Name: _____ Date: _____

THEME: THE MESSAGE

The **theme** is a message that you can find and apply to your own life.

The **theme** refers to the **central idea** or **message** the author is trying to convey to the reader.

The theme is rarely stated in the text.
Instead, the reader must <u>infer</u> the theme.

A **universal theme** has broad appeal and is about an emotion or problem that is common to all people and cultures. Universal means that it applies to anyone, anywhere, at anytime, and it will not include the character's name.

SO, WHY IS **THEME** SO CONFUSING?

Theme is often confused with the <u>PLOT</u> or <u>TOPIC</u> of the story.

The theme of a piece of literature is a message about people, life, and the world we live in that the author wants the reader to understand.

The <u>TOPIC</u> is the main idea of the story, or what it's mostly about.
The <u>PLOT</u> is the sequence of events or actions that make up the story.

BOOK	TOPIC	THEME
Cinderella	A poor girl marries a prince.	Never give up on your dreams!
Charlotte's Web	A talking spider helps a pig.	True friendship can't be beat!

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A **THEME** is the central idea (or message) of a story.

Many writers consider the **THEME** before they begin the writing process.

They ask themselves, "*What message do I want to convey to my reader?*"

COMMON THEMES	UNIVERSAL THEMES
Believe in yourself!	Mans Struggle Against Self, Nature, Society, or Another Person
Be happy with what you have.	Struggle for Equality
Treat others the way you would want to be treated.	Circle of life
Accept yourself.	Dangers of Ignorance
Never give up!	Inner vs. Outer Strength
Respect authority.	Necessity of Work
Friendship can come in forms you don't expect.	Beating the Odds
Prejudice is harmful.	Fear of Failure
It's best to tell the truth.	Winners and Losers
Don't be afraid to try new things.	Fear
Accept others differences.	Courage
Make good choices.	Good vs. Evil
Procrastination can have negative consequences.	Love and Death
Help those in need.	Importance of Family
	Humans in Conflict

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Name: _____ Date: _____

Read the following fable. As you read, think about **THE ME**ssage the author is trying to convey to you (the reader).

THE TORTOISE AND THE HARE

(AN ADAPTATION OF AESOP'S FABLE)

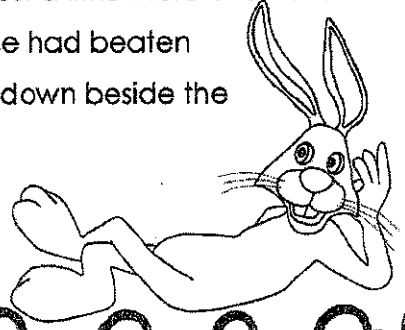
Once upon a time there was a hare who bragged about how fast he could run. "I can run faster than anyone else", boasted the hare. He was always teasing tortoise for his slowness. Then one day, the irritated tortoise answered back, "Who do you think you are? There's no denying you're swift, but even you can be beaten!" The hare squealed with laughter.

"Beaten in a race? By whom? Not you, surely! I bet there's nobody in the world that can win against me. I'm so speedy. Now, why don't you try?"

Annoyed by such bragging, the tortoise accepted the challenge. A course was planned, and the next day at dawn they stood at the starting line. The hare yawned sleepily as the meek tortoise trudged slowly off. When the hare saw how painfully slow his opponent was he decided to take a quick nap. "Take your time!" he said. "I'll have forty winks and catch up with you in a minute."

The hare woke with a start from a fitful sleep and gazed around, looking for the tortoise. But the creature was only a short distance away, having barely covered a third of the course. Breathing a sigh of relief, the hare decided he might as well have breakfast, too. So, off he went to munch some cabbages he had noticed in a nearby field. The heavy meal and the hot sun made his eyelids droop. With a careless glance at the tortoise, now halfway along the course, he decided to have another snooze before speeding past the winning post. As he thought about the look on the tortoise's face when he saw the hare speed by he smiled, fell fast asleep, and was soon snoring happily.

The sun started to sink below the horizon, and the tortoise, who had been plodding towards the winning post since morning, was scarcely a yard from the finish. At that very point, the hare woke with a jolt. He could see the tortoise a speck in the distance, and away he dashed! He leaped at a great rate, his tongue sagging, and gasping for breath. Just a little more and he'd be first at the finish. But the hare's last leap was just too late, for the tortoise had beaten him to the winning post. Poor hare! Tired and in disgrace, he slumped down beside the tortoise.



Tortoise smiled at hare and said, "Don't brag about your lightning pace, for slow and steady won the race!"

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THE TORTOISE AND THE HARE

PROBLEM/CONFLICT, SOLUTION, MORAL, THEME

Problem/Conflict:

The hare told the tortoise he couldn't win. How do you think the tortoise felt?

Solution:

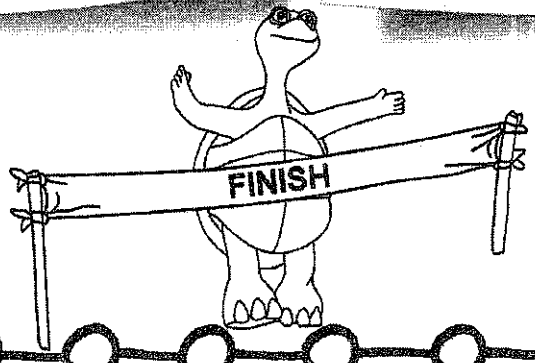
Why do you think the tortoise won? How do you think he felt after winning?

Moral:

What lesson do you think the hare learned? What lesson do you think the tortoise learned?

Theme:

How does **THE ME**ssage of this fable make you feel? Why do you think it makes you feel this way?



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THE TORTOISE AND THE HARE

READING COMPREHENSION QUESTIONS

1. Identify the reason that the hare said, **"Beaten in a race? By whom? Not you, surely! I bet there's nobody in the world that can win against me, I'm so speedy. Now, why don't you try?"**

a) The hare was bored and wanted something to do, so he thought a race would be fun.
b) The hare thought he was the fastest runner around, and he was sure he could beat tortoise.
c) The hare had a secret short-cut already planned, so he knew he would win and prove himself right.

2. Which of the following is the best definition of **bragging**?

a) to show off in a boastful way by using actions or words
b) to be unappreciative of something someone does for you
c) to regret something you said to someone

3. Which of the following is the best definition of **persistence**?

a) to refuse to follow the rules to get what you want
b) to continue to try even though it's difficult; not giving up
c) to admire someone for their great accomplishments

4. Choose the best statement below that demonstrates the **theme** of The Tortoise and the Hare.

a) Friendship comes in forms you don't expect.
b) Determination can help you overcome any obstacle.
c) Good versus Evil

5. Choose the best statement below that demonstrates the **moral** of The Tortoise and the Hare.

a) Better safe than sorry.
b) Even the smallest friends can do big favors.
c) Slow and steady wins the race!

6. If you were to give this story a new title that communicates the **theme**, what would it be?

_____

7. Place a check mark beside each event from the story that demonstrates **persistence.**

____ The hare squealed with laughter.
____ But the creature was only a short distance away, having barely covered a third of the course.
____When the hare saw how slow the tortoise was, he decided to take a quick nap.
____The sun started to sink below the horizon, and the tortoise, who had been plodding towards the winning post since morning, was scarcely a yard from the finish.
____But the hare's last leap was just too late, for the tortoise had beaten him to the winning post.

8. Find one sentence in the story that helped you identify the **moral and theme** of The Tortoise and the Hare.

_____

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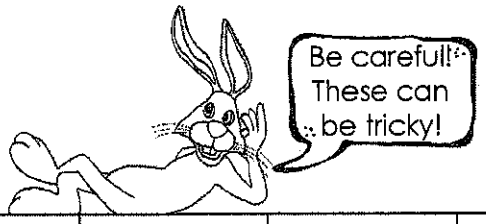
THE TORTOISE AND THE HARE

LOOKING FOR THE DETAILS

Directions: Beside each detail from the story, decide how the <u>underlined</u> character must feel at this point. Use the word bank to help you.



worried	aggravated	proud	exhausted	confident	disappointed	determined

9. "I can run faster than anyone else", boasted the <u>hare</u>. _____
10. <u>Tortoise</u> answered, "Who do you think you are? There's no denying you're swift, but even you can be beaten!" _____
11. Annoyed by such bragging, the <u>tortoise</u> accepted the challenge. _____
12. The <u>hare</u> woke with a jolt. He could see the tortoise a speck in the distance and away he dashed! _____
13. <u>Hare</u> leaped at a great rate, his tongue sagging, and gasping for breath. _____
14. But the <u>hare's</u> last leap was just too late, for the tortoise had beaten him to the winning post. _____
15. <u>Tortoise</u> smiled at hare and said, "Don't brag about your lightning pace, for slow and steady won the race!" _____

Use the words below to fill the blanks.

topic	fables	theme	plot	moral

16. The _____ is the central idea or message the author is trying to convey to the reader.
17. Aesop's well know stories with morals are called _____.
18. The _____ is the main idea of the story, or what the story is mostly about.
19. A _____ is a message or lesson to be learned from a story.
20. The sequence of events or actions that make up a story is called the _____.

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Name: _____ Date: _____

Read the following fable. As you read, think about **THE ME**ssage the author is trying to convey to you (the reader).

THE LION AND THE MOUSE

(AN ADAPTATION OF AESOP'S FABLE)

A lion lay asleep in the forest, his great head resting on his paws. A timid little mouse came upon him unexpectedly, and in her fright and haste to get away, ran across the lion's nose. Woken from his nap, the lion laid his huge paw angrily on the tiny creature to kill her. "Spare me!" begged the poor mouse. "Please let me go, and some day I will surely repay you."

The lion was so amused at the idea of the little mouse being able to help the King of Beasts, that he lifted up his paw and let her go. "You cannot help me, the master of this land. You are such a little mouse, and I need help from no one. You have given me a great laugh, and since I have had a good long day of hunting, my stomach is full, and such a little morsel as you, well, it is not worth the trouble even to chew you up." He dropped the mouse and went back to sleep. The mouse quickly ran back to her home, grateful to be alive.

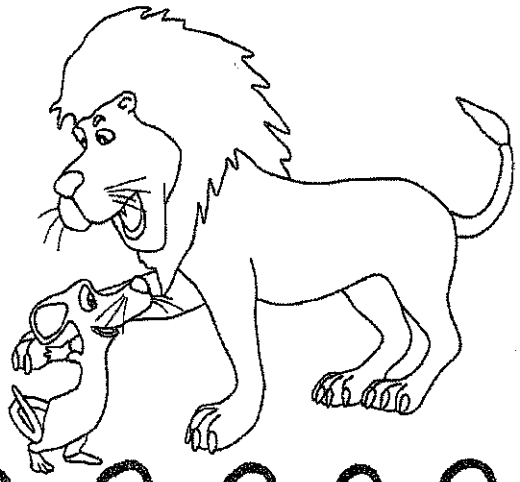
As the lion slept, hunters walked by and wondered at their good fortune to see a lion asleep under a tree. They threw a net over the lion quickly. The lion struggled under the net, and could not believe he was being captured by these little humans. But there were too many of them, and soon he found himself tied to a tree with a rope. Once the lion was secured, the men quickly left to find a cage for him.

The lion could not understand how all of this had happened so quickly. He roared a loud roar, and the brave little mouse emerged from under the tree. "Little mouse!" roared the lion. "Men have captured me. What am I to do?" The mouse crawled bravely up the rope and said, "I promised to repay you for sparing my life, and I am happy to chew through this rope so you may go free." The mouse began gnawing at the rope, and before long the lion was free. "Was I not right? Even a mouse can help a lion!" said the little mouse.

The lion turned to his new little friend, and said "You have taught me a great lesson this day."

"What is that?" asked the mouse.

The mighty lion gratefully replied, "Little friends can be great friends."



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THE LION AND THE MOUSE

PROBLEM/CONFLICT, SOLUTION, MORAL, THEME

Problem/Conflict:

The lion told the mouse he was too little to ever help him. How do you think the mouse felt?

Solution:

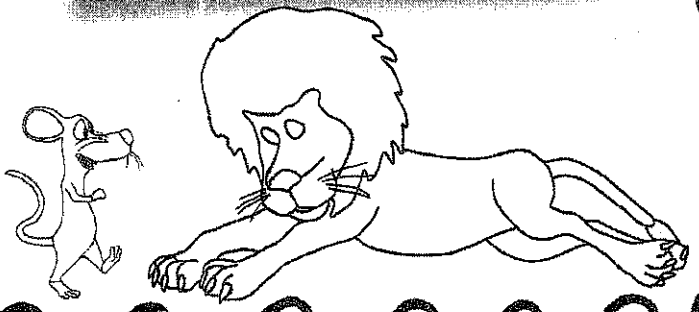
Why did the mouse help the lion? How do you think the lion felt after the mouse freed him from the rope?

Moral:

What lesson do you think the lion learned? What lesson do you think the mouse learned?

Theme:

How does **THE ME**ssage of this fable make you feel? Why do you think it makes you feel this way?



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THE LION AND THE MOUSE

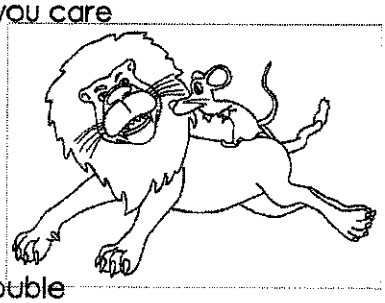
READING COMPREHENSION QUESTIONS

1. Identify the reason the mouse said, **"Please let me go, and some day I will surely repay you."**

a) The mouse was scared and didn't really mean what he said.
b) The mouse was frightened and begging for his life by promising to repay the lion with a favor.
c) The mouse already knew he would need to help the lion one day.

2. Which of the following is the best definition of **kindness**?

a) the act of going out of your way to be nice to someone; showing you care
b) ignoring someone that looks upset or down
c) being unforgiving when someone hurts your feelings



3. Which of the following is the best definition of **compassion**?

a) disliking someone because of their differences
b) being unconcerned about others thoughts or feelings
c) the feeling of wanting to help someone who is sick, hungry, or in trouble

4. Choose the best statement below that demonstrates the **theme** of The Lion and the Mouse.

a) Friendship comes in forms you don't expect.
b) Importance of Family
c) Be happy with what you have.

5. Choose the best statement below that demonstrates the **moral** of The Lion and the Mouse.

a) One who tricks others is bound to get tricked.
b) Little friends can be great friends.
c) There is a time for work and a time for play.

6. If you were to give this story a new title that communicates the **theme**, what would it be?

_____

In your own words, describe what each statement means to you.

