here. Did you get it by the shoreline? You can tell that it broke off from a larger rock during the process of wave erosion.”

“How did you know that, Mrs. Simpson?” Patrick asked.



Name _____

Jesse's Perfect Score

Jesse had no trouble with most of his classes but clearly struggled with science. Just a week ago, Mr. Delgado had suggested that Jesse's parents find him a science tutor. So, when he received an A+ on the astronomy test, Mr. Delgado was pleased—and a little surprised. Then Anton reported that he had seen Jesse looking at his test answers. Mr. Delgado considered Jesse an honest student, but he began wondering whether Jesse had earned that perfect score.

Mr. Delgado was missing important information. First, Jesse had been an astronomy buff for years and was thrilled when the class finally reached that part of science. He had glow-in-the-dark stars on his bedroom ceiling, and photos of planets and galaxies decorated his walls. Second, Jesse had studied especially hard for the test.

Third, Anton was angry at Jesse and wanted revenge. Anton's pride had been wounded. Most days at recess, the other kids chose Jesse for the baseball team before him. Jesse was a better catcher and batter. Anton could not stand it. When Jesse tagged Anton out at home base, Anton promised to make him pay.

Mr. Delgado had to uncover the truth. He began with Jesse. He took him aside, explaining that another student had accused him of cheating on the test. Jesse insisted that he didn't cheat. He was honest and worked hard for his grades. Jesse inquired, "Was the student Anton?"

The surprise on the teacher's face was evident. Jesse explained what happened at recess and described how much he had studied. As he spoke, Jesse gained a new confidence. Mr. Delgado asked questions and listened carefully to Jesse's answers.

He then talked to Anton, who eventually admitted lying, and offered an apology. After thanking Anton for telling the truth, Mr. Delgado discussed the importance of honesty. He emphasized that actions have consequences and told Anton that he owed Jesse an apology. Anton would spend today's recess inside writing that apology.

After Anton finished writing, Mr. Delgado brought the two students together. Jesse listened politely as Anton read the apology aloud. When he



Name _____

Team “Sports”

Alec and Joey lived near the ocean all year long. Most people don't realize how boring and lonely winter can be at the beach, especially when you and your brother like doing different things. The summer, though, was an entirely different story.

The beach was bustling every week as vacationers came and went. An outgoing boy, Alec—the older by two years—was famous for organizing games of beach volleyball, football, and any other sport imaginable. Sometimes Joey, who was on the shy side, tried to join in. But often he preferred to draw, paint, or build fancy sandcastles like his grandmother. She had taught him how to pack the sand tightly with his palms, carving rounded windows and delicate towers with a garden spade.

Alec didn't understand why Joey would rather do artistic things than play ball. When Joey tried to explain, Alec just shook his head. He insisted that sports were better because sports often allowed many kids to play together. That is when Joey's idea hatched. He would show Alec what doing things together looked like!

Working for several hours, Joey created an elaborate sandcastle with stairs, towers, and shell-lined walls. When he had finished, he used his mom's camera to take pictures. Then Joey painted colorful posters featuring his sandcastle and the question, “Can you top this?” He hung his posters everywhere in town, announcing his plans for a day of sandcastle artistry—all ages welcome. At the end of the day, there would be a potluck dinner to mark the occasion.

When Alec saw a poster, he smirked and not so nicely told Joey that no one would come. Still, shortly after sunrise on Saturday, Joey was on the beach digging in the sand. By midmorning, four kids his age were sculpting the sand alongside him. By noon the number had tripled. A couple of parents even joined in. Joey beamed as everyone eagerly discussed ideas and shared tools. It was a sandcastle-making party!

As the afternoon progressed, Alec's game of volleyball died down, and his friends suggested they check out the sand structures. Alec couldn't believe what he saw. At least 30 people were building an entire city of sandcastles! It was one of the most beautiful things he had seen on the beach. Best yet, everyone was chatting and laughing and working together.



Name _____

To Save or to Spend?

You just returned from the mall with your friends. You stopped at your favorite store and picked out the next thing you want to buy. All your friends spent their money on little things like fake dinosaur bones, crystals that grow, and a question and answer book about space. Everyone was excited about what they bought and couldn't wait to get home to play with what they picked out.

You, on the other hand, loved a cool rover model and are thinking about saving the money you earned from doing chores to buy it. You have \$25.00 but you need to save \$50.00 to get it. You also saw a model of a motor, and it was only \$25.00. It looked pretty cool. The model teaches you all about an engine and how it works. Cars, airplanes, and even space rovers depend on engines, so it would be cool to learn how one works.

Now you have a dilemma. How should you spend your hard-earned money? In order to solve this problem, you have to look at both options. If you spend the money on the motor model, you'll have something new to play with right away. You can learn all about how an engine works. Then again, the rover model was very cool! It's expensive, and you'd have to save up for it, but there are over 40 different experiments you could do with it.

