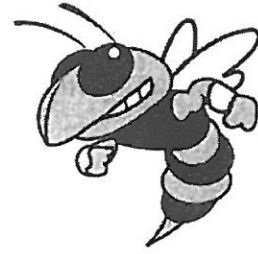


MMS 8th Grade



NTI Day 1

Math <u>Erica.Arnette@mboro.kyschools.us</u>	Classifying Real Numbers
Language Arts <u>Wendy.Pillion@mboro.kyschools.us</u>	"How to Lasso a Shark"
Science <u>Alex.Pratt@mboro.kyschools.us</u>	Identifying Control Variables
Social Studies <u>Amanda.Day@mboro.kyschools.us</u>	Interpreting Maps

Name: 8th Grade Math NTI Day 1

Period:

Number Classification Worksheet

1) Re-write each number in the Venn Diagram where it belongs.

-19

$1.\bar{2}$

0

3

$\sqrt{10}$

$\sqrt{81}$

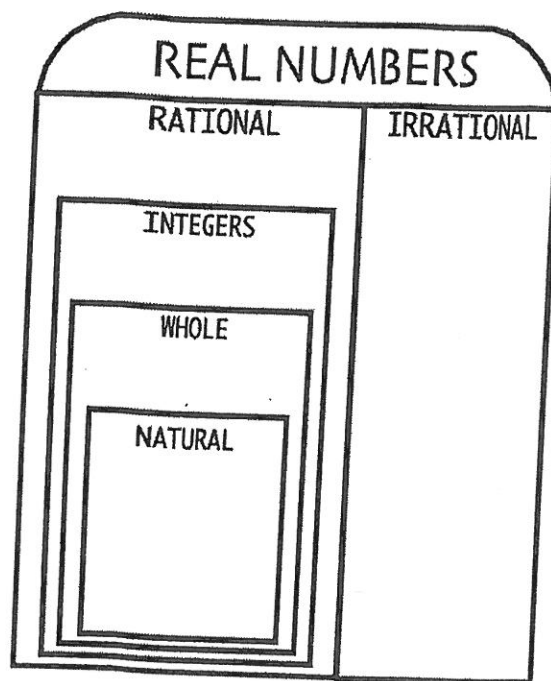
3.456

$-\frac{6}{11}$

-1.48298.....

$\pi + 3$

-44



2) List all classifications of the number.

a) $\sqrt{10}$ _____

b) -44 _____

c) 3 _____

d) $-\frac{6}{11}$ _____

3) Check all boxes that apply to the number.

	Natural	Whole	Integer	Rational	Irrational	Real
a) $\sqrt{81}$	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) $1.\bar{2}$	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) 0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) 13	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

More on back →

8th Grade Math NTI Day I

True or False? If false, correct the statement.

- 4) If a number is in integer, then the number is also rational. _____
- 5) If a number is real, then it is also rational. _____
- 6) 3.456 is an irrational number. _____
- 7) $\sqrt{11}$ is a real number. _____
- 8) Zero is an natural number. _____
- 9) 9 is an integer. _____
- 10) If a number is natural, then it also whole. _____

Short Answer.

- 11) Name a number that is an integer, but not whole. _____
- 12) Give an example of an irrational number that was not already used on this worksheet or our notes. _____
- 13) Give an example of a rational number that was not already used on this worksheet or our notes. _____

SELECTED ANSWERS BELOW: *(the rest will be shown in class tomorrow)*

- 2) a) irrational, real
c) natural, whole, integer, rational, real
- 3) a) check all boxes *except* irrational
c) check whole, integer, rational, and real (not natural, not irrational)
- 5) False. Real numbers can be irrational too.
- 7) True.
- 9) True.
- 11) Examples: -3, -21, -10...(any negative number without fraction or decimals would work).
- 13) Any number would work as long as it did not go on forever in an un-repeating pattern.

4 How to Lasso a Shark

by William B. McMorris

NTI Day
Lang Arts

Would you like to put on scuba gear, jump into the ocean, and try to catch a hungry shark? If you would, you might like to join the author and his friends who do just that. In this article, he tells you how they do it.

Start as if you were going to build a big butterfly net. The handle needs to be about 10 feet long. The rigid hoop is about three feet across. Instead of a net, you string a noose around the inside of the hoop with spring clips. Now, if you are like Trevor Long, associate director of Sea World near Brisbane, Australia, you are ready to hunt sharks. Trevor gets a couple of friends, puts on his scuba gear, and takes this big hoop with a rope on it down 85 feet in the sea.

The divers go to a place where a narrow channel about 30 feet deep cuts through a reef. At special times of the year, huge schools of little fish called pilchard whirl through. They are followed by hungry yellowtail kingfish that are followed by hungry sharks.

When a shark swims by, Trevor slips the hoop over the fish's head and jerks the rope tight. Another diver gets the handle and hoop out of the way, and the third helps hold the rope. At this point, two men have roped a very large fish with very large teeth.

Why doesn't the shark whirl around and make a meal of the seagoing cowboy? "They almost always swim away," Trevor says.

After a battle of about 20 minutes, the shark usually gives up. The fish blows out some air bubbles and goes limp. This is a

sign it is safe to bring it to the surface. If the fish is brought up too quickly, a sudden change in pressure may kill it.

"When they get to the top they get more life," Trevor warns. "They bite the motors, the boat, and anything else that comes in contact."

He adds quickly, "We're on the boat at this time." The crew leads the fish into a sling, winches it into a tank on board, and they run for home. Home is a 110,000-gallon tank in Sea World's Theatre of the Sea.

Sea World divers put on as many as 11 shows per day about the history of diving. Audiences seated in the air-conditioned theater watch through a six-inch-thick wall of clear acrylic. It's easy to think of the fish as almost tame, just big pets in a giant aquarium. But they are not.

Sharks can fool even experts. A horrified audience watched one afternoon as a six-foot-long bronze whaler shark tore at a diver's leg for several seconds before the man could be rescued. It happened, Trevor said, after thousands of trouble-free shows. Nobody can be sure just why the attack took place.

The diver lived, the fish was replaced, but bronze whalers are watched very carefully any time a man is in the water.

Trevor credits the Boy Scouts for helping him in his career. "Our

5. 17.4

Lang. Arts²¹
Day 1

Scoutmaster let us solve all kinds of outdoor living problems by ourselves. He also insisted we be good with knots. I've applied both skills many times above and beneath the water."

These skills are especially useful when he sets up the loop of a rope that lassos sharks. ■

- ✓ Enter your reading time below. Then look up your reading speed on the Words-per-Minute table on page 130.

Reading Time _____

Reading Speed _____

Enter your reading speed on the Reading Speed graph on page 131.

Comprehension

Put an **X** in the box next to the correct answer for each question or statement. Do not look back at the selection.

1. The handle of the shark lasso should be
☐ a. 85 feet long.
☐ b. 30 feet long.
☐ c. 10 feet long.
2. Trevor Long works with sharks in
☐ a. America.
☐ b. Australia.
☐ c. Brazil.
3. To lasso a shark in the sea, Trevor Long needs
☐ a. one helper.
☐ b. two helpers.
☐ c. three helpers.

4. Before giving up, a roped shark usually battles for about

- ☐ a. 16 minutes.
☐ b. 20 minutes.
☐ c. 30 minutes.

5. When the shark blows out air bubbles and goes limp, it is a sign that it is

- ☐ a. safe to bring it to the surface.
☐ b. very dangerous to handle.
☐ c. probably dead.