7. Good things come in little packages. _____

8. Kindness brings kindness in return. _____

9. You reap what you sow. _____

10. No act of kindness is ever wasted. _____

11. Find one sentence in the story that helped you identify the **moral and theme** of The Lion and the Mouse.

_____

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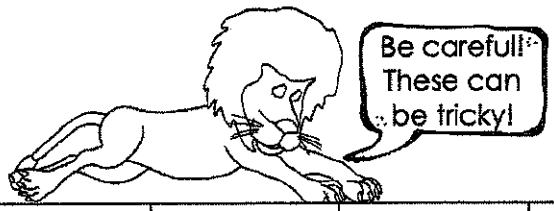
THE LION AND THE MOUSE

LOOKING FOR THE DETAILS

Directions: Beside each detail from the story, decide how the <u>underlined</u> character must feel at this point. Use the word bank to help you.



proud	brave	scared	desperate	angry	thankful	relieved

12. "Spare me!" begged the poor <u>mouse</u>. "Please let me go and some day I will surely repay you." _____

13. <u>Lion</u> replied, "You cannot help me, the master of this land. You are such a little mouse, and I need help from no one." _____

14. The <u>mouse</u> quickly ran back to his home, grateful to be alive. _____

15. The <u>lion</u> struggled under the net, and could not believe he was being captured by these little humans. _____

16. "Little mouse!" roared the <u>lion</u>. "Men have captured me. What am I to do?" _____

17. The <u>mouse</u> began gnawing at the rope and before long the lion was free. _____

18. The <u>lion</u> turned to his new little friend, and said "You have taught me a great lesson this day." _____

Use the following words to write a paragraph describing their meanings and how to find each one in a story. Show what you know!

fable	moral	theme	topic	plot

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Name: _____ Date: _____

CREATE YOUR OWN FABLE!

Answer these questions as you begin to think about your fable.

1) What lesson or moral would you like to teach?

_____

2) Using your moral, develop a theme. What message (or central idea) do you want to convey to the reader?

_____

3) Who will be your characters? Remember that fables often use animals with human qualities and characteristics. This is called personification!

_____

4) What is the setting? Where will your story take place?

_____

5) What problem will your characters need to solve?

_____

6) What will be the conflict in the story?

_____

7) What will be the solution? How will your fable end?

_____

8) Using the story planning above, give your fable a title!

_____

Be sure not to add the theme at the end of the story. When you are finished, trade stories with a friend. See if they can figure out the theme of your fable.

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TITLE: _____

Author: _____

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TITLE: _____

Author: _____

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Science

Name: _____

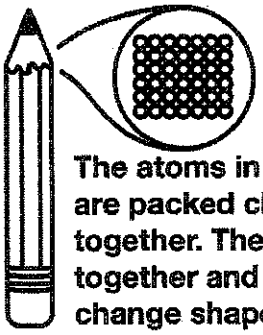
Why Does Matter Matter?

by Kelly Hashway

What do trees, air, and water have in common? They all have matter. That means they take up space. You might be wondering why these things look so different if they all have matter. Everything found on Earth can be grouped into one of three states of matter: solid, liquid, or gas. In order to figure out which state of matter an object fits in, we have to examine its properties. The properties we look at are shape, mass, and volume. Mass is the amount of matter an object has, and volume is the amount of space the matter takes up.

Solid

Solids are easy to recognize. They have definite shape, mass, and volume. Trees are solids. They are made up of tiny particles called atoms. These atoms are packed closely together, and they hold the solid in a definite shape that does not change. If you look around your house, you will see lots of solids. Televisions, beds, tables, chairs, and even the food you eat.

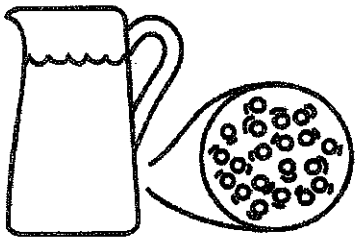


The atoms in a solid are packed closely together. They bond together and do not change shape.

Liquid

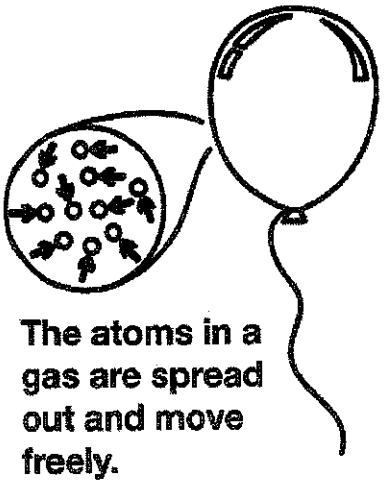
Liquids do not have definite shape, but they do have definite mass and volume. Liquids are similar to solids because their atoms are close together, but what makes a liquid different is that those atoms can move around. Liquids can change shape by flowing. If you've ever spilled a glass of milk, then you know it spreads out across the floor. It does this because the milk is taking the shape of the floor. Since liquids do not have a definite shape of their own, they will take the shape of their containers. This is why the same amount of milk can look different in a tall glass, a wide mug, or spread out on your kitchen floor.

The atoms in a liquid are close together. They slide around.



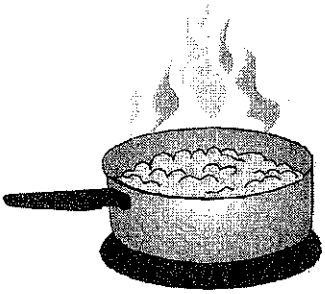
Gas

Gases do not have definite shape or volume. Like liquids, gasses will take the shape of their containers. If a gas is not in a container, it will spread out indefinitely. This is because the atoms in a gas are spaced farther apart than in a solid or a liquid. And being spread out like this allows them to move around freely. Think about the air you breathe everyday. That air is spread across the empty space around the earth. You've probably also noticed that you usually cannot see the air. This is another property of gases. Even though we cannot see them, you come in contact with them everyday. There's air in the tires of your family car and your bicycle. There are many different types of gas in the earth's atmosphere, such as oxygen, carbon dioxide, nitrogen, water vapor, and helium.



The atoms in a gas are spread out and move freely.

When trying to remember the three states of matter, think about water. If it freezes into a solid, it becomes ice. Its atoms are packed together keeping its shape. Of course, we know water can also be a liquid. It flows in rivers or it can be poured from a glass. When water evaporates it becomes water vapor, a type of gas in the air. Try a little experiment of your own by placing an ice cube in a covered glass or container. You will be able to observe the ice first in its solid form and then watch as it melts into a liquid to become water. Eventually the water will turn to water vapor and your glass or container will be filled with this gas.

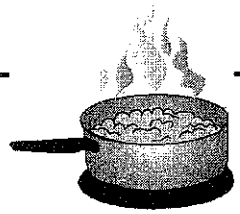


You can see three different states of matter in this picture. The pot is made of solid matter. The water inside the pot is liquid. When the liquid is heated it becomes water vapor, which is a gas.

Matter is everywhere! Can you find a solid, a liquid, and a gas around you right now?

Name: _____

Why Does Matter Matter?



by Kelly Hashway

solids	volume	container	matter	ice	juice
gases	mass	atoms	chair	oxygen	melting
liquids	shape	space	milk	helium	

Choose a word from the box to complete each sentence.

1. The three basic properties of matter are _____,

   _____, and _____.

2. All matter is made up of tiny particles called _____.

3. Volume is the amount of _____ that matter takes up.

4. Mass is the amount of _____ an object has.

5. Liquids take the shape of their _____.

6. _____ do not have a definite shape or volume.

7. _____ do not have a definite shape, but they do have a definite volume.

8. _____ have a definite shape and volume.

9. A _____ and _____ are examples of solids.

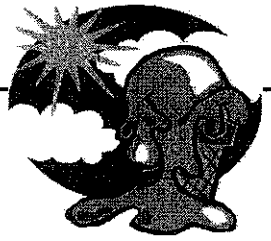
10. _____ and _____ are examples of liquids.

11. _____ and _____ are examples of gas.

12. Solid ice is _____ when it is changing into a liquid.

Name: _____

What's the Matter?



Tell whether each is a solid, liquid, or gas.

1. milk - _____
2. cookie - _____
3. oxygen - _____
4. fish - _____
5. pencil - _____
6. maple syrup - _____
7. shampoo - _____
8. carbon dioxide - _____
9. ice cube - _____
10. paint - _____
11. oil - _____
12. salt - _____
13. water vapor - _____
14. gasoline - _____
15. helium - _____
16. sand - _____

Complete each sentence with the word <u>solid</u>, <u>liquid</u>, or <u>gas</u>.

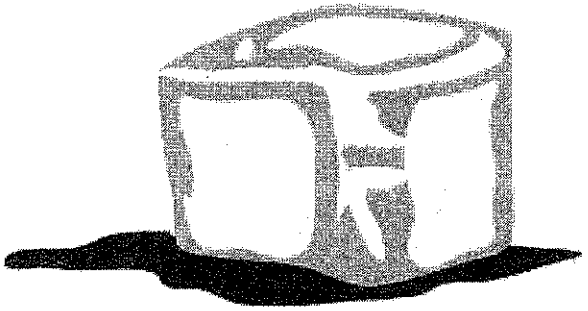
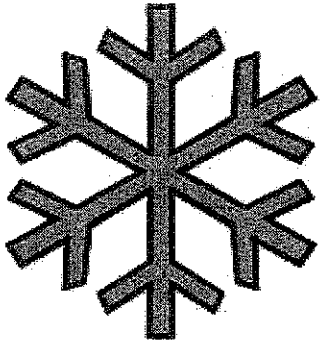
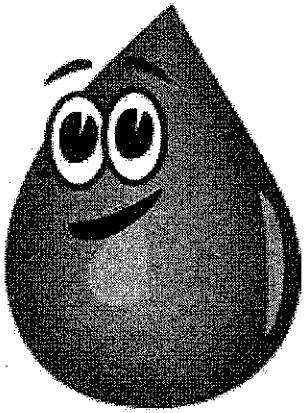
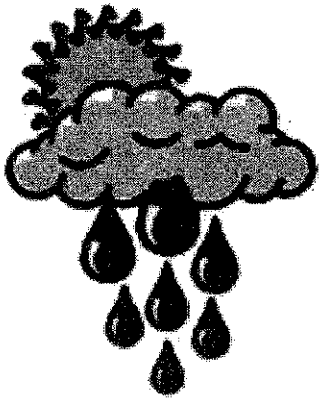
A _____ has a definite shape. It does not take the shape of its container. It also has a definite volume because it can be measured.

A _____ does not have a definite shape. It takes the shape of its container. It does have a definite volume because it can be measured.

A _____ does not have a definite shape. It sometimes takes the shape of its container and sometimes flies freely around you. These particles are not connected to each other and takes up whatever space is available.

Water Molecule Adventure Story

Write a short story from the point of view of a water molecule. In your story, share his adventures as he change into each state of matter.

Your story must:

- Explain what caused the water molecule to change into each state of matter
- Describe at least 1 example of how the water molecule changed when heated and how it changed when cooled

Social Studies

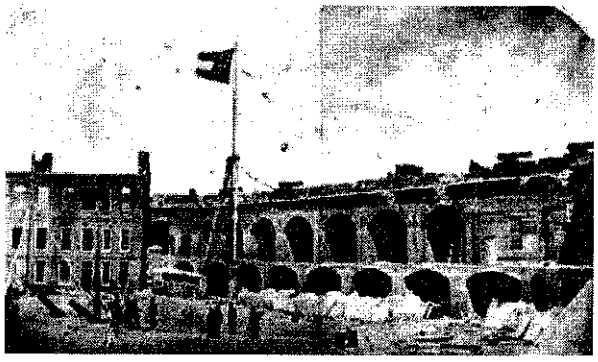
WHAT WAS THE CIVIL WAR?

The Civil War was a war between American states that was fought between 1861 and 1865. The main issue that caused the war was the spread of slavery. Slavery had existed for many years in the United States and all over the world. Some people wanted to keep slavery and allow new states and territories to have it, but others thought the practice was wrong. By the 1860s, people on both sides of the argument had reached their breaking point.

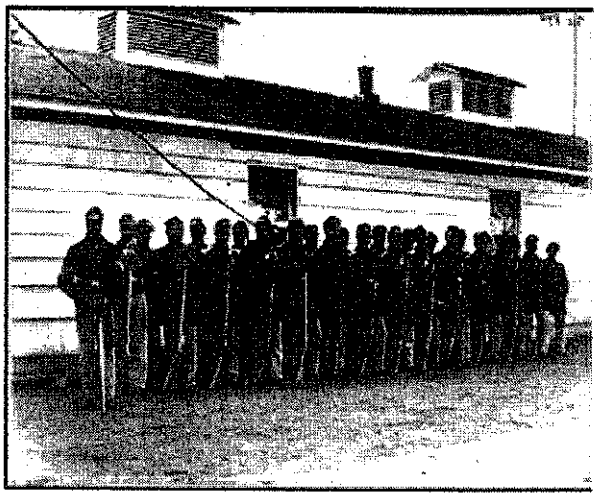
Because of the political problems that the debate over slavery caused, some Southern states wanted to break away from the United States and start their own country. Northern states, however, wanted to keep the country together. Southern states swore that if Abraham Lincoln, an anti-slavery candidate, were to be elected in the 1860 election, they would leave the union. Lincoln was in fact elected, and soon after South Carolina seceded from the Union. Mississippi, Alabama, Georgia, Louisiana and Texas followed.

The war began in April 1861, when the Confederate Army captured Fort Sumter. More serious fighting started the next year, with big battles like the ones at Shiloh and Antietam. As time went on, the battles became even bigger and more deadly: by the end of the war, over 600,000 people had lost their lives on the battlefield. What had started as simply a way to keep the states together slowly turned into a much more serious fight that kept the fate of many slaves and soldiers hanging in the balance.

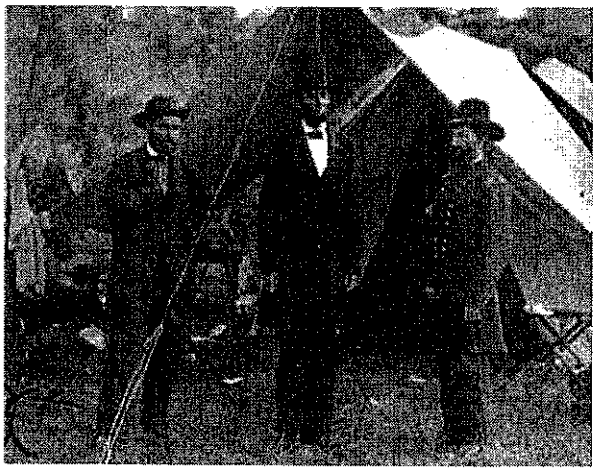
In 1865, the Confederate Army surrendered and the war ended. The South began the long and difficult process of Reconstruction, and the 13th Amendment abolished slavery in 1865.



Fort Sumter, South Carolina, after taken by the Confederates



A regiment of Union troops



Lincoln visiting a Union camp

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EFFECTS OF THE CIVIL WAR

A Southern city after the war

The Civil War freed the United States of many burdens and embarrassments, but it was also a national tragedy. When the war was over, the country became much stronger and more unified, but the impact of so much violence and fighting between people of the same nation was not something easily forgotten or forgiven.

By the North defeating the South and not allowing them to secede, the federal government became much more powerful than it had been. Previously, each state had much more freedom to make its own laws. After the war, though states still had some individual rights, the federal government was the most powerful. When speaking about the United States, people often said "the United States are...," after the war, people began saying "the United States is....". The United States had become a single nation, rather than a collection of states.

One of the most important effects was that slavery had been officially ended and outlawed anywhere in the U.S. Many people had been working to end slavery, and many states had, but it wasn't until the nation was unified, and individual states were placed under more federal control, that it was able to be officially abolished .

The violence that had happened between the North and South left a bitterness between the people. The Civil War nearly crushed the South's economy and many were left in poverty, which only made their anger worse. The southern states were placed under military rule until, one by one, they made agreements to rejoin the Union. A period of reconstruction took place, to help the Southern economy, but times were hard for many years.

The North and the South had been very different from each other before the Civil War, and though the war guaranteed that they were now united, many differences remained. The South blamed the North for invading their land and destroying their economy, while the North blamed the the South for trying to break up the Union and insisting on slavery, and the two parts of the country rarely agreed on anything. Even today, the Northeastern and the Southeastern United States have very different identities, and often clashing political stances.