So now it's decision time! If you wait to get the rover model, you'll have to give up buying the motor model today.

On the other hand, suppose you spend the money on the motor model. What happens when you learn about how an engine works? There aren't 40 different experiments to do with the motor model. Would your choice be a good one, or would you wish you'd saved your money and spent it on the cool rover model instead?

Life is full of decisions and choices. Many have to do with money and things. So keep this proverb in mind, "The art is not in making money, but in keeping it." Remember that your hard-earned money should be spent wisely, and sometimes the wisest thing is not to spend it all.



Name _____

Playing Sports and Giving Back

Professional sports teams make their fans cheer by winning games and championships. Winning is not just about scoring touchdowns, making baskets, and hitting homeruns, though. Many teams and players are winners because they help their communities. They know they are in a unique position to make a difference. Most are very happy to lend their names, time, autographed items, and money to help raise funds and awareness about important causes.

Some sports organizations choose certain charities to support. For example, Major League Baseball™ has chosen Boys & Girls Clubs of America™ as its official charity. Together, these two organizations help children learn to deal with barriers and challenges in their lives. Boys and girls are also taught about sportsmanship, responsibility, and team spirit.

The National Hockey League™ focuses its charity work on fighting cancer. In 1998, the league, along with the National Hockey League Players' Association™ started a program called Hockey Fights Cancer™. In 1999, the two organizations started the Hockey's All-Star Kids Foundation™. This program connects the hockey community with young people who have cancer and other serious diseases.

There are some causes many sports teams help support. One such cause is childhood obesity. When a child is obese, he or she weighs more than is healthy. This can lead to serious problems later in life. Today, more and more children are obese. Sports teams want to help children learn to take better care of their bodies. The Chicago Fire™, Denver Nuggets™, and Atlanta Falcons™ are just a few of the teams that help support programs to teach children about good nutrition and the importance of regular exercise. The National Football League™ started NFL PLAY 60™. This program encourages young football fans to be active for at least 60 minutes every day.

The Sports Philanthropy Project is an organization that helps sports teams give back to communities. It also keeps track of what teams and players are doing to make a difference. Do you want to know what your favorite teams and players are doing? Visit their Web sites to find out.



Name _____

Antonyms, Synonyms**Word Bank**

distrust	disagreeable	retirement	white
whiskers	disorder	wharf	think
whisper	trunk	questionable	displacement
misdialed	among	declaration	shrink

DIRECTIONS Write the list word that has the opposite, or nearly the opposite, meaning as the word or phrase.

1. shout
2. pleasant
3. shipshape
4. have faith in
5. black
6. grow
7. certain

1. whisper
2. disagreeable
3. disorder
4. distrust
5. white
6. shrink
7. questionable

DIRECTIONS Write the list word that has the same, or nearly the same, meaning as the word or phrase.

8. beard
9. ponder
10. called the wrong number
11. career's end
12. relocation
13. dock
14. statement
15. with
16. box

8. whiskers
9. think
10. misdialed
11. retirement
12. displacement
13. wharf
14. declaration
15. among
16. trunk



Name _____

Suffixes -ous, -able, -ible**Word Bank**

famous	flexible	reasonable	fashionable
washable	nervous	various	laughable
convertible	forgettable	humorous	reversible
responsible	divisible	furious	breakable

DIRECTIONS Write the list word that has the same or almost the same meaning as the underlined word or phrase.

1. She wore a stylish new dress.
2. People who are well-known are often stopped by fans on the street.
3. The process was easily able to be changed back.
4. The mayor's proposal was silly.
5. I thought the challenger's proposal was very sensible.
6. I felt worried and had butterflies in my stomach.
7. This shirt is able to be cleaned.
8. The pizza we ordered was evenly divided among us.

1. fashionable
2. famous
3. reversible
4. laughable
5. reasonable
6. nervous
7. washable
8. divisible

DIRECTIONS Write the list word that fits each definition.

9. not easily remembered
10. fragile, easily broken
11. easily changed, car with a folding roof
12. being the primary cause of something
13. full of wild, fierce anger
14. funny and amusing
15. easily bended
16. differing from one another

9. forgettable
10. breakable
11. convertible
12. responsible
13. furious
14. humorous
15. flexible
16. various



Name _____

Suffix -ion**Word Bank**

justification	pollution	suggestion	quotation
correction	proclamation	audition	publication
improvisation	transition	altercation	election

DIRECTIONS Complete each sentence with a list word. Some items may have more than one correct response.