6. When sharks get to the surface, they


- ☐ a. try to swim away.
☐ b. stop battling.
☐ c. bite anything they come in contact with.

7. What kind of shark attacked a diver?

- ☐ a. a great white
☐ b. a yellowtail
☐ c. a bronze whaler

8. Whom does Trevor Long credit for helping him in his career?

- ☐ a. the Boy Scouts
☐ b. shark experts
☐ c. his diving friends

 _____ Number of correct answers
Enter this number on the
Comprehension graph on page 132.

Identify and Control Variables ^{NTI} Day 1

This skill involves looking at the factors that will affect the outcome of an experiment. Once you have identified those variables, you must be sure that only one variable is changed in any one test in your experiment.

Think About Identifying and Controlling Variables

When you design an experiment, the first thing you do is decide exactly which factor you are testing. The factor you are changing is called the variable. Once you have decided on your variable, you must be very careful to keep all other conditions the same. Many experiments have given false results because a factor that should have been kept constant was not controlled.

1. Design and write the procedure for an experiment to test the effect the amount of water has on the growth of plants. Use three samples. State which factor is your variable. Then decide which factors you will have to control. _____

2. What was the variable you allowed to change? _____

3. What factor did you expect to be affected by allowing this variable to change? _____

4. What variables needed to be controlled? _____

5. Why is it necessary to allow only one variable at a time for each test? _____

Standardized Test Practice



ACTIVITY 1

Interpreting Maps

KCCA: Cultures and Societies SS-08-2.3.1; Geography SS-08-4.1.1

General purpose maps show a wide range of general information about a particular area. **Special purpose maps** present specific kinds of information, such as the population density of a region, the distribution of natural resources, or historical information.

★ Learning to Read Maps

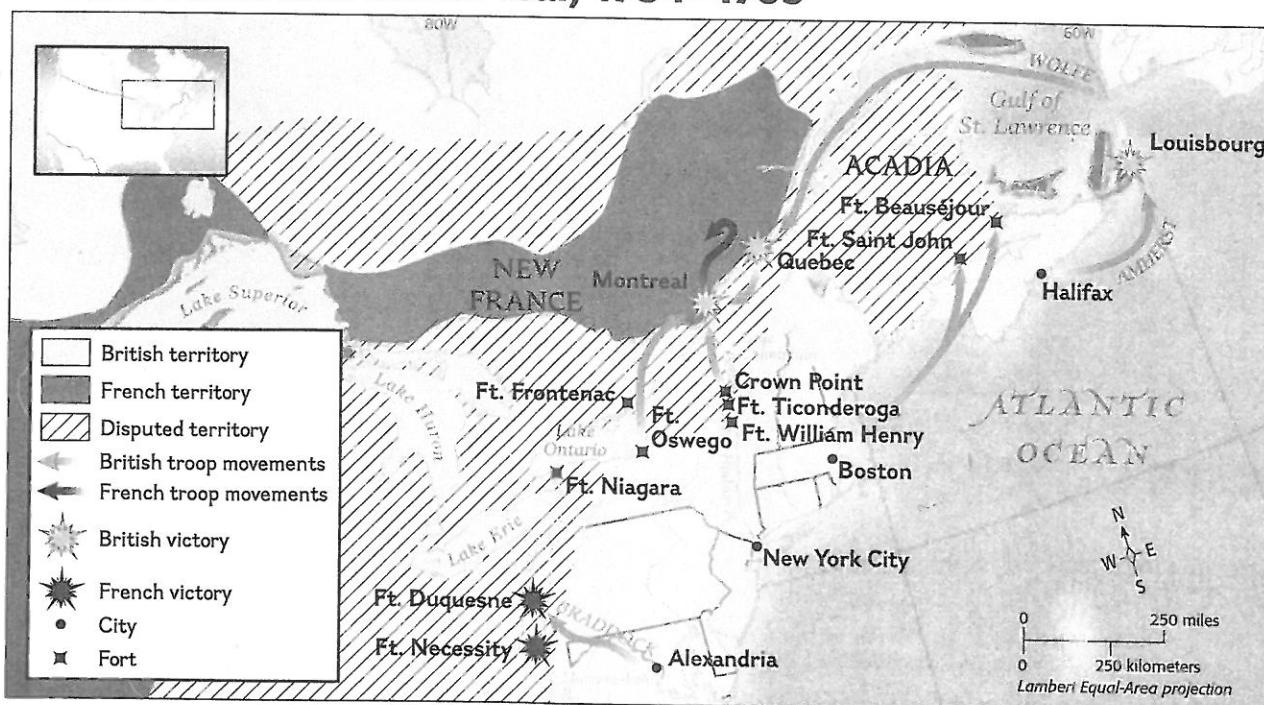
Use the following guidelines to help you interpret maps.

- Determine what kind of map is presented by reading the map title and map key.
- Look for special symbols in the map key to understand information on the map.
- Read any additional material that accompanies the map.

★ Practicing the Skill

DIRECTIONS: Analyze the map and then complete the activity that follows.

The French and Indian War, 1754–1763



Name _____ Date _____ Class _____

DIRECTIONS: A map scale shows how to measure distance on a map. The map key explains what different symbols represent. Study the map on the previous page and answer the following questions.

1. What two units of measurement are shown on the map scale?

2. What is the scale of miles on this map? What does 1/4 inch represent?

3. According to the map key, what do the arrows stand for?

4. In some places on the map, troop movements are identified by the general who led them. Look for General Braddock's troop movements. Between which two places did his troops travel?

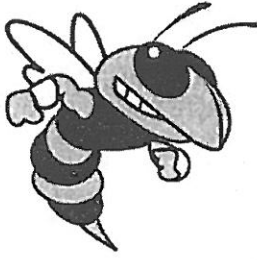
5. What is the approximate distance in miles between these two places?



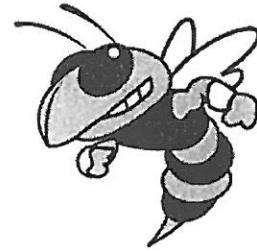
Standardized Test Practice

DIRECTIONS: Using the map on the previous page, answer the following questions.

- | | |
|--|---|
| <ol style="list-style-type: none"> 1 According to the map, what is the distance, in miles, between Boston and Ft. Beauséjour?
 A about 140 miles
 B about 280 miles
 C about 362 miles
 D about 500 miles 2 Which of the following <u>best describes</u> what the map shows?
 A military actions during the French and Indian War
 B how big New France was
 C the size of the British navy
 D who won the French and Indian War | <ol style="list-style-type: none"> 3 At which of the following locations did a battle take place?
 A Halifax
 B Fort Niagara
 C Quebec
 D New York City 4 Which of the following was a French victory?
 A Louisbourg
 B Ft. Niagara
 C Ft. Duquesne
 D Montreal |
|--|---|



MMS 8th Grade



NTI Day 2

Math <u>Erica.Arnette@mboro.kyschools.us</u>	Approximating Irrational Numbers
Language Arts <u>Wendy.Pillion@mboro.kyschools.us</u>	"Tuck Everlasting"
Science <u>Alex.Pratt@mboro.kyschools.us</u>	Compare and Infer
Social Studies <u>Amanda.Day@mboro.kyschools.us</u>	Interpreting Diagrams

Name

8th Grade Math
NTI Day 2

Date _____

Approximations of Irrational Numbers - Matching Worksheet

Match the word problems to their answers. Write the letter of the answer that matches the problem.