Many lives were lost, and many families were torn apart by taking sides during the war, and many of the negative effects of the Civil War are still felt today. However, without the positive effects of it, the country would be a much different place.

Response Questions

Why was it so difficult to abolish slavery without more federal control?

Name three significant things that happened as a result of the Civil War.

Name some of the reasons the North and South were bitter towards one another after the war.

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On the Homefront During the Civil War

The pain of the Civil War was something that was felt by almost every person in the country while it was happening. At home, many families were left without sons and fathers. The mothers and children had to do all the chores and work that were normally shared by the whole family. At the time, most people in the United States lived in small towns or on small farms where they grew their own food. When the men left to go fight, a large burden was put on the families they left behind, and many suffered from hunger and poverty.

Things were especially difficult in the South. Nearly everyone in the South farmed for a living, and the loss of the help was almost unbearable. Most of the fighting happened in the Southern states as well, so there was a constant danger of attacks and fighting near their homes, and no one felt safe.

While at war, the troops were in need of uniforms, food, weapons and many other supplies. Many of the women at home, on top of having to care for their families with less help, were also working to make supplies for the soldiers. It wasn't until World War II , almost 100 years later, that so many men would again become soldiers, once again requiring women to take their place while they were at war. During World War II these women became famously known as "Rosie Riveters" and had much in common with women during the Civil War.

On both sides, despite the hardships, the families did what they had to and found the strength to stay together and survive.

Questions

If your older brother or father was away, what kind of things could you do to help?

What kind of things do you think families had to go without to help make sure the soldiers had what they needed?

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Name _____

Harriet Tubman

Harriet Tubman risked her own life to help others reach freedom. After escaping slavery herself, she returned over and over again to help others on the Underground Railroad. She was a leader in the struggle against slavery. During the American Civil War and while in South Carolina, Harriet served as a spy for the Federal troops. She also nursed wounded soldiers during the war. Harriet Tubman was given the name Moses of her people.

1. Who was called "Moses of her people"?

_____

_____

_____

_____

2. What word(s) could be substituted for the term freedom?

_____

_____

3. What railroad did Harriet Tubman travel?

_____

_____

_____

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Name .....

MY Homework

Lesson 1
Hands On: Angles

Homework Helper

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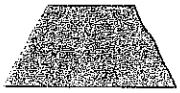
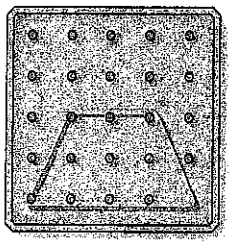
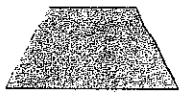
Geoboards and pattern blocks help to explore angles.

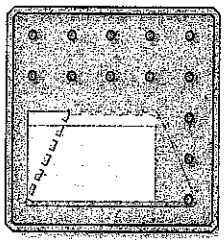
1 A rubber band was used to create a large shape on a geoboard that is similar to the red pattern block.





2 An index card was used to compare an angle formed by two sides of the shape. This angle is *less than* a right angle.

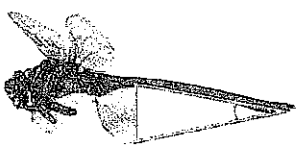


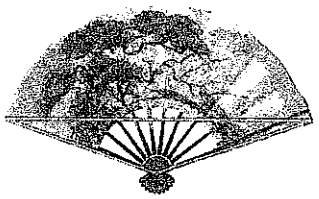


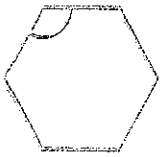
There are 2 angles that are *less than* right angles.
There are 2 angles that are *greater than* right angles.

Practice

Tell whether each angle shown is a *right angle*, *less than* a right angle, or *greater than* a right angle. Use an index card if needed.

1. 

2. 

3. 

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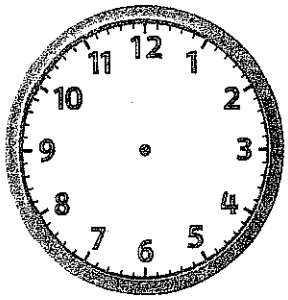
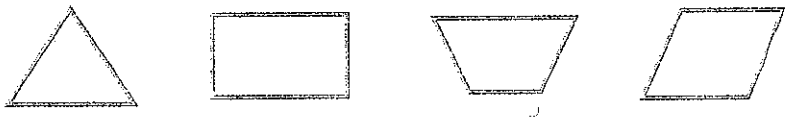
Problem Solving

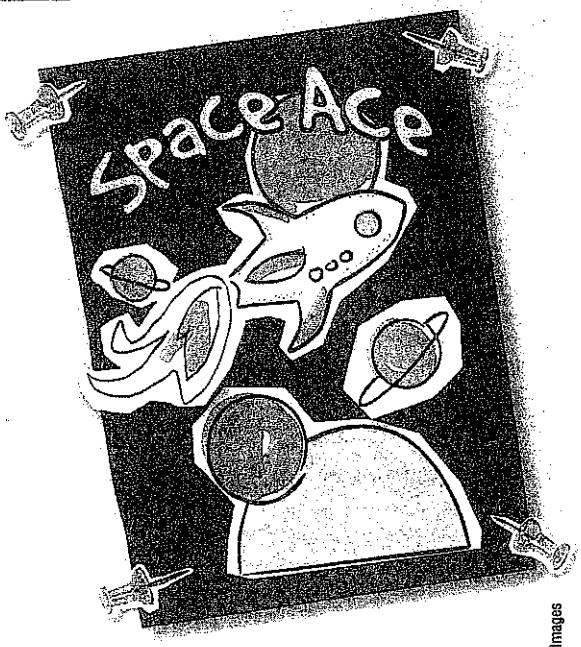
4. Mathematical PRACTICE 1 **Keep Trying** Draw a time when the hands on the clock make a right angle.



5. Mathematical PRACTICE 7 **Identify Structure** Mr. West drew four shapes on the board. Circle the shape that appears to have angles that are all less than a right angle.



6. Manny noticed that the sides of his poster on his bedroom wall formed angles. Tell whether the angles are *right* angles, *less than* right angles, or *greater than* right angles. Explain.



Vocabulary Check

Vocab

Choose the correct word(s) to complete each sentence.

angle ray endpoint vertex right angle

7. The shared endpoint of two rays is called the _____.

8. An _____ is the point at the beginning of a ray.

9. An angle that forms a *square corner* is called a _____.

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Name .....

MY Homework

Lesson 2
Polygons

Homework Helper

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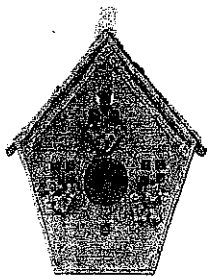
The front of the bird house shown has the shape of a polygon. Describe and classify the polygon.

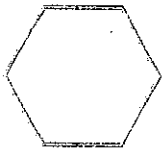


The polygon has 5 sides and 5 angles.

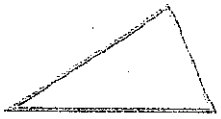
It is a pentagon.

Practice

Describe each shape. Determine the number of sides and angles. Then classify each shape.

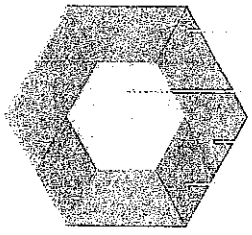
1.  ..... sides ..... angles

This is a(n) ..... .

2.  ..... sides ..... angles

This is a(n) ..... .

3. Mathematical PRACTICE **Identify Structure** Classify the polygons that are used to create the figure shown.



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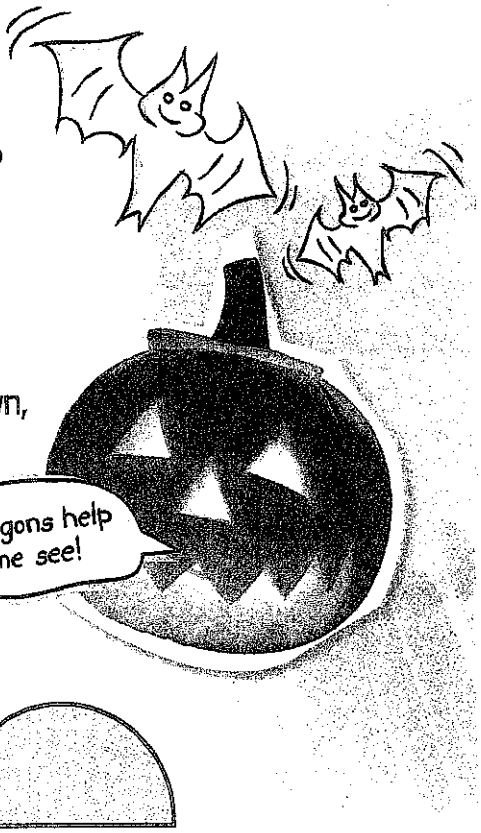
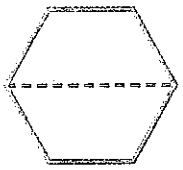
Problem Solving

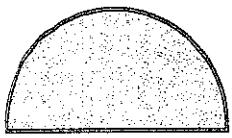
4. What is another name for a square, other than *polygon*?



5. Mathematical PRACTICE 5 **Use Math Tools** Draw and label the polygon you would get when you fold the hexagon shown, in half along the dotted line.



6. Is the figure shown to the right a polygon? Explain.



Vocabulary Check

Choose the correct word to complete each sentence.

hexagon polygon quadrilateral

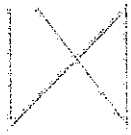
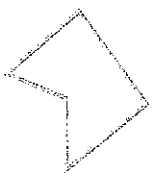
7. A _____ is a closed two-dimensional figure formed of three or more straight sides that do not cross each other.

8. A _____ is a polygon with 6 sides and 6 angles.

9. A _____ is a polygon with 4 sides and 4 angles.

Test Practice

10. Which of the following figures is a hexagon?

Ⓐ  Ⓑ  Ⓒ Ⓓ

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Name

MY Homework

Lesson 3
Hands On: Triangles

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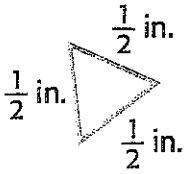
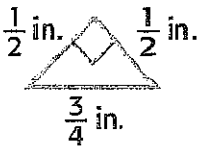
Measure the sides of each triangle below to the nearest quarter of an inch. Then state the number of sides with equal lengths.



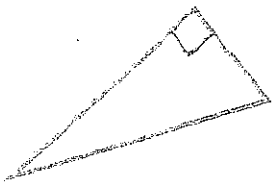
The triangle has 3 sides with equal lengths.



The triangle has 2 sides with equal lengths.

Compare the angles of each triangle. Then describe the triangle using its angles.

The triangle has 1 angle that is greater than a right angle.

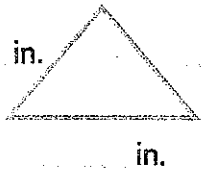


The triangle is a right triangle.

Practice

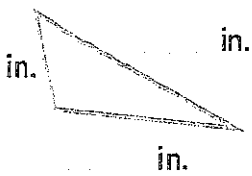
Measure the sides of each triangle below to the nearest quarter of an inch. Then state the number of sides with equal lengths.

1.



sides

2.



sides

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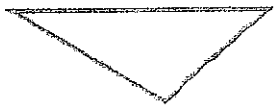
Compare the angles of each triangle. Then circle the correct description.

3.

3 angles are less than a right angle

1 right angle.

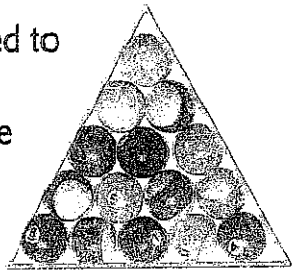
4. 

3 angles greater than a right angle

1 angle is greater than a right angle

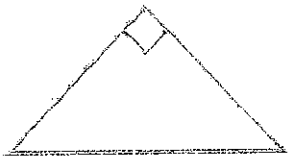
Problem Solving

5. Mathematical PRACTICE 6 **Be Precise** In billiards, a rack is used to organize billiard balls at the beginning of the game. Measure the sides of the triangle shown. What is the length of each side to the nearest quarter inch?



6. Refer to Exercise 5. How many angles are less than a right angle?

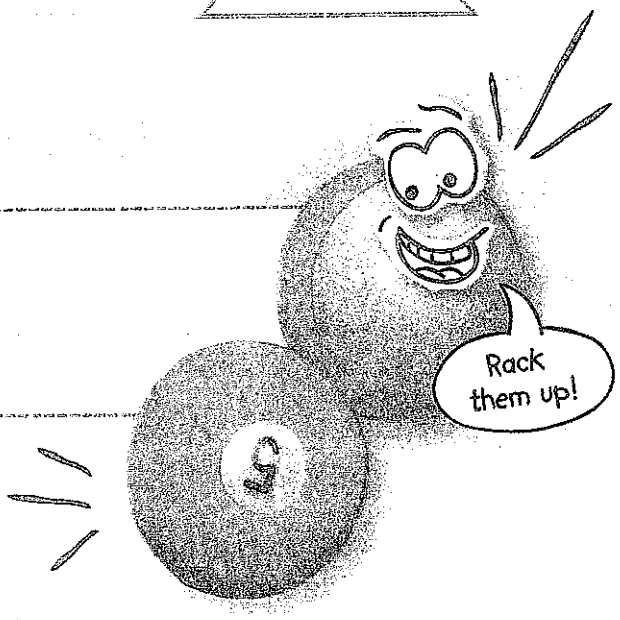
7. How many angles are less than a right angle in the triangle shown at the right?



Vocabulary Check

Fill in the missing word.

8. A triangle with one right angle is called a _____ triangle.



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Name .....

MY Homework

Lesson 4
Quadrilaterals

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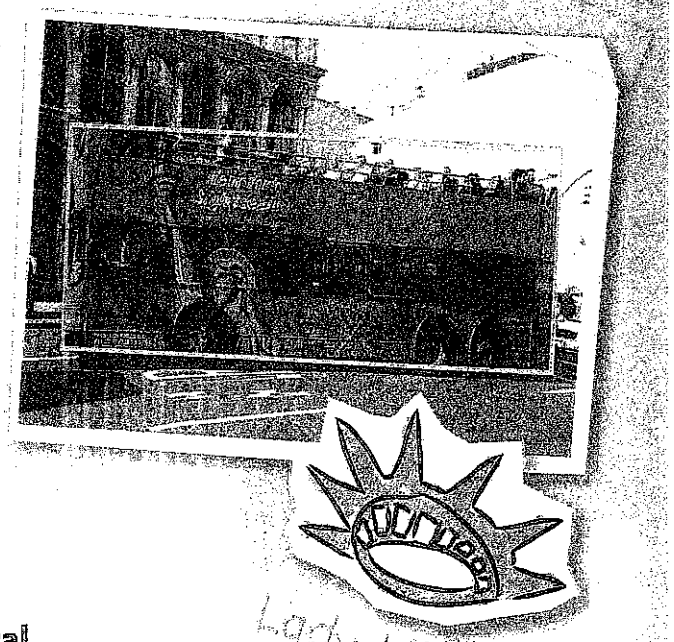
A tour bus is shown at the right. Describe the attributes of the quadrilateral outlined in yellow. Then classify it.



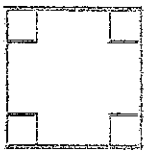
The quadrilateral has opposite sides that are equal in length and parallel.