- Every four years, there is an _____ to select the next president. **1. election**
- Recycling is one way to reduce _____. **2. pollution**
- My teacher wanted me to add another _____ to my paper. **3. quotation**
- I'm planning to _____ for the school play. **4. audition**
- What's your _____ for spending so much money? **5. justification**
- Abraham Lincoln signed the Emancipation _____. **6. Proclamation**
- It's better to avoid an _____ and talk things out. **7. altercation**
- To my recollection, my homework had only one _____. **8. correction**
- Chris just moved here, and the _____ is difficult for him. **9. transition**
- He asked me a question, so I made a _____. **10. suggestion**

DIRECTIONS Choose two words from the above list, and write a sentence for each word. Examples are given.

- She revised her paper to prepare it for publication.

- I forgot my lines so I had to use improvisation to finish the scene.



Draw each geometric figure. Check students' drawings.

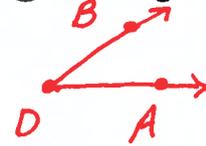
1 a point



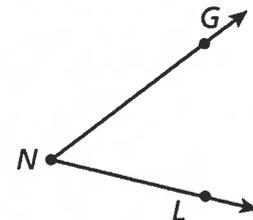
2 a ray



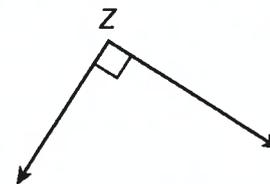
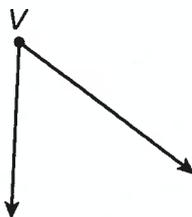
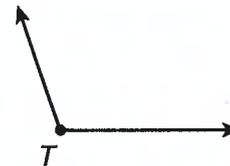
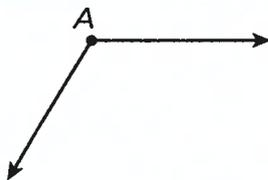
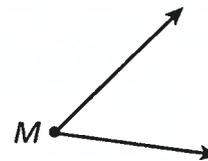
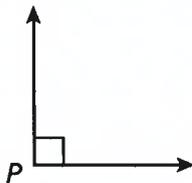
3 an angle



4 Name the angle shown. ∠GNL or ∠LNG



Look at the angles below.



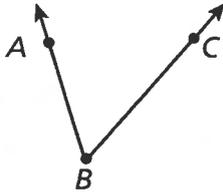
5 Which angles are right angles? ∠P and ∠Z

6 Which angles are acute angles? ∠M and ∠V

7 Which angles are obtuse angles? ∠A and ∠T

Use a protractor to find the measure of each angle.

1



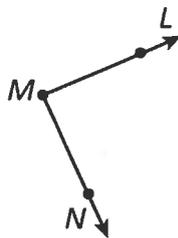
60°

2



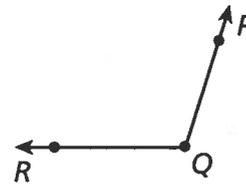
125°

3



90°

4



108°

Draw each angle. Check students' drawings.

5 an angle with measure 75°

6 an angle with measure 150°

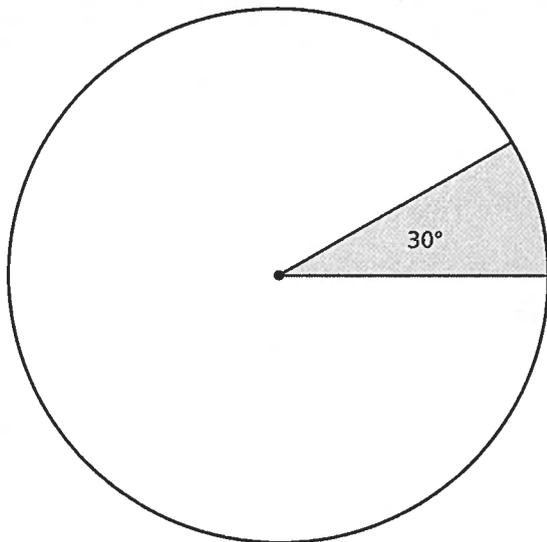
7 On a protractor there are two scales. Read one scale to find 44°. What is the measure on the other scale?

136°

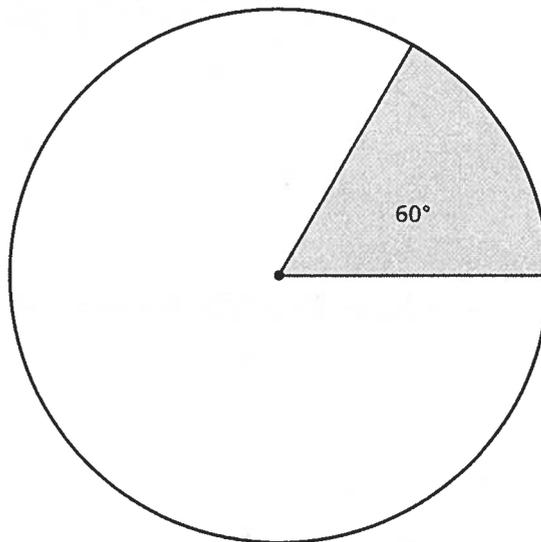
8 Which would be greater, the measure of a right angle or the measure of an obtuse angle?
the measure of an obtuse angle

Use a straightedge and a protractor to draw and shade an angle of each type. Measure and label each angle. Answers will vary. Possible answers are given.