- | | | |
|----------|--|----------------------------|
| _____ 1. | Find the approximation of $\sqrt{71}$ | a. $\sqrt{11} < \sqrt{13}$ |
| _____ 2. | Find the approximation of $\sqrt{180}$ | b. $\sqrt{21} > \sqrt{20}$ |
| _____ 3. | Find the approximation of $\sqrt{99}$ | c. $\sqrt{7} < \sqrt{8}$ |
| _____ 4. | Find the approximation of $\sqrt{150}$ | d. 9.94 |
| _____ 5. | Compare $\sqrt{11}$ and $\sqrt{13}$ | e. 8.42 |
| _____ 6. | Compare $\sqrt{7}$ and $\sqrt{8}$ | f. 13.41 |
| _____ 7. | Compare $\sqrt{18}$ and $\sqrt{19}$ | g. 12.24 |
| _____ 8. | Compare $\sqrt{20}$ and $\sqrt{21}$ | h. $\sqrt{22} < \sqrt{23}$ |
| _____ 9. | Compare $\sqrt{22}$ and $\sqrt{23}$ | i. $\sqrt{19} > \sqrt{18}$ |



Name 8th Grade Math
NTE Day 2

Date _____

Approximations of Irrational Numbers - Independent Practice Worksheet

Complete all the problems. Make sure to draw pictures to help you solve the problems.

1. Find the approximation of $\sqrt{66}$
2. Find the approximation of $\sqrt{82}$
3. Find the approximation of $\sqrt{102}$
4. Find the approximation of $\sqrt{20}$
5. Find the approximation of $\sqrt{9}$
6. Compare $\sqrt{11}$ and $\sqrt{12}$
7. Compare $\sqrt{3}$ and $\sqrt{5}$
8. Compare $\sqrt{8}$ and $\sqrt{10}$
9. Compare $\sqrt{14}$ and $\sqrt{15}$
10. Compare $\sqrt{17}$ and $\sqrt{19}$



5 Tuck Everlasting

by Natalie Babbitt

NTIA
Lang. Arts

In this passage Winnie is approached by a mysterious stranger.
Who is he? What does he want?

At sunset of that same long day, a stranger came strolling up the road from the village and paused at the Fosters' gate. Winnie was once again in the yard, this time intent on catching fireflies, and at first she didn't notice him. But, after a few moments of watching her, he called out, "Good evening!"

He was remarkably tall and narrow, this stranger standing there. His long chin faded off into a thin, apologetic beard, but his suit was a jaunty yellow that seemed to glow a little in the fading light. A black hat dangled from one hand, and as Winnie came toward him, he passed the other through his dry, gray hair, settling it smoothly. "Well, now," he said in a light voice. "Out for fireflies, are you?"

"Yes," said Winnie.

"A lovely thing to do on a summer evening," said the man richly. "A lovely entertainment. I used to do it myself when I was your age. But of course that was a long, long time ago." He laughed, gesturing in self-deprecation with long, thin fingers. His tall body moved continuously; a foot tapped, a shoulder twitched. And it moved in angles, rather jerkily. But at the same time he had a kind of grace, like a well-handled marionette. Indeed he seemed almost to hang suspended there in the twilight. But Winnie, though she was half-charmed, was suddenly reminded of the stiff black

ribbons that had hung on the door of the cottage for her grandfather's funeral. She frowned and looked at the man more closely. But his smile seemed perfectly all right, quite agreeable and friendly. "Is this your house?" asked the man, folding his arms now and leaning against the gate.

"Yes," said Winnie. "We've lived here forever."

"Forever," the man echoed thoughtfully.

It was not a question, but Winnie decided to explain anyway. "Well, not forever, of course, but as long as there've been any people here. My grandmother was born here. She says this was all trees once, just one big forest everywhere around, but it's mostly all cut down now. Except for the wood."

"I see," said the man, pulling at his beard. "So of course you know everyone, and everything that goes on."

"Well, not especially," said Winnie. "At least, I don't. Why?"

The man lifted his eyebrows. "Oh," he said, "I'm looking for someone. A family."

"I don't know anybody much," said Winnie, with a shrug. "But my father might. You could ask him."

"I believe I shall," said the man. "I do believe I shall."

At this moment the cottage door opened, and in the lamp glow that spilled across the grass, Winnie's grandmother

BITV

Lang. Arts
Day 2²⁵

appeared. "Winnifred? Who are you talking to out there?"

"It's a man, Granny," she called back.

"He's looking for someone." ■

✓ Enter your reading time below. Then look up your reading speed on the Words-per-Minute table on page 130.

Reading Time _____

Reading Speed _____

Enter your reading speed on the Reading Speed graph on page 131.

Comprehension

Put an **X** in the box next to the correct answer for each question or statement. Do not look back at the selection.

1. What time of day does this story take place?
☐ a. at dawn
☐ b. at noontime
☐ c. at sunset
2. Winnie was in her yard
☐ a. exploring.
☐ b. catching fireflies.
☐ c. looking for her father.
3. The stranger is
☐ a. tall and bearded.
☐ b. old and sad.
☐ c. short and narrow.
4. As a child the stranger said he also
☐ a. laughed loudly.
☐ b. collected fireflies.
☐ c. played with a marionette.

5. Winnie lived in a
☐ a. farmhouse.
☐ b. country inn.
☐ c. cottage.

6. Winnie said she and her family had lived there
☐ a. for a short time.
☐ b. forever.
☐ c. for 10 years.

7. Winnie thinks the stranger should talk to her
☐ a. grandfather.
☐ b. father.
☐ c. grandmother.

8. Who was the stranger looking for?
☐ a. a family
☐ b. Winnie's grandmother
☐ c. a missing brother

_____ Number of correct answers
Enter this number on the
Comprehension graph on page 132.

Critical Thinking

Put an **X** in the box next to the best answer for each question or statement. You may look back at the selection if you'd like.

1. What kind of mood or feeling does the author create in this story?
☐ a. mysterious
☐ b. funny
☐ c. sad

Date

8th Grade Science

Compare and Infer

NTI Day 2

Comparing and inferring both start with careful observations. When you compare things, you make note of both their similarities and differences. Sometimes the data is arranged in a table or a graph to make the comparisons more obvious. Inferring is using logical reasoning to arrive at explanations for observations. Inferences are based on judgment and are not always correct.

Think About Comparing and Inferring

Conifers are vascular plants. Therefore, they have leaves. Although they don't look like the leaves you are familiar with, pine needles are true leaves. However, they differ in some ways from the broad leaves of the oak or maple tree. The chart below compares a pine needle to an oak or maple leaf.

Characteristic	Broad Leaf	Pine Needle
Size and Shape	broad and flat, thin	long and narrow, thick
Surface Exposed	much surface exposed	little surface exposed
Veins	many veins	no veins evident
Flexibility	leaf is soft and flexible	needle surface is hard
Season	leaves drop in winter	leaves stay on all year round

1. Because pine needles are true leaves, what four things can you infer must be present in both the broad leaf and the pine needle? _____

2. Conifers flourish in difficult northern environments that are cold and dry, places where broad-leaved trees cannot grow. How are needles adapted to this climate?

3. What could you infer by comparing the pine needle with the broad leaf?

Standardized Test Practice

ACTIVITY 2
Interpreting Diagrams

KCCA: Government and Civics SS-08-1.2.1

A simplified drawing that shows how something works is called a **diagram**. Some diagrams use arrows to show movement or relationships. For example, the diagram in this activity shows the system of checks and balances at work in our government.

★ Learning to Interpret a Diagram

Use the following guidelines to help you interpret diagrams.