It has four right angles.

So, the quadrilateral is a rectangle.

Practice

Describe the attributes of each quadrilateral. Then classify the quadrilateral.

1. 

2.

3. Circle the quadrilateral(s) that do *not* have all the attributes of a parallelogram.

rectangle rhombus square trapezoid

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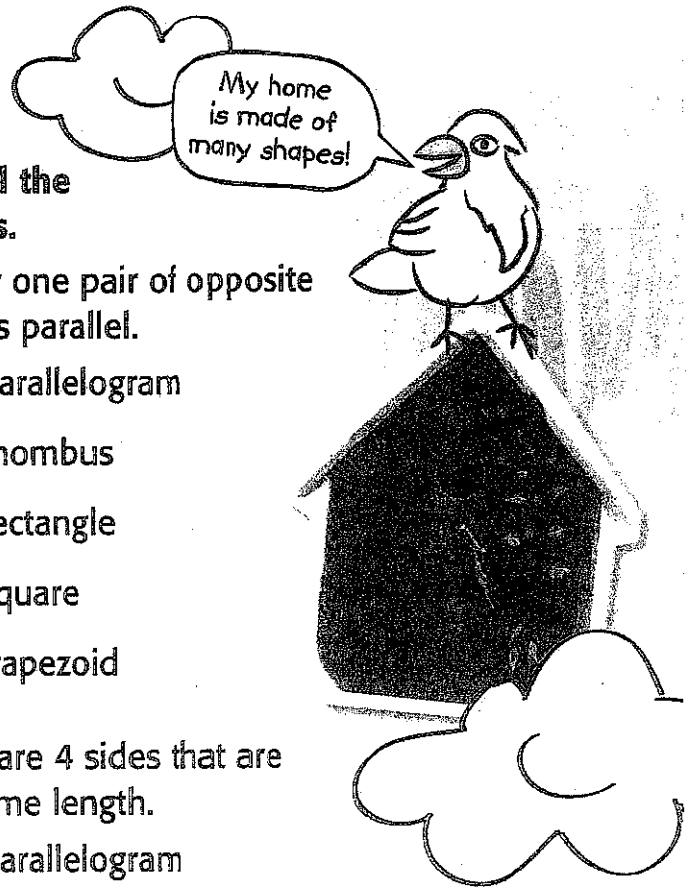
Problem Solving



Mathematical PRACTICE **Identify Structure** **Check all the quadrilaterals that have the given attributes.**

4. Both pairs of opposite sides are parallel.
   - ☐ parallelogram
   - ☐ rhombus
   - ☐ rectangle
   - ☐ square
   - ☐ trapezoid

5. Exactly one pair of opposite sides is parallel.
   - ☐ parallelogram
   - ☐ rhombus
   - ☐ rectangle
   - ☐ square
   - ☐ trapezoid

6. There are four right angles.
   - ☐ parallelogram
   - ☐ rhombus
   - ☐ rectangle
   - ☐ square
   - ☐ trapezoid

7. There are 4 sides that are the same length.
   - ☐ parallelogram
   - ☐ rhombus
   - ☐ rectangle
   - ☐ square
   - ☐ trapezoid

Vocabulary Check

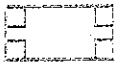
Fill in each blank with a word that makes each sentence true.

8. A square is a parallelogram with _____ right angles and four sides that are the same length.

9. Sides that are the same distance apart are _____ sides.

Test Practice

10. Which of these shapes appears to be a quadrilateral, but *not* a parallelogram?

Ⓐ Ⓑ Ⓒ  Ⓓ

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Check My Progress

Vocabulary Check

State whether each sentence is *true* or *false*. If *false*, replace the highlighted word to make a true sentence.

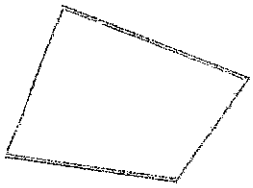
1. A triangle with a right angle is a **right triangle.**

2. A polygon that has 5 sides and 5 angles is a **hexagon.**

3. An **octagon** is made when two rays share the same endpoint.

Concept Check

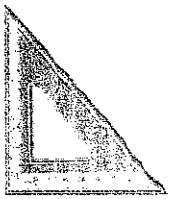
Describe each shape. Determine the number of sides and angles. Then classify each shape.

4. 

____ sides

____ angles

This is a(n) _____.

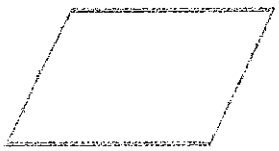
5. 

____ sides

____ angles

This is a(n) _____.

6. Describe the attributes of the quadrilateral below. Then classify the quadrilateral.



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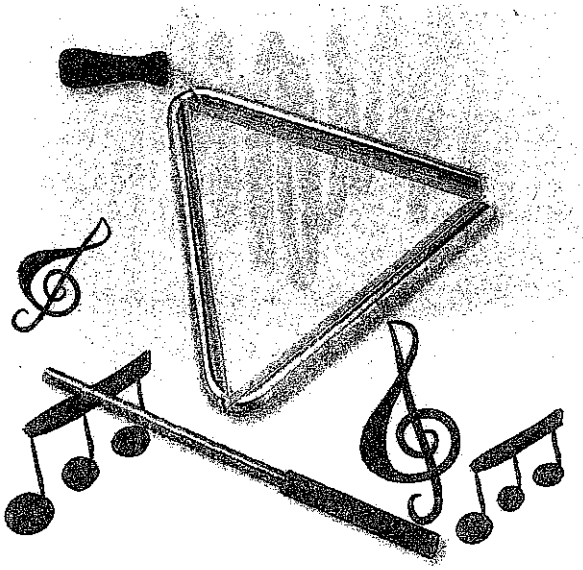
Problem Solving



7. A triangle is a musical instrument. Circle the phrase that best describes the angles of the red triangle.

   all angles are greater than a right angle

   all angles are less than a right angle

   one angle is equal to a right angle

8. Rhonda created two differently-named quadrilaterals with toothpicks. Both quadrilaterals have sides of the same length. What two quadrilaterals did she create?

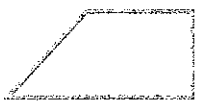
9. Cole says that all quadrilaterals are polygons, but not all polygons are quadrilaterals. Is he correct? Explain.

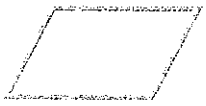
10. Three picture frames are on a dresser. Two are shaped like squares and the other is shaped like a trapezoid. How many sides are there in the frames altogether?

Test Practice

11. Mr. Corwin drew four shapes on the whiteboard. Which shape does *not* appear to have a right angle?

Ⓐ

Ⓒ 

Ⓑ 

Ⓓ

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Name .....

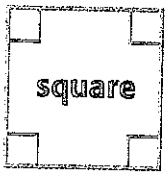
MY Homework

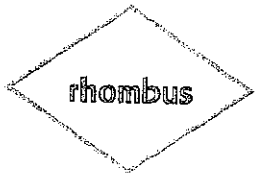
Lesson 5
Shared Attributes of Quadrilaterals

Homework Helper

eHelp Need help? connectED.mcgraw-hill.com

The attributes of the quadrilaterals that you learned about in Lesson 4 were used to create the table.



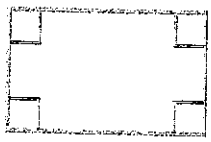


Attribute	Quadrilateral(s)
Both pairs of opposite sides have the same length.	parallelogram, rectangle, square, rhombus
Both pairs of opposite sides are parallel.	parallelogram, rectangle, square, rhombus
Opposite angles are the same size.	parallelogram, rectangle, square, rhombus

Each quadrilateral has 4 sides and 4 angles.

Practice

1. Complete the attributes of a rectangle.



Opposite sides are _____.

Opposite sides are the same _____.

The figure has _____ right angles.

2. Circle the quadrilateral(s) that have all the attributes of a rectangle.

trapezoid parallelogram square rhombus

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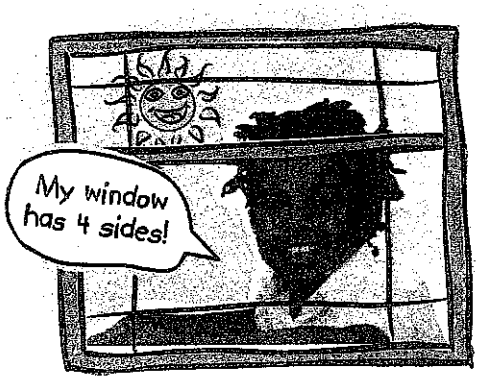
Real World Problem Solving



Mathematical PRACTICE 2 **Reason** 3. State whether the following statement is *true* or *false*. If false, explain why.
A trapezoid can also be classified as a parallelogram because it has parallel sides.

For Exercises 4–6, draw a quadrilateral that has the given attributes in the space provided.

My Drawing!

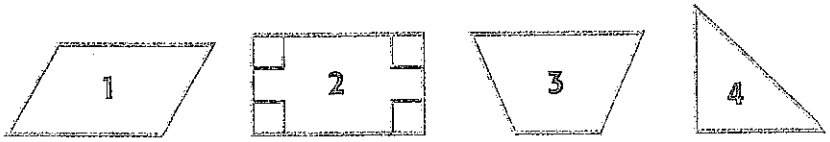
4. opposite sides are parallel

5. four right angles

6. four sides of equal length

Test Practice

7. Which statement about the figures shown below is true?



Ⓐ Figures 1 and 2 are parallelograms.

Ⓑ Figures 1 and 4 are quadrilaterals.

Ⓒ Figures 1 and 2 are rectangles.

Ⓓ Figures 1 and 3 are parallelograms.

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Name .....

My Homework

Lesson 6

Problem Solving: Guess, Check, and Revise

Homework Helper

eHelp

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Cassandra and Shawnel are the same age. Tonya is 3 years older than Cassandra. If you add all their ages together, the sum is 39. What is the age of each girl?

1 Understand

What facts do you know?

- Cassandra and Shawnel are the same age.
- Tonya is 3 years older than Cassandra.
- The sum of their ages is 39.

What do you need to find?

- Find the ages of each girl.

2 Plan

Guess, check, and revise to solve the problem.

3 Solve

Make a guess, then check. Use what you find to revise.

Cassandra's Age	Shawnel's Age	Tonya's Age	Sum of Ages	Check
10	10	13	33	too low
15	15	18	48	too high
12	12	15	39	correct

So, Cassandra and Shawnel are each 12 years old and Tonya is 15 years old.

4 Check

Is my answer reasonable? Explain.

Add their ages to check. $12 + 12 + 15 = 39$

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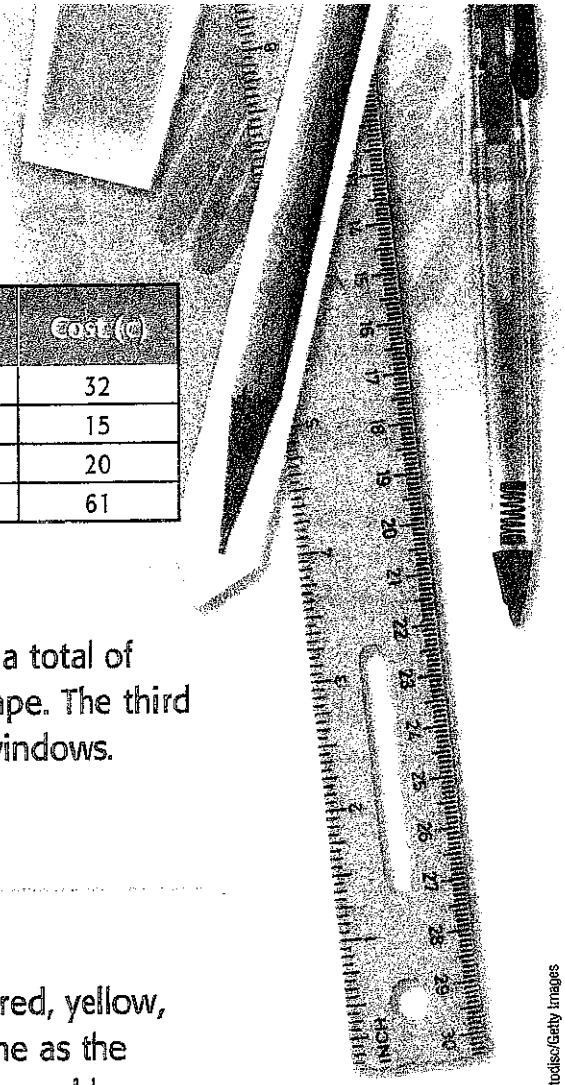
Problem Solving

Mathematical PRACTICE 4 Make a Plan Guess, check, and revise to solve each problem.



School Supplies	Cost (¢)
eraser	32
pencil	15
pen	20
ruler	61

1. Mei bought two items. She spent exactly 93¢. What did she buy?

2. A house has 3 windows that are polygons with a total of 13 sides. Two of the windows are the same shape. The third window has one more side than the first two windows. What specific shapes are the windows?

3. There are 20 crayons in a bag. The crayons are red, yellow, and blue. The number of red crayons is the same as the number of yellow crayons. There are twice as many blue crayons as yellow crayons. How many of each color are there?

4. Dolores bought some new pillows. She bought twice as many green pillows as blue pillows, and 1 less red pillow than green pillows. She bought a total of 9 pillows. How many pillows of each color did she buy?

5. Andrew has a combination of 8 quarters, dimes, and nickels that add up to a value of 95¢. How many of each coin does Andrew have?

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Name _____

MY Homework

Lesson 7
Partition Shapes

Homework Helper

eHelp

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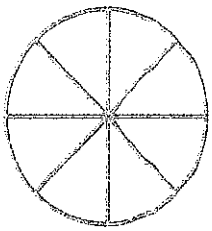
Cassie made a pie to take to the family reunion. If she wants to partition the pie into 8 equal pieces, what fraction of the pie's area will each piece represent?

1 The circle represents the pie's area.



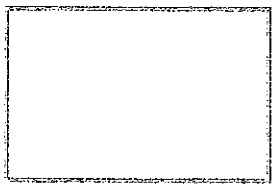
2 Partition the circle into 8 equal sections.

The fraction of the pie's area that each piece represents is $\frac{1}{8}$.

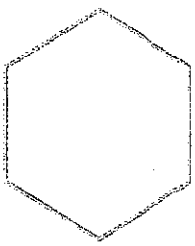
Practice

Partition each figure as indicated. Then write the unit fraction of the figure's area that each equal section represents.