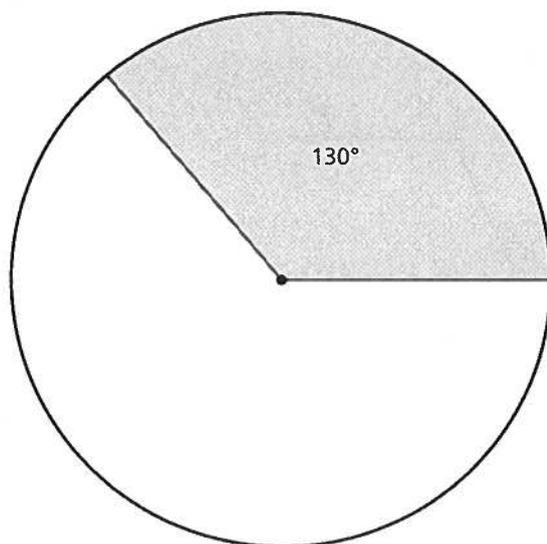
- ① acute angle less than 40°



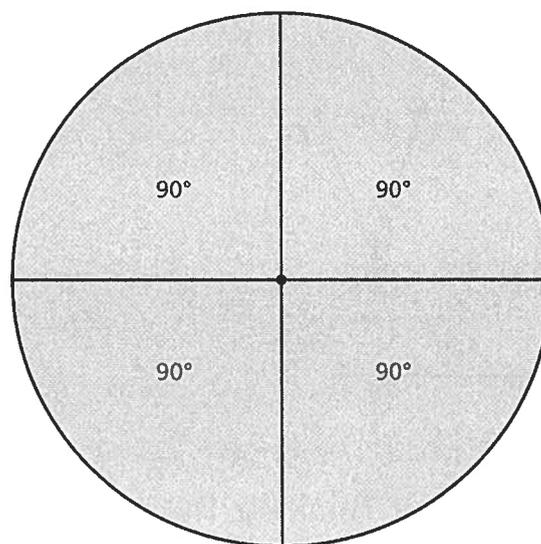
- ② acute angle greater than 40°



- ③ obtuse angle less than 160°



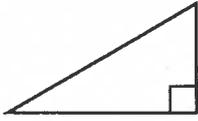
- ④ four angles with a sum of 360°



- ⑤ Write out the sum of your angle measures in Exercise 4 to show that the sum equals 360° . Check students' work.
-

Name each triangle by its angles and then by its sides.

1



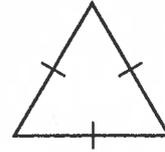
right, scalene

2



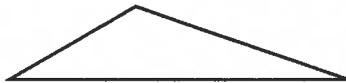
obtuse, isosceles

3



acute, equilateral

4



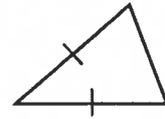
obtuse, scalene

5



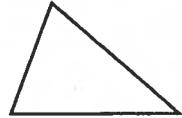
obtuse, scalene

6



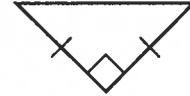
acute, isosceles

7



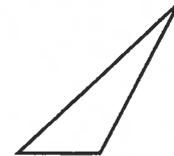
acute, scalene

8



right, isosceles

9



obtuse, scalene

- 10 Describe how acute, obtuse, and right triangles are different.

Acute triangles have three acute angles, right

triangles have one right angle, and obtuse triangles

have one obtuse angle.

- 11 Describe how scalene, isosceles, and equilateral triangles are different.

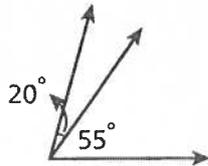
Scalene triangles have no equal sides,

isosceles triangles have 2 equal sides, and

equilateral triangles have 3 equal sides.

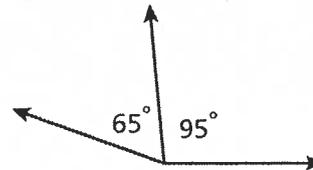
Use a protractor to draw the two described angles next to each other. What is the measure of the larger angle they form when they are put together?

- 1 The measures of the two angles are 20° and 55° .



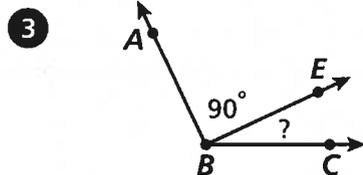
Drawings may vary; 75°

- 2 The measures of the two angles are 65° and 95° .