- Read the diagram's title to find out the subject or concept.
- Study the information on the diagram, noting the direction of the arrows.
- Identify the relationships among the parts of the diagram.

★ Practicing the Skill

DIRECTIONS: Read the selection below and complete the activity that follows.

Checks and Balances

To meet the goals listed in the Preamble, the writers of the Constitution divided the national government into three parts, or branches. The legislative branch—Congress—makes the laws. The executive branch—the president, the vice president, and executive workers—makes sure those laws are carried out. The judicial branch—the court system, including the Supreme Court—decides how the laws should be applied in individual cases.

To keep any one of these three branches of government from becoming too powerful, the Framers of the Constitution also set up a system of checks and balances. Under this system each branch of government is

able to check, or limit, the power of the others.

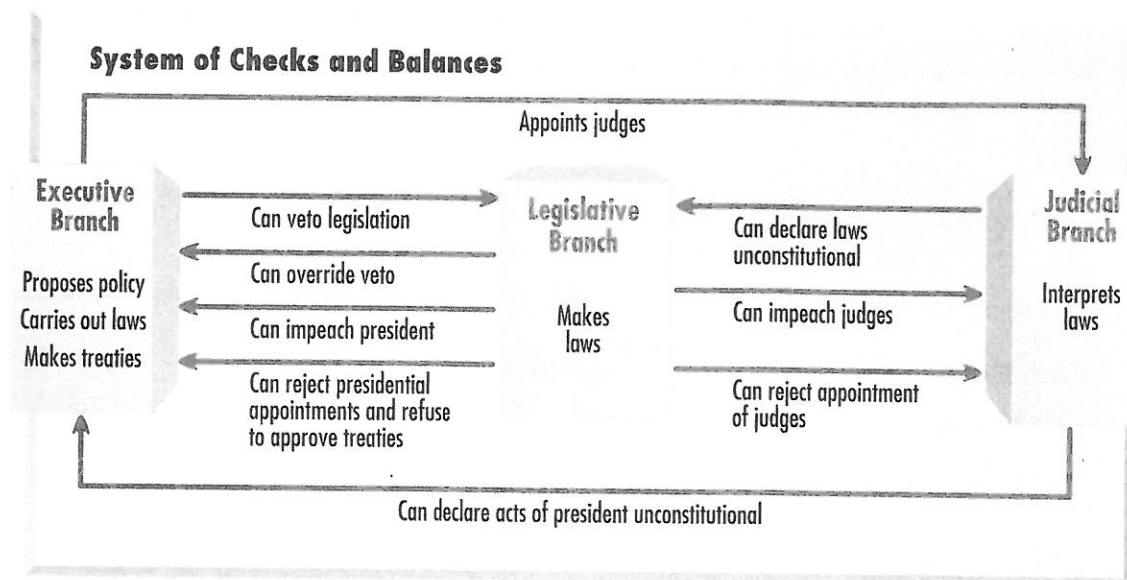
The system of checks and balances helps maintain a balance among the three branches.

The president, for example, can check Congress with his veto power. Veto power is the power to reject a bill passed by Congress and keep it from becoming a law. Congress can also check the president's power by overriding a veto. To do so, however, requires a vote by two-thirds of the members of both houses of Congress. The Supreme

Court can check the power of both the legislative and executive branches with its power to decide the meaning of laws and to declare laws or actions unconstitutional.



DIRECTIONS: Diagrams provide insights about governmental relationships. Study the diagram below and answer the following questions.



1. What information is shown in the diagram?

2. What do the arrows on the diagram indicate?

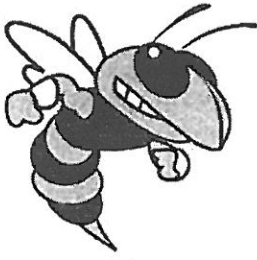
3. How do you think the system of checks and balances has affected government in the United States?



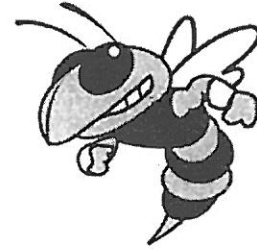
Standardized Test Practice

DIRECTIONS: Answer the following questions based on the diagram above.

- | | |
|---|--|
| <p>1 How can the judicial branch check the power of the executive branch?</p> <ul style="list-style-type: none"> A It can veto legislation. B It can impeach the president. C It can declare presidential acts unconstitutional. D It can override a veto. | <p>2 How can the executive branch check the power of the legislative branch?</p> <ul style="list-style-type: none"> A It can declare laws unconstitutional. B It can veto legislation. C It can impeach members of the legislative branch. D It can appoint judges to federal courts. |
|---|--|



MMS 8th Grade



NTI Day 3

Math <u>Erica.Arnette@mboro.kyschools.us</u>	Two & Multi- Step Equations
Language Arts <u>Wendy.Pillion@mboro.kyschools.us</u>	"Mystery Monsters of Loch Ness"
Science <u>Alex.Pratt@mboro.kyschools.us</u>	Observe & Communicate
Social Studies <u>Amanda.Day@mboro.kyschools.us</u>	Interpreting Maps & Diagrams

Two-Step Equations: Integers

Sheet 1

Solve each equation.

1) $5n + 5 = 45$

2) $\frac{y}{6} - 3 = -11$

3) $4(g - 1) = 24$

4) $\frac{v + 9}{15} = 0$

5) $-40 = 12x + 8$

6) $-2p - 3 = -19$

7) $13 = \frac{w - 14}{2}$

8) $36 = 1 + 7a$

9) $-9 = -11 + \frac{b}{8}$

10) $2q + 10 = 7q$

Multi-Step Equations: Integers

Level 1: S1

Solve each equation.

1) $3(x - 4) = 2(-2x + 1)$

2) $8q + 6 = 4q - 14$

3) $9 = \frac{v + 4}{v + 12}$

4) $7 - (5t - 13) = -25$

5) $-3(7p + 5) = 27$

6) $14 + 13y = 20y - 21$

7) $\frac{-8 - 3k}{2} = 11$

8) $-15b + 21 + 5b = -19$

6 Mystery Monsters of Loch Ness *Lang Arts*

by Patricia Lauber

Do you like mysteries? Do you like stories about monsters? If you answered yes to both questions, you're in luck. This passage is about a large monster that lives in a lake in Scotland. Or does it? See what you think.

In the north of Scotland, there is a long, narrow lake. Mountains rise along its sides. Between them, the big lake stretches as far as the eye can see. The water is deep and dark. This is Loch Ness—*loch* is the Scottish word for "lake."

Loch Ness is a lake with a mystery. The mystery goes back hundreds of years. It has to do with a big, strange creature that was said to live in the loch.

Local people believed in this creature. They spoke of it as "the beastie in the loch." Most of the time, they said, the beastie lived under water. But once in a while it came to the surface. Then someone might catch sight of its head or its back or tail. What was it? No one could say, for no one ever got a good look at it. They thought it must be some kind of fish, since it lived in the loch. But it did not look like any fish they knew.

Before the 1930s, few outsiders had heard of the beastie. Then a road was built along Loch Ness. Many visitors began seeing the loch and hearing about the beastie. Some believed they had caught sight of it.

One of these sightings was written up for a local newspaper. When the editor read the story, he said, "If it's that big, we'll have to call it a monster." That was how the beastie in the loch became the

Loch Ness monster. From then on, many papers printed stories about the monster. They made good reading.