1. 3 equal sections

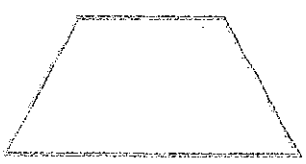


2. 2 equal sections



3. 4 equal sections

4. 4 equal sections



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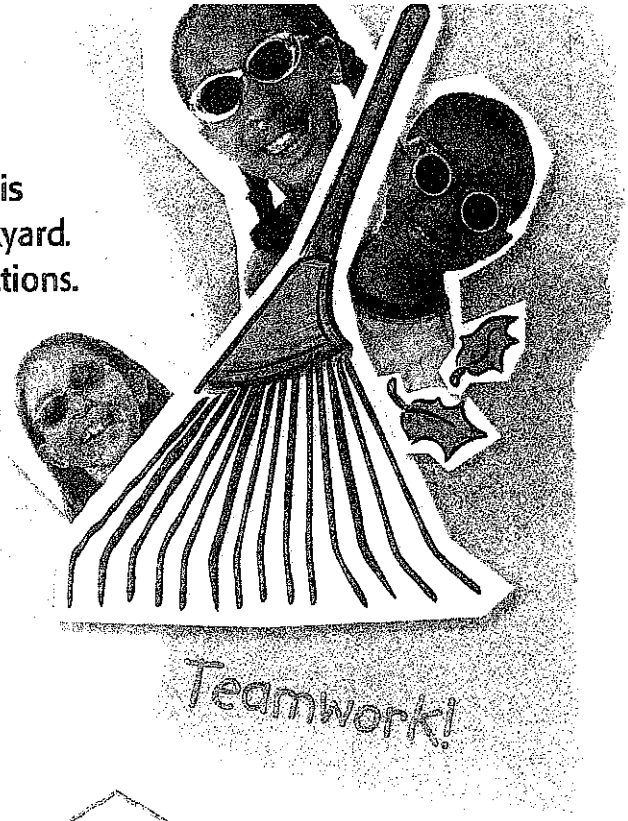
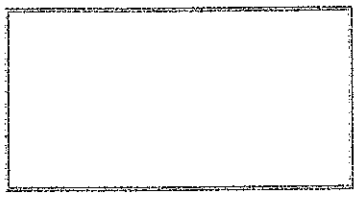
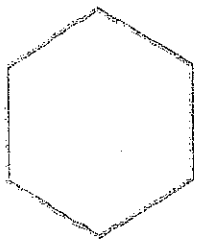
Problem Solving



Mathematical PRACTICE 5 **Use Math Tools** Nicholas and his 2 friends are raking leaves in his rectangular backyard. They decide to partition the yard into 3 equal sections. Each friend will rake one section. Partition the rectangle into 3 equal sections. Label each section with its unit fraction.



6. Partition the hexagon into 4 equal sections. What unit fraction of the hexagon's area does each section represent?



Mathematical PRACTICE 7 **Reason** Draw a circle. Partition the circle into six equal sections. What unit fraction of the total area is each section?

Test Practice

8. For art class, each student was given a piece of paper in the shape of a rectangle. Mrs. Brucker asked the students to partition the paper into 8 equal sections. What unit fraction of the paper's area will each section have?

Ⓐ $\frac{1}{2}$ Ⓒ $\frac{1}{6}$

Ⓑ $\frac{1}{3}$ Ⓓ $\frac{1}{8}$

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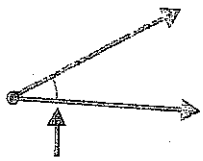
Vocabulary Check

Write each word from the word bank below by its description or example.

angle	**attribute**	**hexagon**	**octagon**
parallel	**parallelogram**	**pentagon**	**polygon**
quadrilateral	**rhombus**	**square**	**vertex**

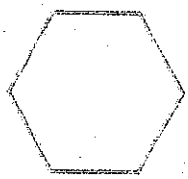
1.

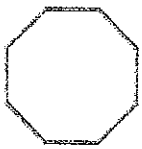
2. a polygon with 5 sides and 5 angles

3. 

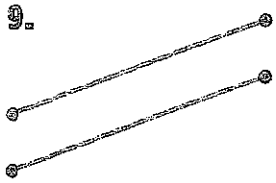
4. a parallelogram with 4 equal sides, but not necessarily 4 right angles

5. a rectangle with 4 equal sides

6. 

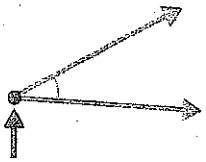
7. 

8. a closed figure formed by three or more straight sides that do not cross each other

9. 

10. Some examples include number of sides, number of angles, and parallel sides.

11. a polygon with 4 sides and 4 angles

12. 

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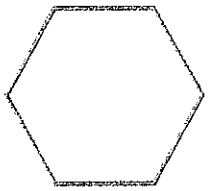
Concept Check

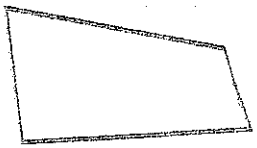
Describe each shape. Determine the number of sides and angles. Then classify each shape.

13. 

_____ sides

_____ angles

This is a(n) _____.

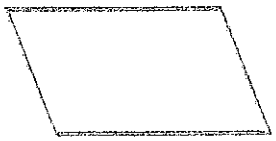
14. 

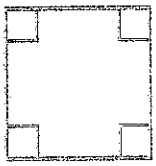
_____ sides

_____ angles

This is a(n) _____.

Describe the attributes of each quadrilateral. Then classify the quadrilateral.

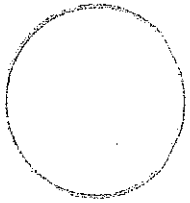
15. 

16. 

Partition each figure into equal sections as indicated. Then write the unit fraction of the figure's area that each equal section represents.

17. 3 equal sections

18. 6 equal sections



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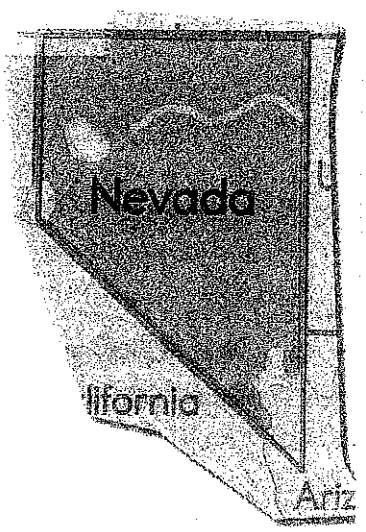
Name _____

Problem Solving



19. The state of Nevada is almost in the shape of a quadrilateral. Complete the attributes of the outline of the state of Nevada.

There is _____ set of parallel opposite sides.

Opposite sides are not equal in length.

Opposite angles are not the same size,

but there appear to be _____ right angles.

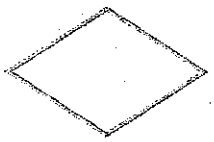
20. Karen is thinking of two numbers. Their difference is 9 and their sum is 17. What are the numbers?

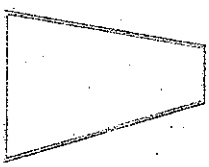
21. Naomi cut out two figures from construction paper. One figure is rectangular. The shape of the second figure has all the attributes of the rectangular figure. In addition, it has four sides that are equal in length. Classify the shape of the second figure.

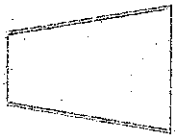
22. Four students were asked to draw a parallelogram. Each drew a differently-named figure, but each was correct. Explain how that can be.

Test Practice

23. Identify the figure that is *not* a trapezoid.

Ⓐ 

Ⓒ 

Ⓑ 

Ⓓ

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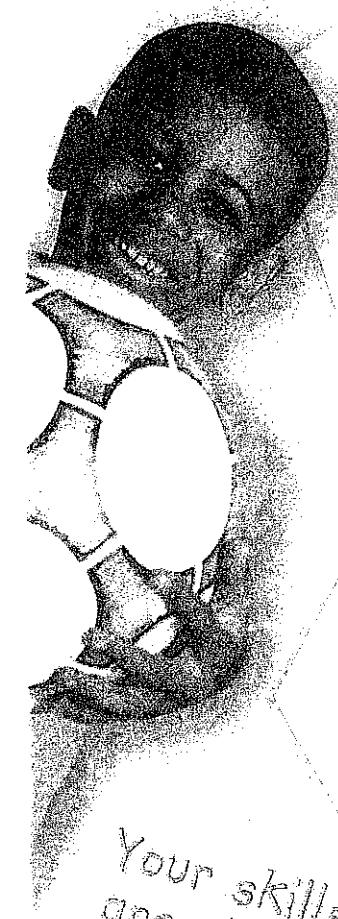
Reflect

Chapter 14
Answering the ESSENTIAL QUESTION

Use what you learned about geometric shapes to complete the graphic organizer.



ESSENTIAL QUESTION

How can geometric shapes help me solve real-world problems?

Real-World Example

Vocabulary

Attributes

Your skills are shaping up!

Now reflect on the ESSENTIAL QUESTION. Write your answer below.

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MUSIC

Name _____ Class _____ Date _____

Instrument Sort

Directions: Sort the instruments at the bottom of the page into their instrument families by writing them in the correct column. Then name another instrument from that family in the space provided.

Brass

1. _____
2. _____
3. _____
4. _____

Another brass instrument I know:

_____

Percussion

1. _____
2. _____
3. _____
4. _____

Another percussion instrument I know:

_____

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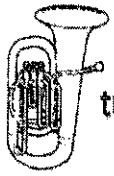
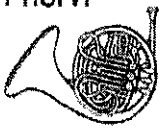
trumpet	cymbals	 tuba	triangle
tambourine	trombone	French horn 	snare drum

Name _____ Class _____ Date _____

INSTRUMENT SORT

Directions: Sort the instruments at the bottom of the page into their instrument families by writing them in the correct column. Then name another instrument from that family in the space provided.

Woodwind

1. _____
2. _____
3. _____
4. _____

Another woodwind instrument I know:

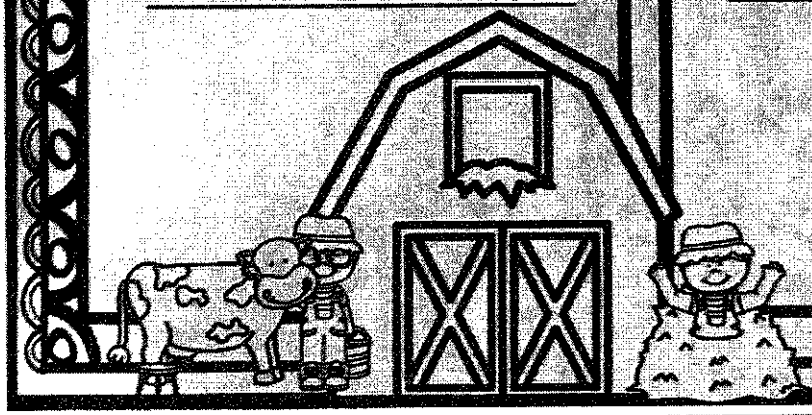
_____

Strings

1. _____
2. _____
3. _____
4. _____

Another string instrument I know:

_____



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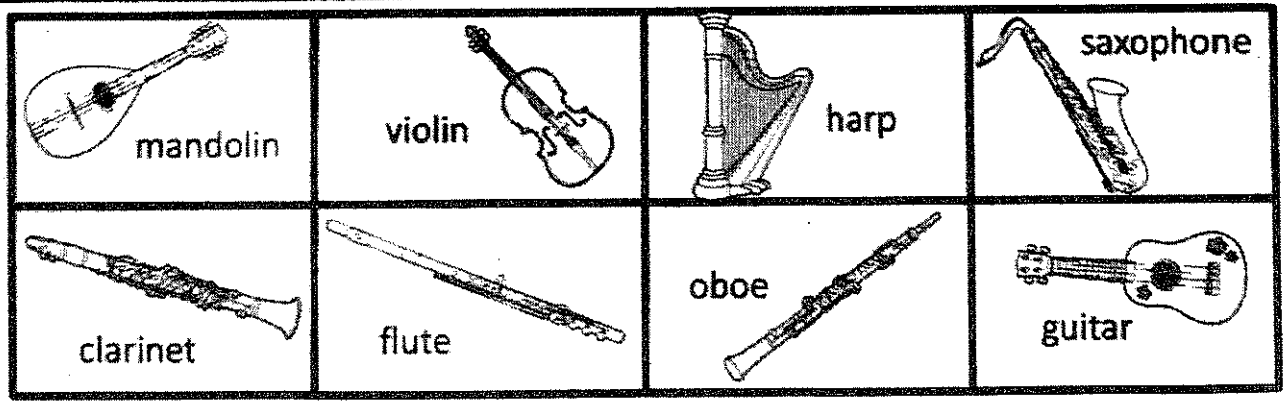


P.E.

This is an interval training program that you can try. The plan for this program is for you to go from no exercise (the couch) to being able to run a 5K (3.2Miles). The best part about this program is that you don't have to run a specific distance, you just have to run for a specific amount of time. You can do this anywhere that it would be safe for you to run.

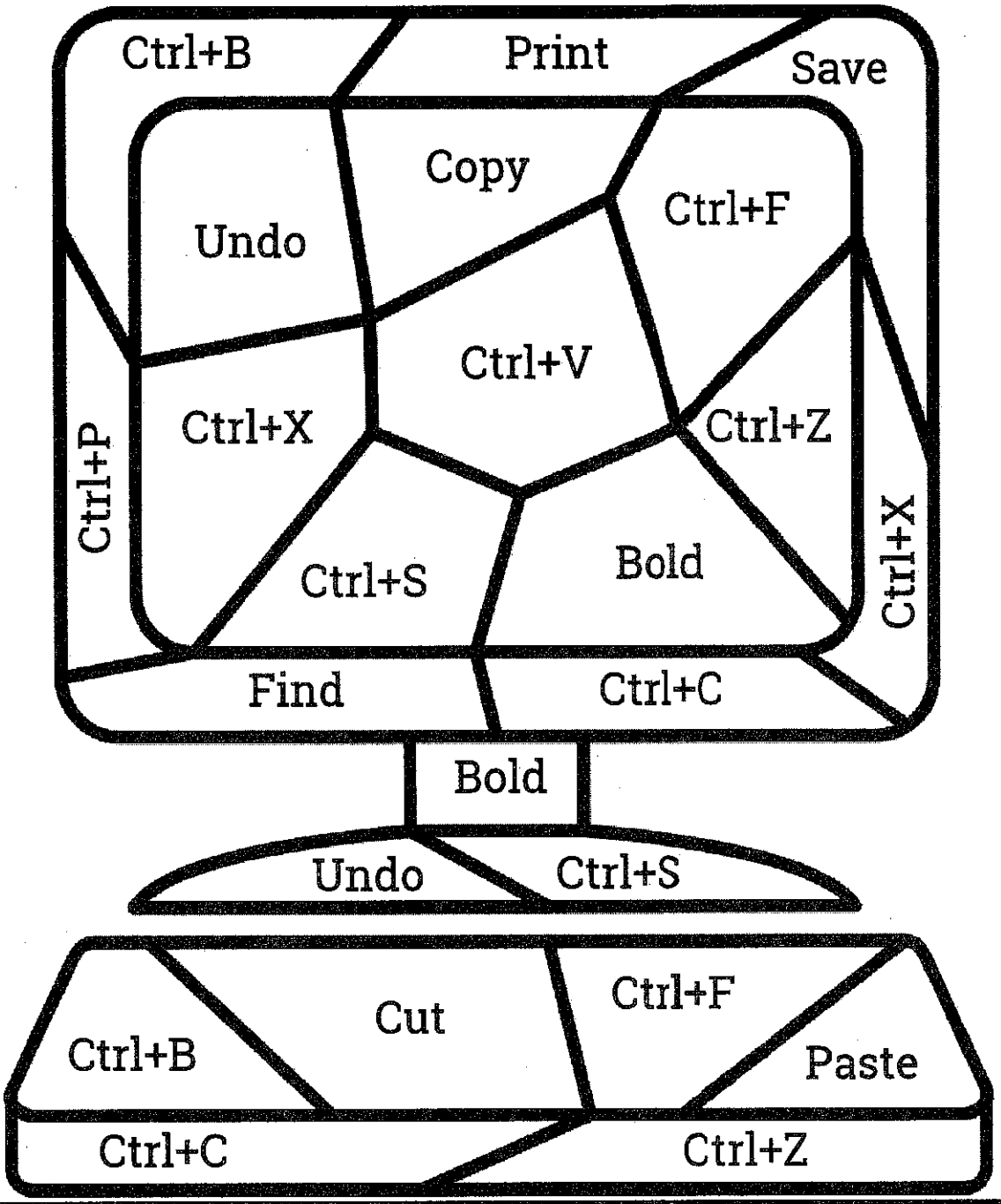
The Couch to 5k Training Plan

Week	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	5 min walk 2 min jog 5 min walk	Relax!	5 min walk 2 min jog 5 min walk	Relax!	5 min walk 3 min jog 5 min walk	Relax!	Relax!
2	5 min walk 3 min jog 5 min walk	Relax!	5 min walk 4 min jog 5 min walk	Relax!	5 min walk 5 min jog 5 min walk	Relax!	Relax!
3	5 min walk 6 min jog 5 min walk	Relax!	4 min jog 5 min walk 4 min jog 5 min walk	Relax!	5 min walk 7 min jog 5 min walk	Relax!	Relax!
4	5 min walk 7 min jog 5 min walk	Relax!	5 min walk 8 min jog 5 min walk	Relax!	5 min walk 9 min jog 5 min walk	Relax!	Relax!
5	5 min walk 9 min jog 5 min walk	Relax!	6 min jog 5 min walk 6 min jog 5 min walk	Relax!	5 min walk 10 min jog 5 min walk	Relax!	5 min walk 11 min jog 5 min walk
6	5 min walk 11 min jog 5 min walk	Relax!	13 min jog 5 min walk	Relax!	15 min jog 5 min walk	Relax!	Relax!
7	15 min jog 5 min walk	Relax!	8 min jog 5 min walk 8 min jog 5 min walk	Relax!	16 min jog 5 min walk	Relax!	17 min jog 5 min walk
8	17 min jog 5 min walk	Relax!	18 min jog 5 min walk	Relax!	20 min jog 5 min walk	Relax!	Relax!
9	20 min jog	Relax!	12 min jog 5 min walk 12 min jog	Relax!	24 min jog	Relax!	25 min jog
10	25 min jog	Relax!	27 min jog	Relax!	30 min jog	Relax!	Race Day!