Drawings may vary; 160°

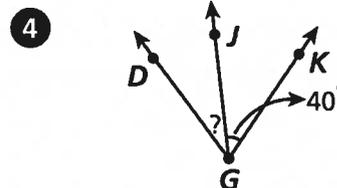
Write and solve an equation to find the unknown angle measure. Equations may vary.



The measure of $\angle ABC$ is 115° .

What is the measure of $\angle EBC$?

$$90^\circ + x = 115^\circ; 25^\circ$$



The measure of $\angle DGK$ is 70° .

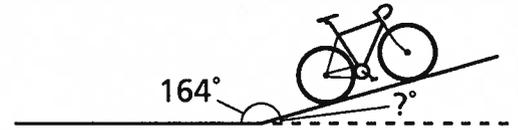
What is the measure of $\angle DGJ$?

$$70^\circ - 40^\circ = x; 30^\circ$$

- 5 When two 45° angles are put together, what kind of angle will they form?
 a right angle

Write an equation to solve each problem.

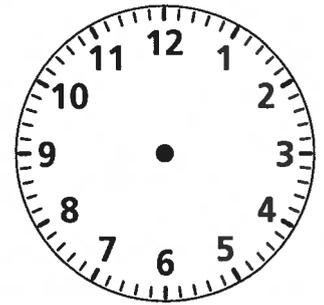
- 1 Suppose you are bicycling along a straight road that suddenly starts sloping up a hill. You want to know what the angle measure of the slope is, but you can't measure inside the hill.



If you are able to measure the angle on top of the road, however, you can use an equation to find the unknown measure. What is the angle of the slope of the hill shown?

$$\underline{180^\circ - 164^\circ = x; 16^\circ}$$

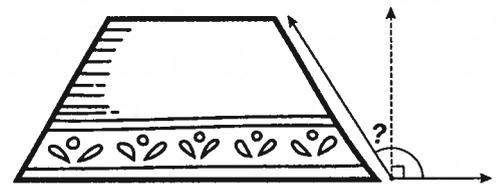
- 2 On the clock face shown at the right, draw clock hands to show the times 3:00 and 5:00. One clock hand for each time will overlap with a clock hand from the other time. What is the difference between the measures of the angles formed by the hands of the clocks for the two times? (Hint: There are 30° between each pair of numbers on a clock.)



Check students' clocks.

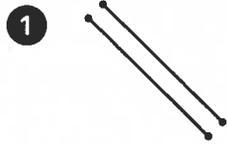
$$\underline{150^\circ - 90^\circ = x; 60^\circ}$$

- 3 A lampshade is often sloped, with the top narrower than the bottom. For the lampshade shown, the whole angle shown is 122° . Find the measure of the unknown angle to find by how much the lampshade is sloped from upright.



$$\underline{122^\circ - 90^\circ = x; 32^\circ}$$

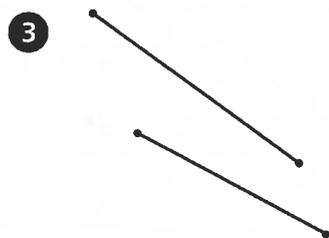
Which of the line segments below look parallel? Which look perpendicular? Which look neither parallel nor perpendicular? Explain your thinking. Possible answers given.



Parallel: yes Perpendicular: no
They are the same distance apart at all points.



Parallel: no Perpendicular: yes
The lines meet at a right angle.

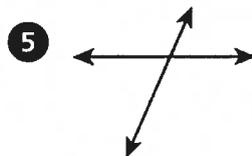


Parallel: no Perpendicular: no
They are not the same distance apart at all points, and they do not intersect at right angles.

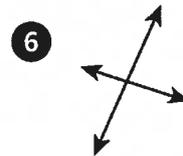
Tell whether each pair of lines is *parallel*, *perpendicular*, or *neither*.



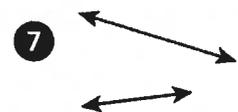
parallel



neither



perpendicular



neither

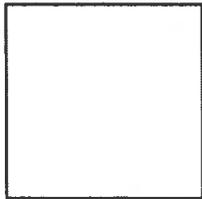
- 8 First draw a line segment 5 centimeters long. Then draw a line segment 7 centimeters long parallel to your first line segment. Check students' drawings.

VOCABULARY
 quadrilateral
 square
 trapezoid
 rhombus
 rectangle
 parallelogram

Using the Vocabulary box at the right, write the name of the quadrilateral that best describes each figure. Use each word once. Describe how it is different from other quadrilaterals.

Answers will vary. Possible answers given.