These stories made the monster famous. But many readers thought it was a joke. To them, a monster was a make-believe animal, something they might see in a movie. They thought the Scots had invented a monster to draw tourists to the loch.

Accounts of the Loch Ness monster also sounded like jokes. Many people thought they had seen part of it. The parts added up to a very strange creature indeed.

It was said to be 20 or 30 feet long. The body was thick in the middle, but it thinned out toward the ends. There was a long neck with a small head. Some people had seen what looked like horns or feelers—two fleshy stalks that grew out of the head. Some had seen a stiff mane or fin on the neck and shoulders.

Sometimes the back looked like an overturned boat. At other times it had one, two, or three humps. Some people saw two or four flippers. They said the monster swam by paddling with its flippers. Other people saw no flippers. They said it swam by using its powerful tail.

The monster seemed shy. It never attacked boats or people. It was easily

startled by noises, such as the slam of a car door or the putt-putt of an outboard motor. Any noise caused it to disappear. Sometimes the Loch Ness monster sank silently from sight. ■

- ✓ Enter your reading time below. Then look up your reading speed on the Words-per-Minute table on page 130.

Reading Time _____

Reading Speed _____

Enter your reading speed on the Reading Speed graph on Page 131.

Comprehension

Put an **X** in the box next to the correct answer for each question or statement. Do not look back at the selection.

1. *Loch* is the Scottish word for
 - ☐ a. scary.
 - ☐ b. monster.
 - ☐ c. lake.
2. Where is Loch Ness located?
 - ☐ a. in central Scotland
 - ☐ b. in the south of Scotland
 - ☐ c. in the north of Scotland
3. The mystery of Loch Ness goes back
 - ☐ a. hundreds of years.
 - ☐ b. thousands of years.
 - ☐ c. 50 years.
4. What did the local people call the creature in the loch?
 - ☐ a. the monster
 - ☐ b. the beastie
 - ☐ c. the big fish

5. People said that the creature lived most of the time
 - ☐ a. under water.
 - ☐ b. in a cave.
 - ☐ c. under an overturned boat.

6. Who first called the creature a monster?
 - ☐ a. a visiting tourist
 - ☐ b. a local newspaper editor
 - ☐ c. the author of this selection

7. The main reason the creature became famous is
 - ☐ a. many visitors saw it.
 - ☐ b. many papers printed stories about it.
 - ☐ c. local people talked about it.

8. Some people thought the Scots invented the monster to
 - ☐ a. keep tourists away.
 - ☐ b. amuse themselves.
 - ☐ c. draw tourists to the loch.

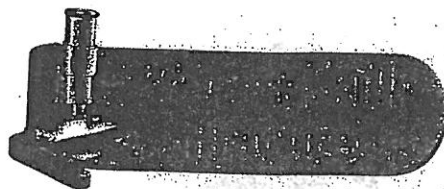
_____ Number of correct answers
Enter this number on the
Comprehension graph on page 132.

Critical Thinking

Put an **X** in the box next to the best answer for each question or statement. You may look back at the selection if you'd like.

1. The author wrote this selection to
 - ☐ a. frighten you with a monster story.
 - ☐ b. inform you about a mystery.
 - ☐ c. persuade you to visit Loch Ness.

Name NTI Day 3
Date 8th Grade Science



Observe and Communicate

Observing is the most basic of all scientific process skills. Careful observation also means recording what you observe. Good record-keeping makes communication among scientists much easier and more effective. Communicating in science means informing others of the results of your experiments in an organized fashion.

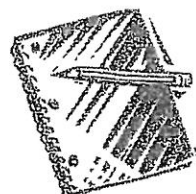
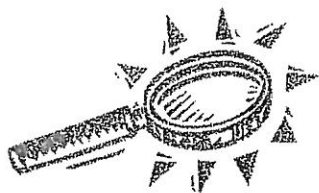
Think About Observing and Communicating

Alicia obtained two stalks of fresh celery, one with the leaves removed and one with the leaves still on. She placed the stalks together in a glass of water to which some red food coloring had been added. After four hours she checked the celery stalks. Red color was rising in both of them, but much faster in the one that still had leaves. She left the celery stalks in the colored water overnight. When she checked them the next morning, she saw little red marks in the leaves of the leafy stalk. Then she removed the stalks from the water and cut across each one about 5 centimeters from its bottom. The "strings" in each stalk were red, and there were little red dots on the outer edge of each stalk.

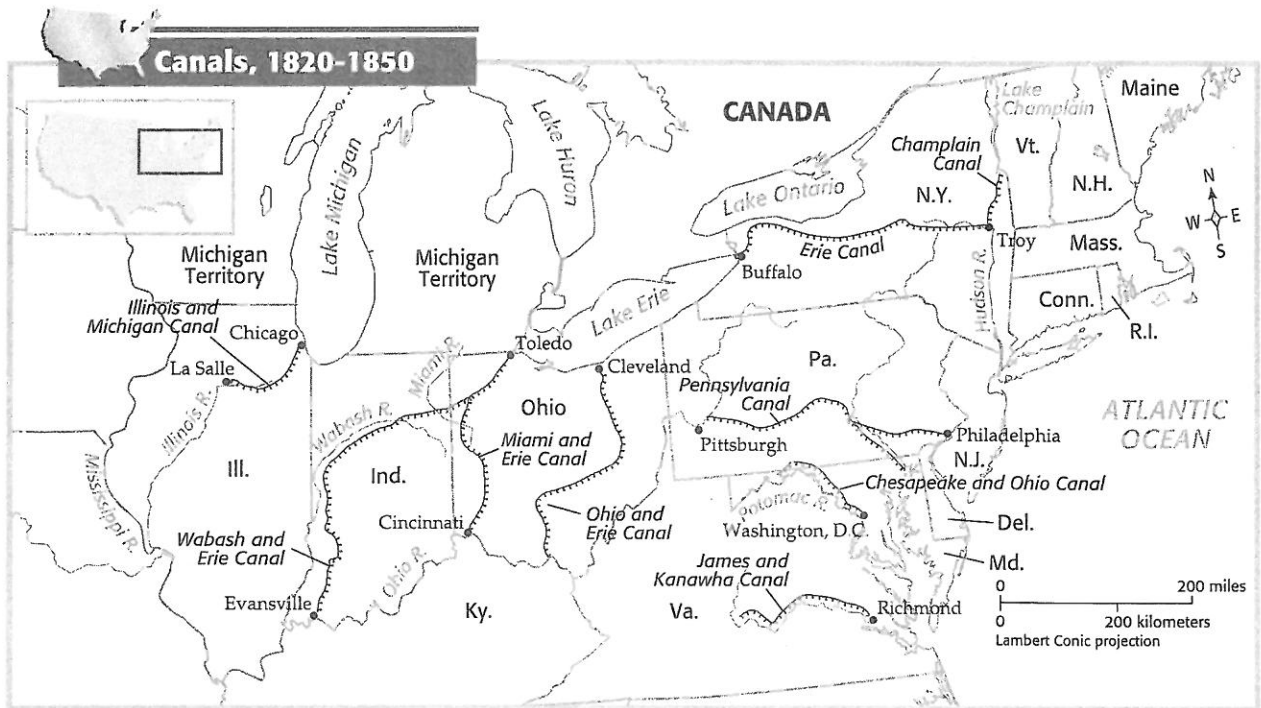
1. What are some ways that Alicia could record and communicate her observations?

2. Alicia knew that plants get rid of excess moisture through the stomata in their leaves. With this knowledge, why do you think the red color rose faster in the stalk with the leaves?