Technology

Name: _____ Date: _____

Technology **Color** By **Shortcut**



RED	Ctrl+C Copy	**GREEN**	Ctrl+Z Undo	**PURPLE**	Ctrl+S Save
ORANGE	Ctrl+V Paste	**LIGHT BLUE**	Ctrl+P Print	**PINK**	Ctrl+F Find
YELLOW	Ctrl+B Bold	**DARK BLUE**	Ctrl+X Cut		

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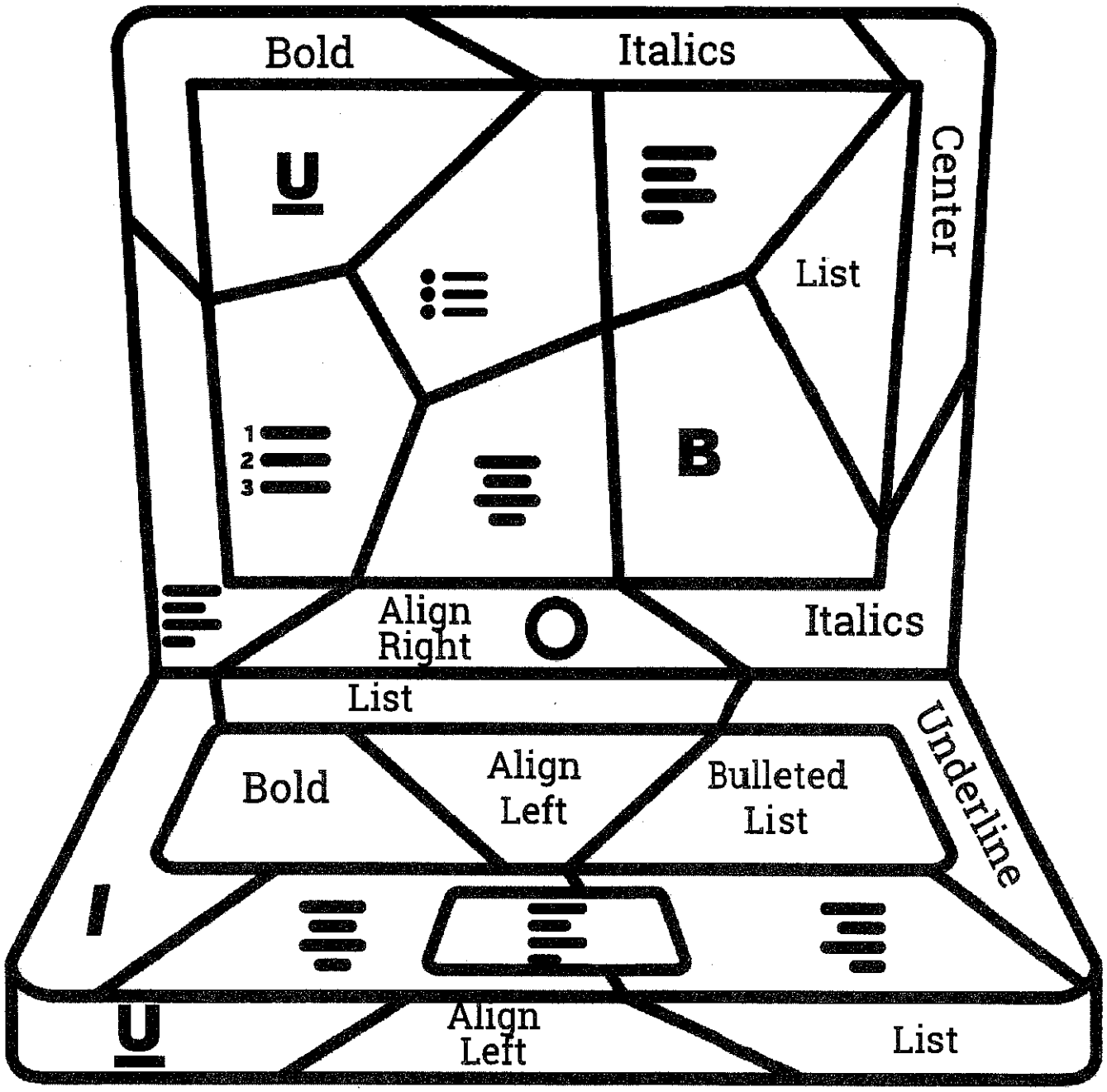
Name: _____ Date: _____

Technology **Color** By **Word Processing**



RED	**B** Bold	**GREEN**	Bulleted List	**PURPLE**	Align Right
ORANGE	*I* Italics	**LIGHT BLUE**	1 2 3 List	**PINK**	Center
YELLOW	**U** Underline	**DARK BLUE**	Align Left		

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THE FOLLOWING PAGES ARE THE ANSWER KEYS.

PLEASE LET YOUR PARENTS KNOW.

THE TORTOISE AND THE HARE

ANSWER KEY

PROBLEM/CONFLICT, SOLUTION, MORAL, THEME

Problem/Conflict: The hare thought no one could beat him in a race. The tortoise was tired of his bragging, so he took him up on the challenge.

Annoyed - because tortoise was tired of his bragging. Sad - because hare was making fun tortoise by telling him he was too slow to ever beat him in a race.

Solution: The tortoise never gave up. His determination and perseverance helped him win the race!

The tortoise won because he kept going - never stopping or giving up. I think he was proud of himself.

Moral: Slow and steady wins the race!

I think the hare learned that confidence can get in the way of success. I think the tortoise learned that persistence and hard work pays off in the end.

Theme: Determination can help you overcome any obstacle.

Happy - I felt happy when the tortoise won the race and proved hare to be wrong.

READING COMPREHENSION QUESTIONS

1) b
2) a
3) b
4) b
5) c
6) Answers will vary. Examples: Determined Tortoise and Confident Hare, A Race of Determination, or (my favorite) Determined Tortoise Wins By a Hare
7) The following should be checked.
   - ✓ But the creature was only a short distance away, having barely covered a third of the course.
   - ✓ The sun started to sink below the horizon, and the tortoise, who had been plodding towards the winning post since morning, was scarcely a yard from the finish.
   - ✓ But the hare's last leap was just too late, for the tortoise had beaten him to the winning post.
8) Tortoise smiled at hare and said, "Don't brag about your lightning pace, for slow and steady won the race!"

LOOKING FOR THE DETAILS

9) confident
10) determined
11) aggravated
12) worried
13) exhausted
14) disappointed
15) proud
16) theme
17) fables
18) topic
19) moral
20) plot

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THE LION AND THE MOUSE

ANSWER KEY

PROBLEM/CONFLICT, SOLUTION, MORAL, THEME

Problem/Conflict: The lion was caught by hunters and desperately needed the help of mouse to get away.

Hurt - the mouse was willing to repay the lion by helping him one day if he would kindly let him go, but the lion made him feel like he was too small to ever help him out.

Solution: The mouse bravely climbed up the rope and quickly gnawed through the rope, freeing the lion from the hunters.

The mouse had made a promise to repay the lion if he would let him go. I think the lion felt thankful that the mouse was able to free him.

Moral: Little friends can be great friends!

I think the lion learned the valuable meaning of friendship and how sometimes looks can be deceiving. I think the mouse learned that kindness can bring rewards.

Theme: Friendship comes in forms you don't expect.

Proud - I was proud of the mouse for showing kindness and compassion toward the lion.

READING COMPREHENSION QUESTIONS

1) b
2) a
3) c
4) a
5) b
6) Answers will vary. Examples: A Story of True Friendship, A Compassionate Friend, or Rewarding Kindness.
7) Size doesn't matter and you should never look at the outward appearance. Something small may contain bigger and better qualities.
8) Treat others the way you would want to be treated.
9) You only get back what you give. Eventually you have to face up to the consequences of your actions.
10) Sometimes the simplest acts of kindness make a difference even when you think they don't matter.
11) The mighty lion gratefully replied, "Little friends can be great friends."

LOOKING FOR THE DETAILS

12) scared
13) proud
14) relieved
15) angry
16) desperate
17) brave
18) thankful

Answers will vary. Students should demonstrate the following:

Fables are well know stories that include morals. A **moral** is the lesson to be learned from a story or event. A **theme** is the central idea or message the author is trying to convey to the reader. It is rarely stated and must be inferred. Sometimes, topic and plot is confused with theme. The **topic** is the main idea of the story, or what it's mostly about. The **plot** is the sequence of events or actions that make up the story.

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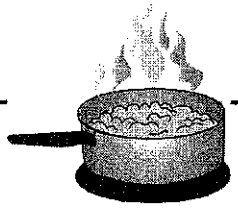
ANSWER KEY



Why Does Matter Matter?

by Kelly Hashway

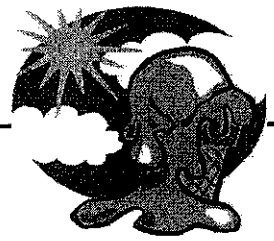
solids	volume	container	matter	ice	juice
gases	mass	atoms	chair	oxygen	melting
liquids	shape	space	milk	helium	

Choose a word from the box to complete each sentence.

1. The three basic properties of matter are **volume**, **mass**, and **shape**.
2. All matter is made up of tiny particles called **atoms**.
3. Volume is the amount of **space** that matter takes up.
4. Mass is the amount of **matter** an object has.
5. Liquids take the shape of their **container**.
6. **Gases** do not have a definite shape, mass, or volume.
7. **Liquids** do not have a definite shape, but they do have a definite volume.
8. **Solids** have a definite shape and volume.
9. A **chair** and **ice** are examples of solids.
10. **Milk** and **juice** are examples of liquids.
11. **Oxygen** and **helium** are examples of gases.
12. Solid ice is **melting** when it is changing into a liquid.

ANSWER KEY

What's the Matter?



Tell whether each is a solid, liquid, or gas.

1. milk - **liquid**
2. cookie - **solid**
3. oxygen - **gas**
4. fish - **solid**
5. pencil - **solid**
6. maple syrup - **liquid**
7. shampoo - **liquid**
8. carbon dioxide - **gas**
9. ice cube - **solid**
10. paint - **liquid**
11. oil - **liquid**
12. salt - **solid**
13. water vapor - **gas**
14. gasoline - **liquid**
15. helium - **gas**
16. sand - **solid**

Complete each sentence with the word solid, liquid, or gas.

A **solid** has a definite shape. It does not take the shape of its container. It also has a definite volume because it can be measured.

A **liquid** does not have a definite shape. It takes the shape of its container. It does have a definite volume because it can be measured.

A **gas** does not have a definite shape. It sometimes takes the shape of its container and sometimes flies freely around you. These particles are not connected to each other and takes up whatever space is available.

Name _____

Harriet Tubman Answer Key

1. Harriet Tubman

2. liberated; liberation

3. Underground Railroad

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Name .....

MY Homework

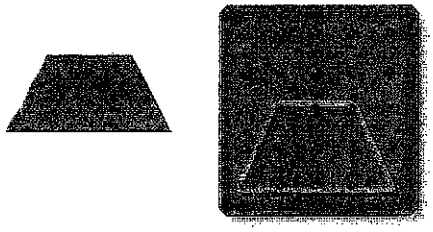
Lesson 1
Hands On: Angles

Homework Helper

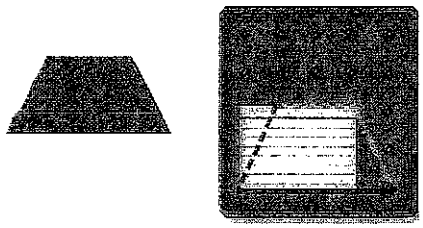
eHelp Need help? connectED.mcgraw-hill.com

Geoboards and pattern blocks help to explore angles.

1. A rubber band was used to create a large shape on a geoboard that is similar to the red pattern block.



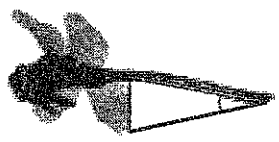
2. An index card was used to compare an angle formed by two sides of the shape. This angle is *less than* a right angle.



There are 2 angles that are *less than* right angles.
There are 2 angles that are *greater than* right angles.

Practice

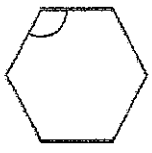
Tell whether each angle shown is a *right angle, less than* a right angle, or *greater than* a right angle. Use an index card if needed.