1

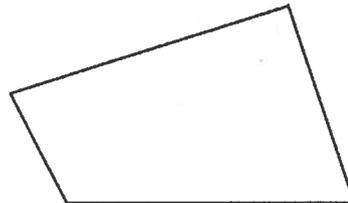


square; possible answer: _____

4 equal sides and _____

4 right angles _____

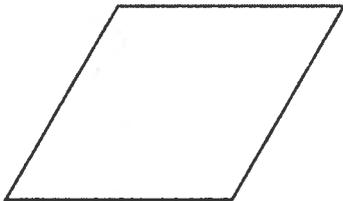
2



quadrilateral; possible answer: _____

no opposite sides parallel _____

3

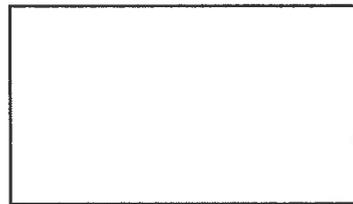


rhombus; possible answer: _____

opposite sides parallel; _____

4 equal sides _____

4

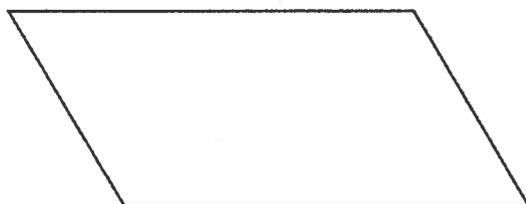


rectangle; possible answer: _____

opposite sides parallel; _____

4 right angles _____

5

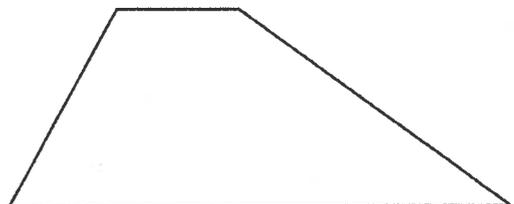


parallelogram; possible answer: _____

opposite sides parallel and _____

equal _____

6

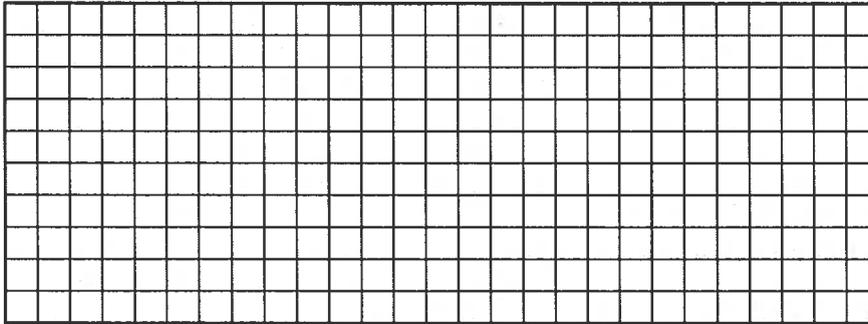


trapezoid; possible answer: _____

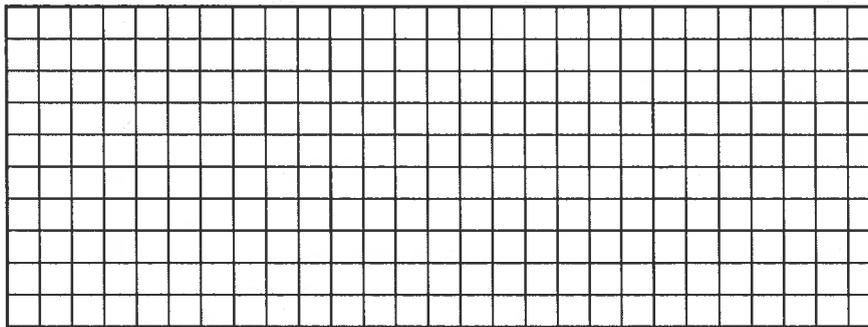
exactly 1 pair of opposite sides _____

parallel _____

- 1 Draw a rectangle and a parallelogram. Draw one diagonal on each figure. Name the kinds of triangles you made. Answers may vary. Check students' drawings.



- 2 Draw your figures again. Draw the other diagonal and name the kinds of triangles you made this time. Answers may vary. Check students' drawings.



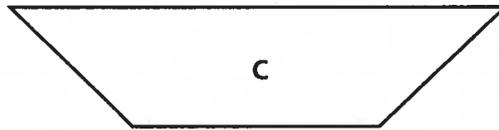
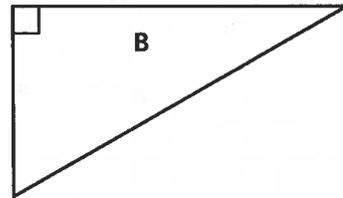
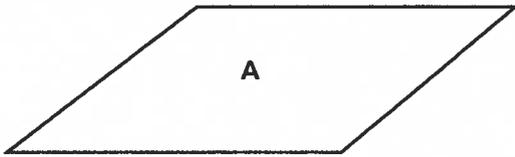
- 3 Use geometry words to describe how diagonals of quadrilaterals make triangles.

On each side of the diagonal of a quadrilateral,
 there are two line segments adjacent to the
 diagonal. So there are two triangles that share
 the diagonal as a side.