3. How could Alicia effectively communicate this result to someone else?

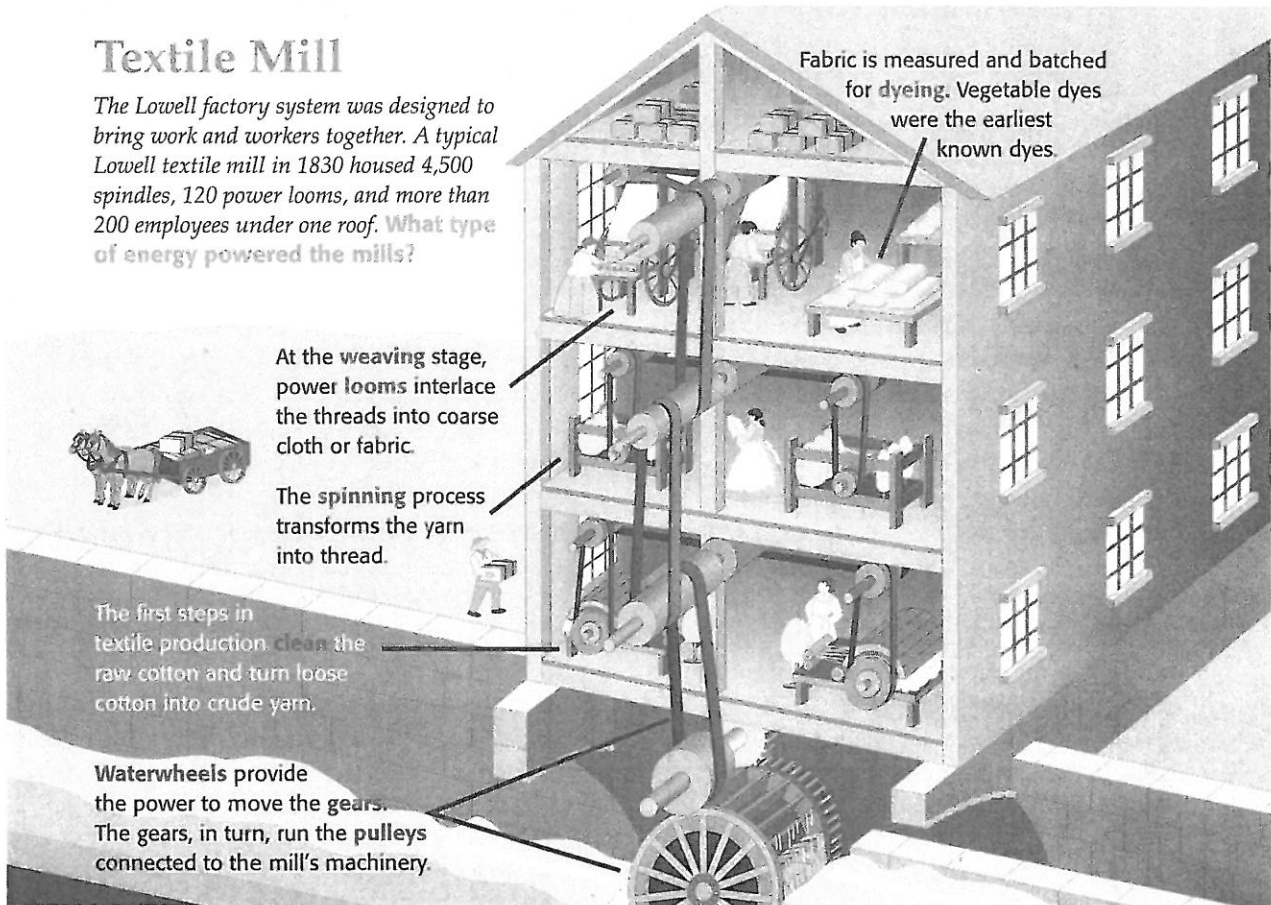


DIRECTIONS: Diagrams and maps together provide insights about historical events and relationships. Study the diagram and map below and answer the following questions.



Textile Mill

The Lowell factory system was designed to bring work and workers together. A typical Lowell textile mill in 1830 housed 4,500 spindles, 120 power looms, and more than 200 employees under one roof. What type of energy powered the mills?



1. What information is shown in the diagram and the map?

1. What information is shown in the diagram and the map?

2. What do the lines on the diagram indicate?

3. How do you think the development of textile mills affected New England?



Standardized Test Practice

DIRECTIONS: Answer the following questions based on the map and diagram on the previous page.

1 What source of energy was used to run the power looms in New England textile mills?

- A coal
- B electricity
- C steam
- D water

2 How did the canal system of the early 1800s in the United States benefit the textile mills and other factories of New England?

- A Workers could use the canals to commute to work each day.
- B The canals could be used to ship goods to consumers in the West.
- C The canals provided recreational activities for people in New England.
- D The canals allowed New England factory owners to import goods from Europe.

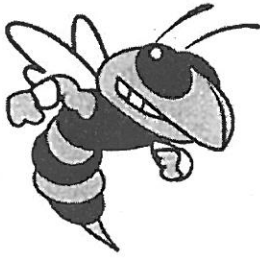
In the early 1800s New England became a center of manufacturing in the United States. It was here that the Industrial Revolution first took hold in America. New England had plenty of people to work in factories and many rushing rivers and streams that provided the waterpower to run machinery. New England was also close to other resources like coal and iron, and it had several ports for shipping.

Most importantly, merchants in New England had capital—money for investment. The merchants of Boston and Providence grew wealthy as American shipping thrived in the late 1700s and early 1800s. Their money—capital—was essential for developing needed machinery and building industries.

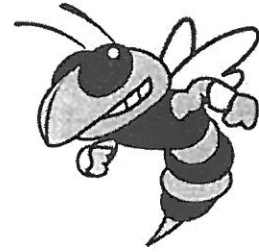
In 1811 Francis Cabot Lowell, a wealthy New

Englander, traveled to Great Britain where he studied and made detailed drawings of British factories and machinery. Upon his return to the United States Lowell borrowed capital to establish a textile mill, which he called the Boston Manufacturing Company. Lowell used the knowledge he gained in England and improved upon the design of the British power looms.

In 1814 he opened a textile plant in Waltham, Massachusetts. For the first time, all the stages of cloth making were performed under one roof. Lowell's mill launched the "factory system," a system bringing manufacturing steps together in one place to increase efficiency. The factory system was a significant development in the way goods were made—and an important part of the Industrial Revolution.



MMS 8th Grade



NTI Day 4

Math <u>Erica.Arnette@mboro.kyschools.us</u>	Equations with Variables on Both Sides
Language Arts <u>Wendy.Pillion@mboro.kyschools.us</u>	"The Great Brain at the Academy"
Science <u>Alex.Pratt@mboro.kyschools.us</u>	Drawing Conclusions
Social Studies <u>Amanda.Day@mboro.kyschools.us</u>	Interpreting Primary Sources

Name : _____

Score : _____

Teacher : 8th Grade Math

Date : _____

NTI Day 4

Solving Equations of Different Solution Types

Solve each equation.

1) $-z + z = -9$

4) $7 = 2(9 + 3e)$

2) $-(z - 8) + 4 = -(6 + z)$

5) $-47 = 5(-9 - 4b) + 20b$

3) $90 + 9c = 9(c + 10)$

6) $5(v + 7) = 3 - (-5v - 32)$

State whether each equation has one, infinite or no solutions. If just one solution, solve for the variable.