1. 

less than

2.

greater than

3. 

greater than

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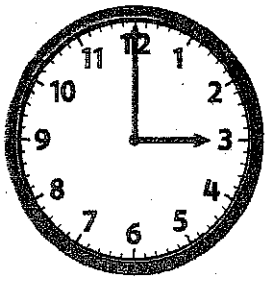
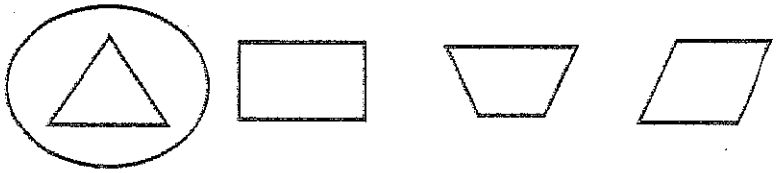
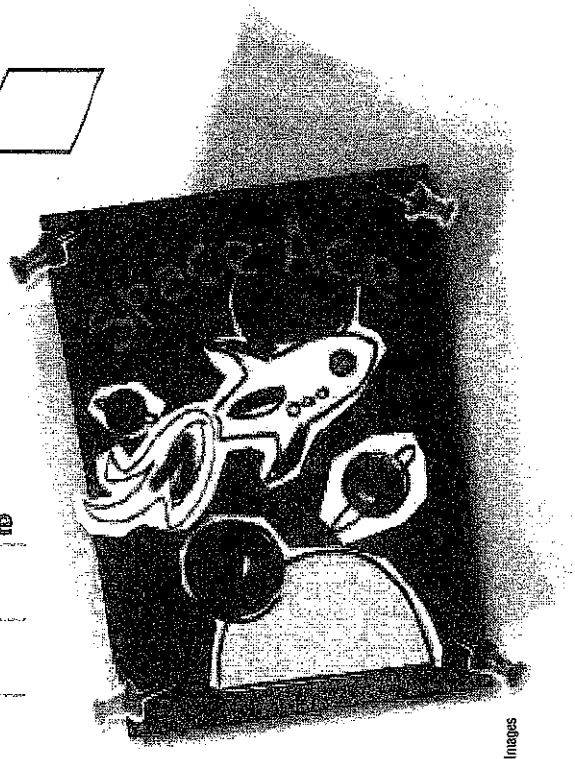
Problem Solving Sample answers: 4, 6

Mathematical PRACTICE 1 **Keep Trying** 4. Draw a time when the hands on the clock make a right angle.



Mathematical PRACTICE 7 **Identify Structure** 5. Mr. West drew four shapes on the board. Circle the shape that appears to have angles that are all less than a right angle.





6. Manny noticed that the sides of his poster on his bedroom wall formed angles. Tell whether the angles are *right* angles, *less than* right angles, or *greater than* right angles. Explain.

All of the angles are right angles because each angle forms a square corner.

Vocabulary Check

Vocab

Choose the correct word(s) to complete each sentence.

angle ray endpoint vertex right angle

7. The shared endpoint of two rays is called the vertex.

8. An endpoint is the point at the beginning of a ray.

9. An angle that forms a *square corner* is called a right angle.

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Name _____

3.G.1

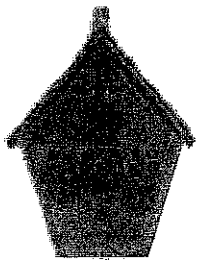
MY Homework

Lesson 2
Polygons

Homework Helper

eHelp Need help? connectED.mcgraw-hill.com

The front of the bird house shown has the shape of a polygon. Describe and classify the polygon.

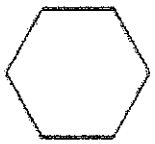


The polygon has 5 sides and 5 angles.

It is a pentagon.

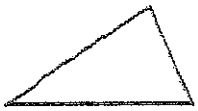
Practice

Describe each shape. Determine the number of sides and angles. Then classify each shape.

1. 

6 sides
6 angles

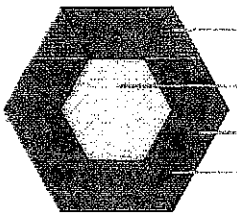
This is a(n) hexagon.

2. 

3 sides
3 angles

This is a(n) triangle.

3. Mathematical PRACTICE **Identify Structure** Classify the polygons that are used to create the figure shown.



triangle
hexagon
quadrilaterals

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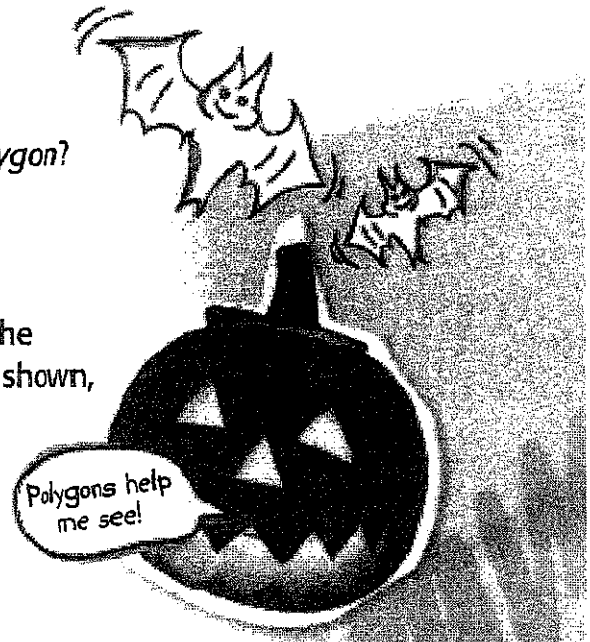
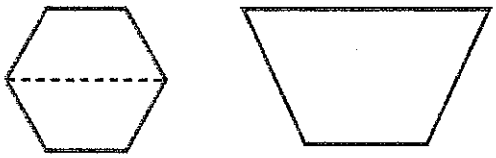
Problem Solving



4. What is another name for a square, other than *polygon*?

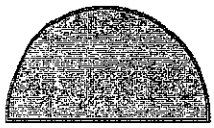
quadrilateral

Mathematical PRACTICE 5 **Use Math Tools** 5. Draw and label the polygon you would get when you fold the hexagon shown, in half along the dotted line.



quadrilateral

6. Is the figure shown to the right a polygon? Explain.



No; Sample answer: polygons only have straight lines.

Vocabulary Check

Vocab

Choose the correct word to complete each sentence.

hexagon polygon quadrilateral

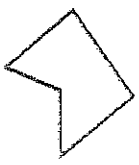
7. A polygon is a closed two-dimensional figure formed of three or more straight sides that do not cross each other.

8. A hexagon is a polygon with 6 sides and 6 angles.

9. A quadrilateral is a polygon with 4 sides and 4 angles.

Test Practice

10. Which of the following figures is a hexagon?

Ⓐ Ⓑ  ● Ⓓ

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Name

3.G.1

My Homework

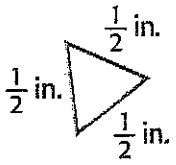
Lesson 3

Hands On: Triangles

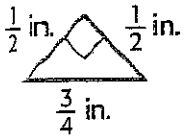
Homework Helper

eHelp Need help? connectED.mcgraw-hill.com

Measure the sides of each triangle below to the nearest quarter of an inch. Then state the number of sides with equal lengths.



The triangle has 3 sides with equal lengths.



The triangle has 2 sides with equal lengths.

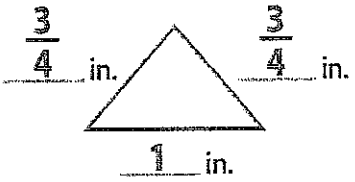
Compare the angles of each triangle. Then describe the triangle using its angles.

The triangle has 1 angle that is greater than a right angle.

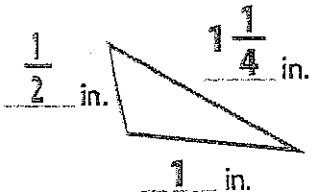
The triangle is a right triangle.

Practice

Measure the sides of each triangle below to the nearest quarter of an inch. Then state the number of sides with equal lengths.

1. 

2 sides

2. 

0 sides

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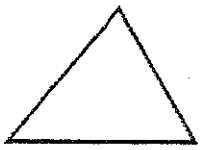
Compare the angles of each triangle. Then circle the correct description.

3.



(3 angles are less than a right angle)

1 right angle.

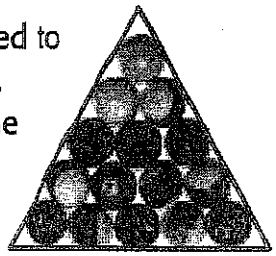
4.

3 angles greater than a right angle

(1 angle is greater than a right angle)

Real World Problem Solving

Mathematical PRACTICE 5 **Be Precise** 5. In billiards, a rack is used to organize billiard balls at the beginning of the game. Measure the sides of the triangle shown. What is the length of each side to the nearest quarter inch?

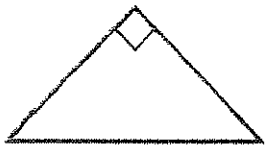


$1\frac{1}{2}$ inches

6. Refer to Exercise 5. How many angles are less than a right angle?

3 angles

7. How many angles are less than a right angle in the triangle shown at the right?



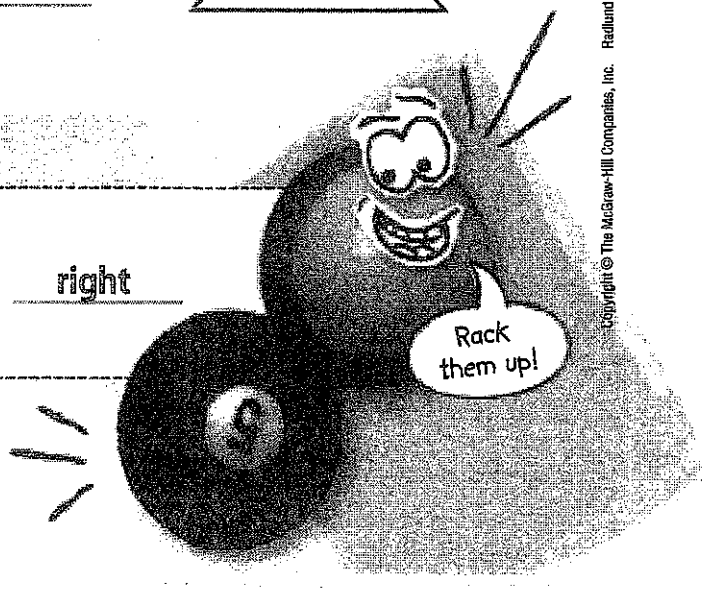
2 angles

Vocabulary Check

Vocab

Fill in the missing word.

8. A triangle with one right angle is called a right triangle.



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MY Homework

Lesson 4
Quadrilaterals

Homework Helper

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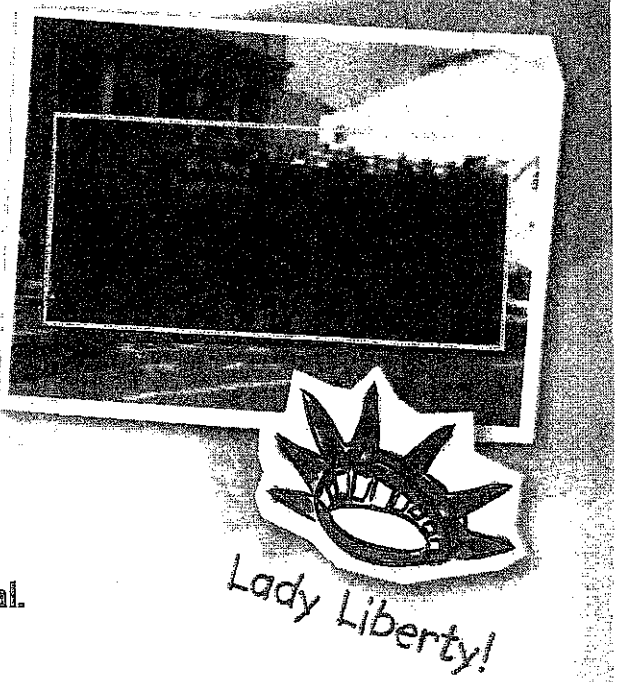
A tour bus is shown at the right. Describe the attributes of the quadrilateral outlined in yellow. Then classify it.

The quadrilateral has opposite sides that are equal in length and parallel.

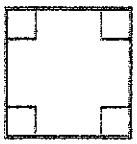
It has four right angles.

So, the quadrilateral is a rectangle.



Practice

Describe the attributes of each quadrilateral. Then classify the quadrilateral.

1. 

There are 4 right angles and 4 equal sides. Opposite sides are parallel; square

2.

One pair of parallel sides; trapezoid

3. Circle the quadrilateral(s) that do *not* have all the attributes of a parallelogram.

rectangle rhombus square (trapezoid)

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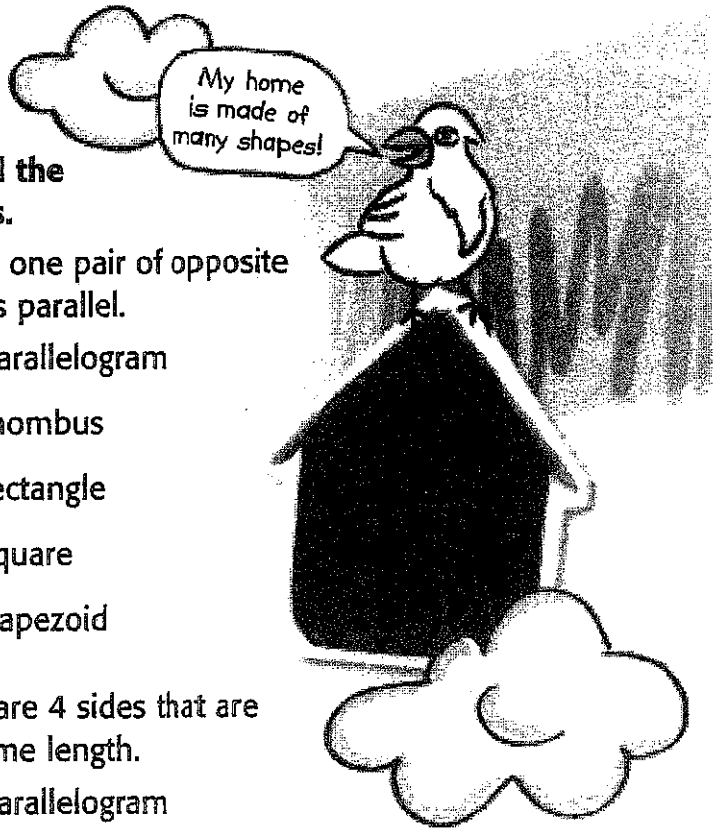
Problem Solving



Mathematical PRACTICE 7 Identify Structure **Check all the quadrilaterals that have the given attributes.**

4. Both pairs of opposite sides are parallel.

- [x] parallelogram
- [x] rhombus
- [x] rectangle
- [x] square
- [ ] trapezoid

5. Exactly one pair of opposite sides is parallel.

- [ ] parallelogram
- [ ] rhombus
- [ ] rectangle
- [ ] square
- [x] trapezoid

6. There are four right angles.

- [ ] parallelogram
- [ ] rhombus
- [x] rectangle
- [x] square
- [ ] trapezoid

7. There are 4 sides that are the same length.

- [ ] parallelogram
- [x] rhombus
- [ ] rectangle
- [x] square
- [ ] trapezoid

Vocabulary Check

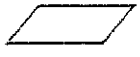
Fill in each blank with a word that makes each sentence true.

8. A square is a parallelogram with ___four___ right angles and four sides that are the same length.

9. Sides that are the same distance apart are ___parallel___ sides.

Test Practice

10. Which of these shapes appears to be a quadrilateral, but *not* a parallelogram?

Ⓐ Ⓑ  Ⓒ Ⓓ

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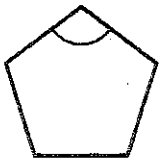
Check My Progress *(Lessons 1 through 4)*

Tell whether each angle shown is a *right angle*, *less than* a right angle, or *greater than* a right angle. Use an index card if needed.

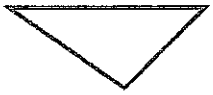
1. 

1. greater than

2.

2. less than

Describe each shape. Determine the number of sides and angles. Then classify each shape.

3. 