- 4 Use geometry words to describe a way to separate triangles into other triangles.

A segment drawn from a vertex perpendicular to
 the opposite side will create two right triangles.
 In isosceles and equilateral triangles, these two
 right triangles will be the same size and shape.

- 1 What are some different ways you could sort these three figures? Which figures would be in the group for each sorting rule?



Rules and explanations will vary. Samples are given.

Figures with one right angle: B

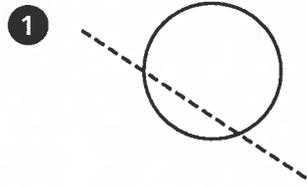
Figures with parallel sides: A and C

Figures with at least one acute angle: A, B, and C

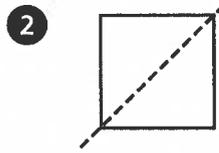
- 2 Draw a fourth figure to add to the figures in Exercise 1. Does it match any of the sorting rules you listed for Exercise 1?

Drawings and answers will vary.

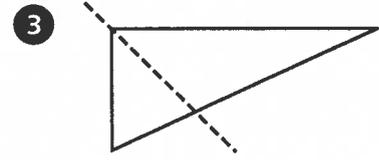
Tell whether the dotted line is a line of symmetry.



not a line of symmetry

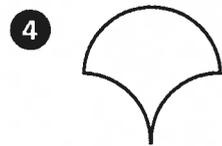


yes, a line of symmetry

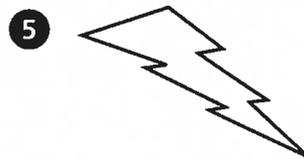


not a line of symmetry

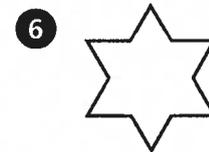
How many lines of symmetry does each figure have?



one

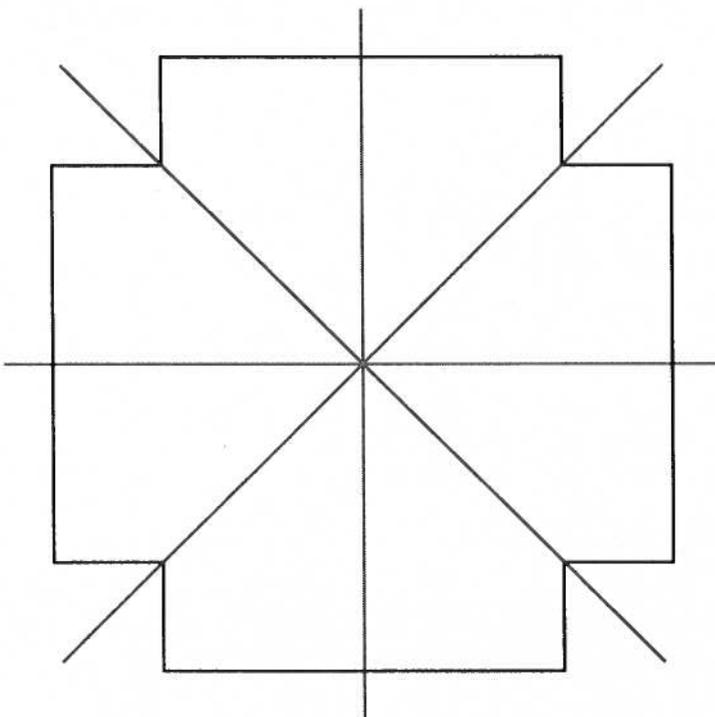


none



six

7 Draw any lines of symmetry for this figure.



Draw a flag design. The design must include a quadrilateral with 2 lines of symmetry. The flag must also have a triangle with a 45° angle. Check students' drawings.

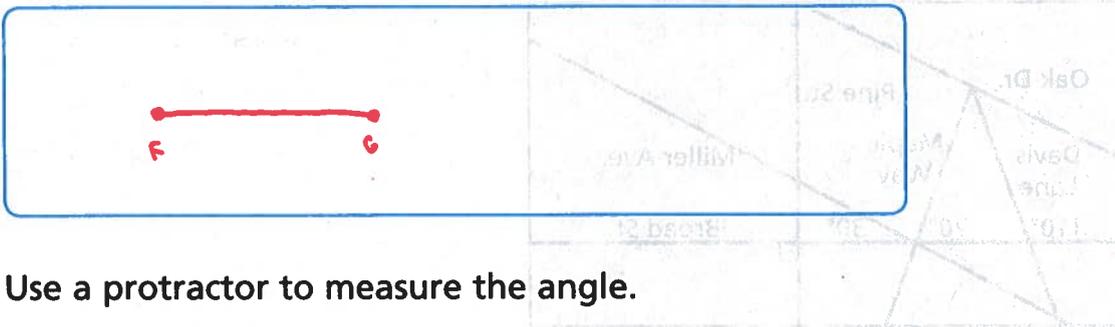
- 1 What type of quadrilateral did you draw? How did you make sure that the quadrilateral has 2 lines of symmetry?