7) $-6k + 10 + 6k = 10$

10) $4(c - 6) = -24 + 4c$

8) $7(6 - 10h) + 66h + 4h = 5$

11) $3 - 8c = 2 + 6(7 - 5c)$

9) $12(t + 5) - 44 = 2(6t + 8)$

12) $6 = -10x + 2 + 10x$



7 The Great Brain at the Academy *Lang. Arts*

by John D. Fitzgerald

Tom, a student at a private boy's school, has a plan to mix business with education. What kind of business is he planning? Will his friends help him carry out the plan? In this passage you'll find the answers.

Monday evening at seven twenty-five Tom made his usual announcement. "You fellows are going to have to use the washroom on the second floor for the next half hour."

Then he went inside the washroom and locked the door. He climbed through the trapdoor to the attic and opened the dormer window. In a couple of minutes he saw Daniel coming down the street. Jerry had doubted Daniel would cooperate. But Tom didn't have any doubts after learning Daniel had spent two years at the academy and stood to make fifty cents besides.

Tom let down the string with the rock tied to it. He watched Daniel remove the rock and tie the string to one end of the rope. Then he hauled it up, coiled it on the floor, and returned to the washroom. He did his cleaning job and then joined his three friends on Jerry's bunk.

"Everything went according to plan," he whispered. "Tomorrow you all start earning your ten percent."

"Hold it," Phil said. "I thought I had already earned my ten percent by getting Daniel to buy the rope for you."

"You haven't even started to earn it," Tom said. "Here is the way we will work it. Two of you will go with me to the washroom at seven thirty tomorrow night. One will have to stay and clean the washroom. The

other one will go up to the attic with me to help with the rope. The third can remain in the dormitory. You will each take turns doing the different things that must be done to get the candy store going."

"Count me out," Phil said to Tom's surprise. "We will all get expelled for sure if we get caught smuggling candy into the academy."

Jerry shook his head. "What a worry wart you are," he said with disgust. "We haven't even opened the candy store and already you've got us all expelled."

"I can't help it," Phil said. "This is the only Catholic academy in Utah. And if I get expelled my mother and father will never forgive me."

Tom hadn't expected this. He looked at Tony.

"What about you, Tony?" he asked.

"Haw," Tony said.

"Cut out that haw business," Tom said. "Are you in or out?"

Tony hesitated a moment. "I think Phil is right," he said.

"In that case," Tom said, "would you and Phil mind leaving us? What I have to say is for the ears of stockholders in the corporation only. And Jerry and I will pick two other fellows to become stockholders."

Phil began biting his lip. "You mean we aren't even friends anymore?" he asked.

Jerry spoke before Tom could answer.

"Who wants to be friends with a couple of nervous old worry warts?" he asked.

"Jerry is right," Tom said. "We don't want to have anything to do with a couple of fellows who are going to be worrying all the time about something that can't even happen." ■

- ✓ Enter your reading time below. Then look up your reading speed on the Words-per-Minute table on page 130.

Reading Time _____

Reading Speed _____

Enter your reading speed on the Reading Speed graph on Page 131.

Comprehension

Put an **X** in the box next to the correct answer for each question or statement. Do not look back at the selection.

1. Who had spent two years at the academy?
☐ a. Jerry
☐ b. Tom
☐ c. Daniel
2. What are the boys trying to smuggle into the academy?
☐ a. candy
☐ b. sandwiches
☐ c. magazines
3. Where does Tom plan to smuggle the goods into the academy?
☐ a. through a classroom window
☐ b. through an attic window
☐ c. through a washroom window

4. If the boys are caught smuggling, they could

- ☐ a. be expelled.
- ☐ b. be suspended.
- ☐ c. lose all their money.

5. The academy is located in the state of

- ☐ a. California.
- ☐ b. Idaho.
- ☐ c. Utah.

6. In that state, the academy is the only


- ☐ a. boy's academy.
- ☐ b. Catholic academy.
- ☐ c. private academy.

7. Tom calls the boys who will take part in his plan

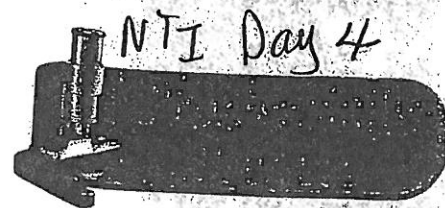
- ☐ a. worry warts.
- ☐ b. stockholders.
- ☐ c. fellow smugglers.

8. Who will pick two other fellows to join the corporation?

- ☐ a. Tom and Jerry
- ☐ b. Tony and Phil
- ☐ c. Daniel

 _____ Number of correct answers
Enter this number on the
Comprehension graph on page 132.

Name _____
Date 8th Grade Science



Draw Conclusions

To be able to draw valid conclusions from an experiment, you must make and record observations that are accurate and complete. Then you can use your data to draw reasonable conclusions.

Think About Drawing Conclusions

Dante surveyed three different types of land for a biodiversity study: cultivated property, partly cultivated property, and wild land. He defined *cultivated* as a lawn that received a lot of care from its owner, *partly cultivated* as a lawn that received an average amount of care, and *wild* as an area that received no care or interference from human beings. He marked off an area 6 ft by 20 ft on each type of land. Then he wrote down the different kinds of plants he found, counting their number when possible. He used his data to make the following chart.

Cultivated Property	Partly Cultivated Property	Wild Land
Grass Clover Crab Grass 4 Dandelion 2 Sour Grass	22 Wild Mustard 11 Cheeseweed 11 Groundsel 4 Blue-Curls 3 Yellow Sweet Clover 2 Thistle 1 Red-Stem Filaree 1 Telegraph Weed "unidentified" grasses	Wild Oats 11 Wild Radish 11 Telegraph Weed 6 Milkweed 1 Lupine

1. What conclusion can you draw from Dante's data? _____

2. Is this the conclusion you expected when you first imagined surveying the three different types of land? Why or why not? _____

3. Why do you think Dante got the results he did? _____

Name _____

Date _____

Class _____

8th grade U.S. History Day 4

DIRECTIONS: Primary sources may use unfamiliar words or phrases, or even use words differently than we might use them today. As you read a primary source, pause when you reach an unfamiliar word and make sure you understand what the word refers to—a place? a food? a person? Study the primary source and answer the following questions.

1. What is the general subject of the Seneca Falls Declaration of 1848?

2. What key words or phrases are used?

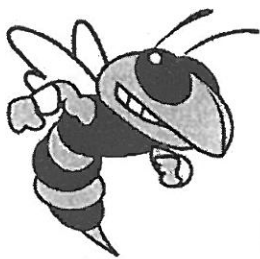
3. Explain why you disagree or agree with the Seneca Falls Declaration.



Standardized Test Practice

DIRECTIONS: Use the primary source on the previous page to answer the following questions.

- 1 According to the Seneca Falls Declaration, which of the following statements is most accurate?
- A The Declaration called for government action to guarantee women's rights.
 - B The authors did not believe that legal action was required.
 - C The loss of women's rights was a recent historical event.
 - D Women had the same rights as men in all but a few areas.
- 2 Why did the authors of the Seneca Falls Declaration of 1848 mimic the language of the U.S. Declaration of Independence?
- A They were in a hurry to write the Declaration for the convention and did not have the time to create a new format.
 - B The Declaration of Independence was housed in New York State and was easily accessible to convention organizers.
 - C The authors wished to draw parallels between the struggle for independence of the colonies and the struggle of women for equal rights.
 - D The authors of both documents were the same.