3. 3 sides, 3 angles; triangle

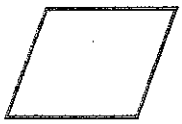
4.

4. 5 sides, 5 angles; pentagon

Describe the attributes of each quadrilateral. Then classify the quadrilateral.

5.

5. one pair of parallel sides; trapezoid

6. 

6. all sides equal in length, opposite sides parallel; rhombus

Solve.

7. A triangular pendant on Alexandra's necklace has sides that measure $1\frac{1}{2}$ inches, 2 inches, and $1\frac{1}{2}$ inches. Describe the number of sides with equal lengths.

7. two sides

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My Homework

Lesson 5
Shared Attributes of Quadrilaterals

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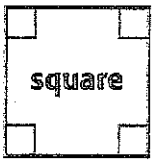
The attributes of the quadrilaterals that you learned about in Lesson 4 were used to create the table.



Attribute	Quadrilateral(s)
Both pairs of opposite sides have the same length.	parallelogram, rectangle, square, rhombus
Both pairs of opposite sides are parallel.	parallelogram, rectangle, square, rhombus
Opposite angles are the same size.	parallelogram, rectangle, square, rhombus

Each quadrilateral has 4 sides and 4 angles.

Practice

1. Complete the attributes of a rectangle.

Opposite sides are parallel.

Opposite sides are the same length.

The figure has 4 right angles.

2. Circle the quadrilateral(s) that have all the attributes of a rectangle.

trapezoid parallelogram (square) rhombus

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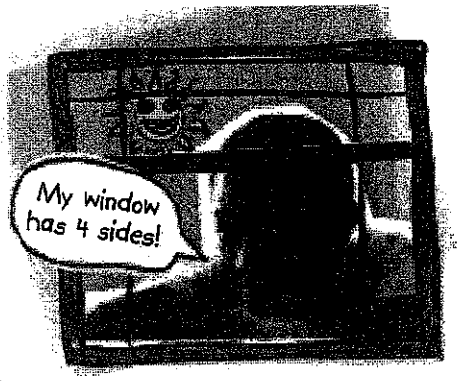
Problem Solving



Mathematical PRACTICE 3 Reason State whether the following statement is *true* or *false*. If false, explain why.
A trapezoid can also be classified as a parallelogram because it has parallel sides.

false; Sample answer: A trapezoid has exactly one pair of opposite parallel sides, while a parallelogram has both pairs of opposite parallel sides.

For Exercises 4–6, draw a quadrilateral that has the given attributes in the space provided.

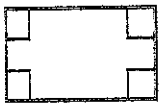
4. opposite sides are parallel

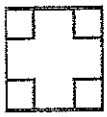
5. four right angles

6. four sides of equal length

Sample answers:

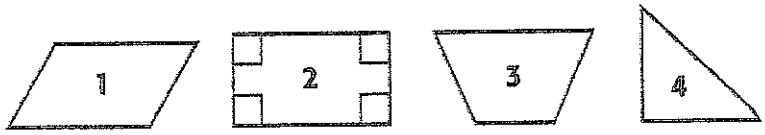
4.

5. 

6. 

Test Practice

7. Which statement about the figures shown below is true?



Ⓐ Figures 1 and 2 are parallelograms.
Ⓑ Figures 1 and 4 are quadrilaterals.
Ⓒ Figures 1 and 2 are rectangles.
Ⓓ Figures 1 and 3 are parallelograms.

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MY Homework

Lesson 6

Problem Solving: Guess, Check, and Revise

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Cassandra and Shawnel are the same age. Tonya is 3 years older than Cassandra. If you add all their ages together, the sum is 39. What is the age of each girl?

1 Understand

What facts do you know?

- Cassandra and Shawnel are the same age.
- Tonya is 3 years older than Cassandra.
- The sum of their ages is 39.

What do you need to find?

- Find the ages of each girl.

2 Plan

Guess, check, and revise to solve the problem.

3 Solve

Make a guess, then check. Use what you find to revise.

Cassandra's Age	Shawnel's Age	Tonya's Age	Sum of Ages	Check
10	10	13	33	too low
15	15	18	48	too high
12	12	15	39	correct

So, Cassandra and Shawnel are each 12 years old and Tonya is 15 years old.

4 Check

Is my answer reasonable? Explain.

Add their ages to check. 12 + 12 + 15 = 39

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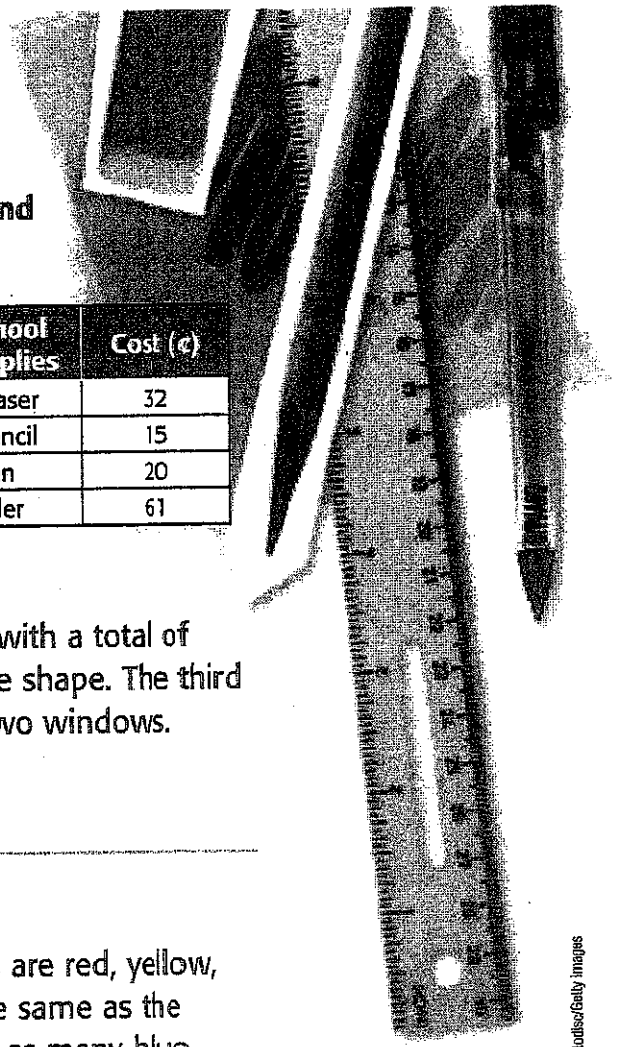
Problem Solving

Mathematical PRACTICE 1 Make a Plan Guess, check, and revise to solve each problem.



1. Mei bought two items. She spent exactly 93¢. What did she buy?

School Supplies	Cost (¢)
eraser	32
pencil	15
pen	20
ruler	61

eraser, ruler

2. A house has 3 windows that are polygons with a total of 13 sides. Two of the windows are the same shape. The third window has one more side than the first two windows. What specific shapes are the windows?

2 quadrilaterals and 1 pentagon

3. There are 20 crayons in a bag. The crayons are red, yellow, and blue. The number of red crayons is the same as the number of yellow crayons. There are twice as many blue crayons as yellow crayons. How many of each color are there?

5 red, 5 yellow, 10 blue crayons

4. Dolores bought some new pillows. She bought twice as many green pillows as blue pillows, and 1 less red pillow than green pillows. She bought a total of 9 pillows. How many pillows of each color did she buy?

2 blue, 4 green, 3 red pillows

5. Andrew has a combination of 8 quarters, dimes, and nickels that add up to a value of 95¢. How many of each coin does Andrew have?

2 quarters, 3 dimes, 3 nickels

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My Homework

Lesson 7
Partition Shapes

Homework Helper

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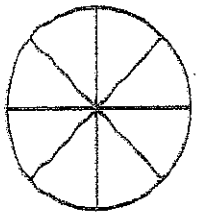
Cassie made a pie to take to the family reunion. If she wants to partition the pie into 8 equal pieces, what fraction of the pie's area will each piece represent?

1 The circle represents the pie's area.



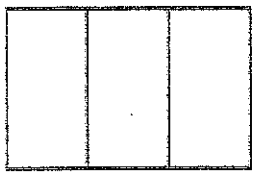
2 Partition the circle into 8 equal sections.

The fraction of the pie's area that each piece represents is $\frac{1}{8}$.

Practice Sample partitions: 1–4

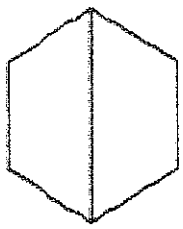
Partition each figure as indicated. Then write the unit fraction of the figure's area that each equal section represents.

1. 3 equal sections



$\frac{1}{3}$

2. 2 equal sections

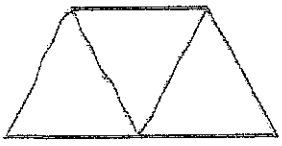


$\frac{1}{2}$

3. 4 equal sections

$\frac{1}{4}$

4. 3 equal sections



$\frac{1}{3}$

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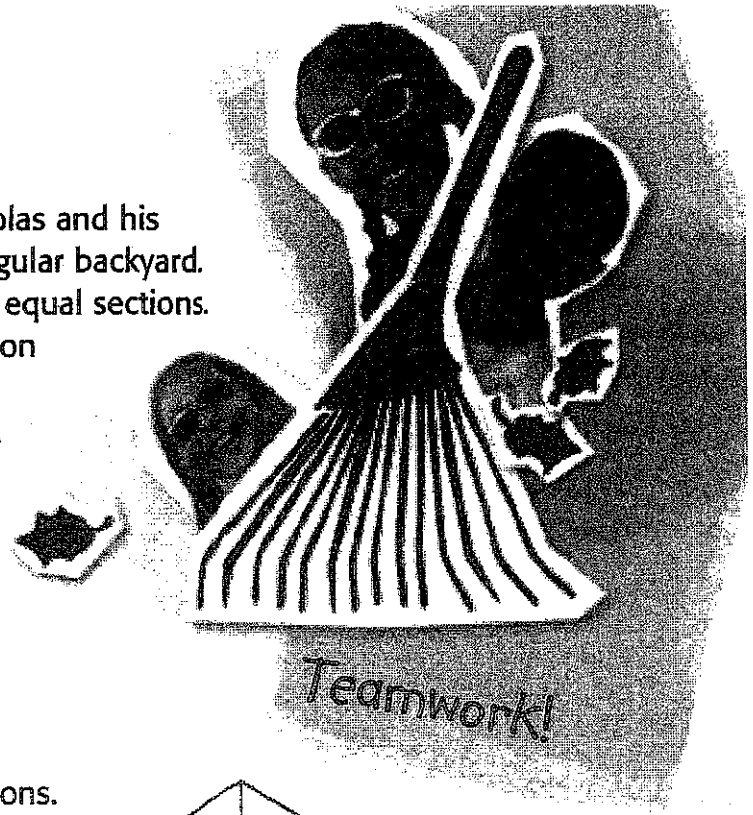
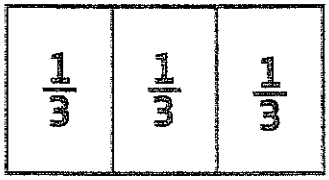
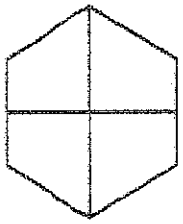
Problem Solving



Mathematical PRACTICE 5 **Use Math Tools** 5. Nicholas and his 2 friends are raking leaves in his rectangular backyard. They decide to partition the yard into 3 equal sections. Each friend will rake one section. Partition the rectangle into 3 equal sections. Label each section with its unit fraction.



6. Partition the hexagon into 4 equal sections. What unit fraction of the hexagon's area does each section represent?



Sample answer: $\frac{1}{4}$

Mathematical PRACTICE 2 **Reason** 7. Draw a circle. Partition the circle into six equal sections. What unit fraction of the total area is each section?

$\frac{1}{6}$; See students' drawings.

Test Practice

8. For art class, each student was given a piece of paper in the shape of a rectangle. Mrs. Brucker asked the students to partition the paper into 8 equal sections. What unit fraction of the paper's area will each section have?

Ⓐ $\frac{1}{2}$ Ⓒ $\frac{1}{6}$

Ⓑ $\frac{1}{3}$ ● $\frac{1}{8}$

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Problem Solving

18. The state of Nevada is almost in the shape of a quadrilateral. Complete the attributes of the outline of the state of Nevada.

There is one set of parallel opposite sides.
Opposite sides are not equal in length.
Opposite angles are not the same size,
but there appear to be two right angles.

20. Karen is thinking of two numbers. Their difference is 9 and their sum is 17. What are the numbers?

4, 13

21. Naomi cut out two figures from construction paper. One figure is rectangular. The shape of the second figure has all the attributes of the rectangular figure. In addition, it has four sides that are equal in length. Classify the shape of the second figure.

square

22. Four students were asked to draw a parallelogram. Each drew a differently-named figure, but each was correct. Explain how that can be.

Sample answer: One student drew a square, one drew a rectangle, one drew a rhombus, and one drew a parallelogram.

Test Practice

23. Identify the figure that is *not* a trapezoid.

Ⓐ

Ⓒ

Ⓑ

Ⓓ

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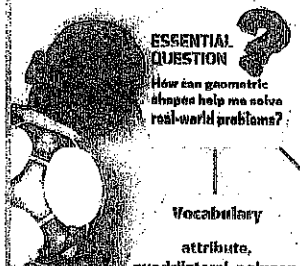
Reflect

Chapter 14
Answering the ESSENTIAL QUESTION

Use what you learned about geometric shapes to complete the graphic organizer.
Sample answers given.



ESSENTIAL QUESTION
How can geometric shapes help me solve real-world problems?

Real-World Example
Basketball is played on a rectangular court. Describe the attributes of a basketball court.

Vocabulary
attribute, quadrilateral, polygon, rectangle, parallel

Attributes
Opposite sides of a rectangle are equal length and parallel. There are four right angles.

Your skills are shaping up!

Now reflect on the ESSENTIAL QUESTION. Write your answer below.

See students' work.

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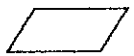
Review

Chapter 14
Geometry

Vocabulary Check

Write each word from the word bank below by its description or example.

angle	attribute	hexagon	octagon
parallel	parallelogram	pentagon	polygon
quadrilateral	rhombus	square	vertex

1. 
parallelogram

2. a polygon with 5 sides and 5 angles
pentagon

3.
angle

4. a parallelogram with 4 equal sides, but not necessarily 4 right angles
rhombus

5. a rectangle with 4 equal sides
square

6.
hexagon

7.
octagon

8. a closed figure formed by three or more straight sides that do not cross each other
polygon

9.
parallel

10. Some examples include number of sides, number of angles, and parallel sides.
attribute

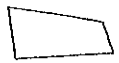
11. a polygon with 4 sides and 4 angles
quadrilateral

12.
vertex

Concept Check

Describe each shape. Determine the number of sides and angles. Then classify each shape.

13.
6 sides
6 angles
This is a(n) hexagon.

14. 
4 sides
4 angles
This is a(n) quadrilateral.

Describe the attributes of each quadrilateral. Then classify the quadrilateral.

15.
Opposite sides are equal in length and parallel; parallelogram

16.
All sides are of equal length. Opposite sides are parallel. There are four right angles; square

Partition each figure into equal sections as indicated. Then write the unit fraction of the figure's area that each equal section represents. Sample partitions: 17, 18

17. 3 equal sections

$\frac{1}{3}$

18. 6 equal sections

$\frac{1}{6}$