Answers will vary based on figures drawn.

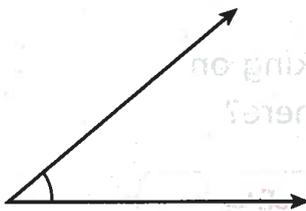
- 2 What type of triangle did you draw in the flag design? What tool did you use to make sure that the angle you drew measures 45° ?

Answers will vary based on figures drawn; protractor

- 1 Draw and label line segment FG .

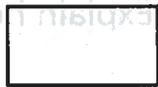


- 2 Use a protractor to measure the angle.

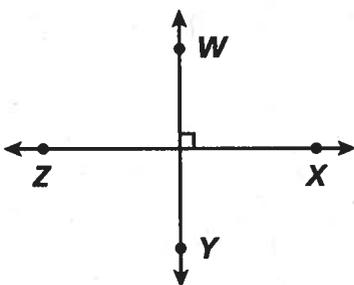


The angle measures 40°.

- 3 Choose the figure that has at least one pair of parallel lines. Mark all that apply.



- 4 Use the figures. For 4a–4d, select True or False for the statement.



4a. \overleftrightarrow{ZX} and \overleftrightarrow{WY} are parallel.

True False

4b. \overleftrightarrow{SU} and \overleftrightarrow{RT} are parallel.

True False

4c. \overleftrightarrow{ZX} and \overleftrightarrow{WY} are perpendicular.

True False

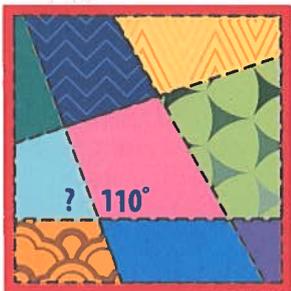
4d. A line drawn through points R and U is perpendicular to \overleftrightarrow{RT} .

True False

- 8 A gear in a watch has turned clockwise, in one-degree sections, a total of 300 times.

The gear has turned a total of 300 degrees.

- 9 Lucy is designing a block for a quilt. She measured one of the angles. Use the numbers and symbols on the tiles to write and solve an equation to find the unknown angle measure.



40° 70° 110° 180° + -

Equation: 180 - 110 = ?

Solution: ? = 70

- 10 Luke is drawing a figure that has exactly 2 acute angles. For 10a–10d, choose Yes or No to tell if the figure could be the figure Luke is drawing.

10a. Yes No

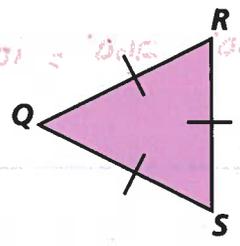
10b. Yes No

10c. Yes No

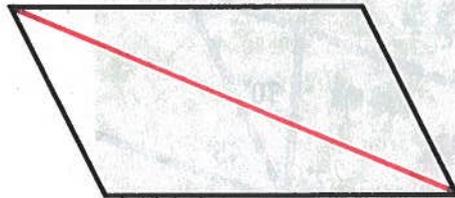
10d. Yes No

- 11 Triangle QRS can be classified

as
 an acute
 a right
 an obtuse
 triangle.



- 15 Draw one diagonal in the figure to form two obtuse triangles.



- 16 Does the figure have a line of symmetry? Explain.



NO. IT'S NOT POSSIBLE TO DRAW A LINE ACROSS THE FIGURE TO DIVIDE IT INTO TWO MATCHING PARTS

- 17 A Ferris wheel turns 35° before it pauses. It turns another 85° before stopping again.

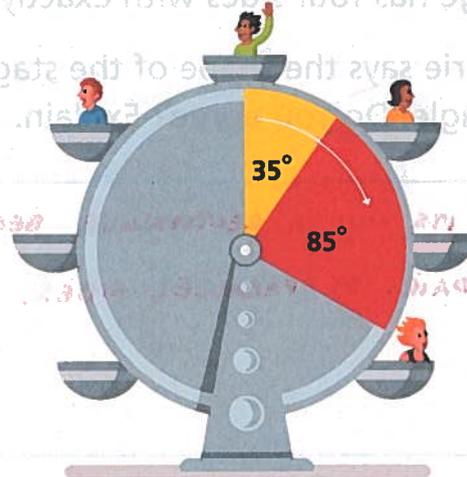
Part A

What is the total measure of the angle that the Ferris wheel turned?

120°

Part B

How many more times will it need to repeat the pattern to turn 360° ? Explain your thinking.



2; $3 \cdot 120 = 360$. IT'S ALREADY MADE ONE 120° TURN, SO IT WILL NEED TO COMPLETE THE PATTERN 2 TIMES TO MAKE 360°