MMS 8th Grade



NTI Day 5

Math <u>Erica.Arnette@mboro.kyschools.us</u>	Line & Angle Relationships
Language Arts <u>Wendy.Pillion@mboro.kyschools.us</u>	"Battle of the Ballot"
Science <u>Alex.Pratt@mboro.kyschools.us</u>	Observe & Compare
Social Studies <u>Amanda.Day@mboro.kyschools.us</u>	Perceiving Cause-and-Effect Relationships

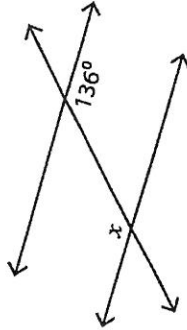
NTI Day 5

Angles in Transversal

Easy: 51

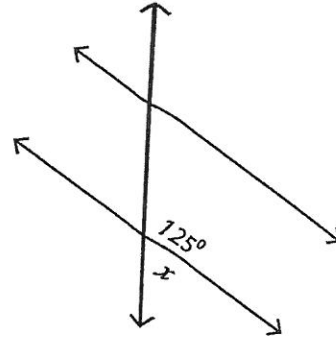
Find the value of x . *Identify the type of angle pair.*

1)



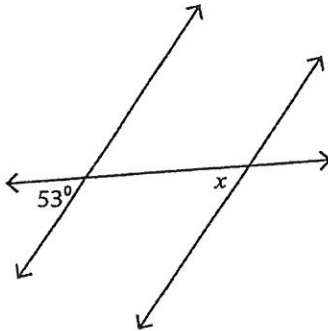
$x =$ _____

2)



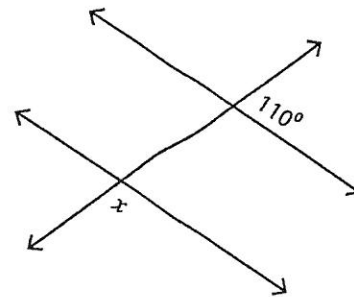
$x =$ _____

3)



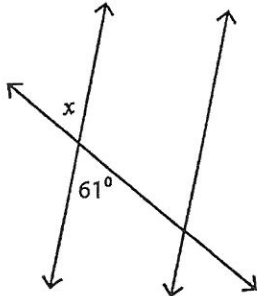
$x =$ _____

4)



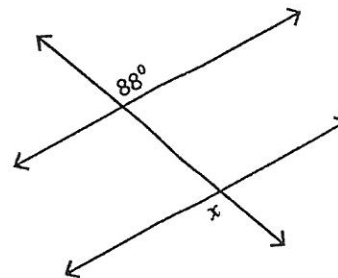
$x =$ _____

5)



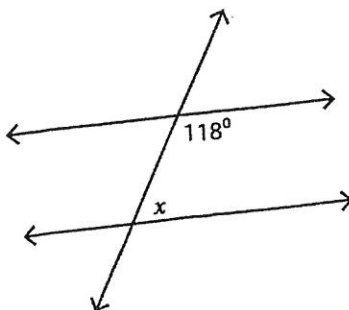
$x =$ _____

6)



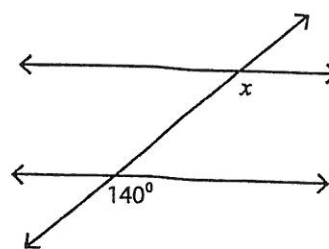
$x =$ _____

7)



$x =$ _____

8)



$x =$ _____

27th Nov 2001 8 Battle of the Ballot

NTI 5
Lang. Arts

Can you imagine a time when women in the United States were not allowed to vote? This selection tells about the long battle women fought to gain a right that many citizens take for granted today.

Picture yourself living in 1848. Women in the United States aren't allowed to vote. They can't own property. They can't serve on juries or even go to most colleges!

Many women were upset about these things. They knew that change had to come, and soon. In 1848, about 300 women met in Seneca Falls, New York, to hold the first Women's Rights Convention.

At this meeting, the women talked about their goals. They wanted to buy property in their own names. Like men, they wanted the right to a good education. Most important, they wanted the right to vote. With the vote, they would be the political equals of men.

For many years, women had banded together to fight social problems. Many groups had spoken out against slavery. Others fought to ban alcoholic drinks or to improve education. Word spread about the brave women in Seneca Falls. Other groups joined the fight for woman suffrage.

Two women stand out as the leaders in the struggle for the right to vote. Neither lived to see the laws changed. But their hard work started the movement. These women refused to let the dream of equal rights die.

Elizabeth Cady Stanton was the mother of six children. She was an excellent

writer and speaker. Her father had been a judge. As a child, Stanton saw how unfair the law was to women, and she vowed to change it.

Mrs. Stanton's best friend was Susan B. Anthony. Anthony grew up in a Quaker family. She had been active in the fight against slavery. She had strong feelings about justice.

Anthony taught school for several years. One day, she learned that a male teacher was earning \$40 a month while Anthony made only \$10. The pay was different only because she was a woman. Her sense of justice told her to work for women's rights.

Anthony began to organize women to try to change the law. She planned women's meetings and conventions. She gave speeches written by Stanton, who was often busy with her young children.

In 1869, Anthony and Stanton formed the National Woman Suffrage Association (NWSA). The group's goal was an amendment to the federal Constitution that gave women the right to vote. That year another group formed called the American Woman Suffrage Association (AWSA). This group did not work toward one main law for woman suffrage. Instead, the AWSA strove for a suffrage amendment to each state constitution.

Stanton, Anthony, and many other women spoke to groups of people all

over the United States. They urged citizens to write to their leaders. They asked lawmakers to change the laws. They asked men as well as women to sign petitions. The important question put to the public was "If women are citizens, why can't they vote?"

While they lived, Anthony and Stanton worked tirelessly for the cause. Other courageous women continued the fight. Finally, after 71 years of struggling, the battle was won. In 1919 Congress passed the Nineteenth Amendment, giving women the right to vote. ■

✓ Enter your reading time below. Then look up your reading speed on the Words-per-Minute table on page 130.

Reading Time _____

Reading Speed _____

Enter your reading speed on the Reading Speed graph on Page 131.

Comprehension

Put an X in the box next to the correct answer for each question or statement. Do not look back at the selection.

1. Which event happened in Seneca Falls, New York?

- ☐ a. The National Woman Suffrage Association (NWSA) was formed.
- ☐ b. The first Women's Rights Convention was held.
- ☐ c. Women were granted the right to vote.

2. Besides the right to vote, women wanted the right to

- ☐ a. buy property in their own names.
- ☐ b. attend school.
- ☐ c. drive a car.

3. How many women attended the first Women's Rights Convention?

- ☐ a. 100
- ☐ b. 300
- ☐ c. 500

4. Elizabeth Cady Stanton found time to fight for women's rights despite the fact that she

- ☐ a. grew up in a Quaker family.
- ☐ b. taught school for several years.
- ☐ c. was the mother of six children.

5. Before working for women's rights, Susan B. Anthony had been active in the fight

- ☐ a. against slavery.
- ☐ b. to protect animals.
- ☐ c. to improve education.

6. What experience did Anthony have while teaching school that helped her decide to work for women's rights?

- ☐ a. She was paid less than a male teacher.
- ☐ b. She was not permitted to teach the best students.
- ☐ c. She was only allowed to teach part-time.

7. Women's battle to win the right to vote lasted for about

- ☐ a. 30 years.
- ☐ b. 50 years.
- ☐ c. 70 years.

Observe and Compare

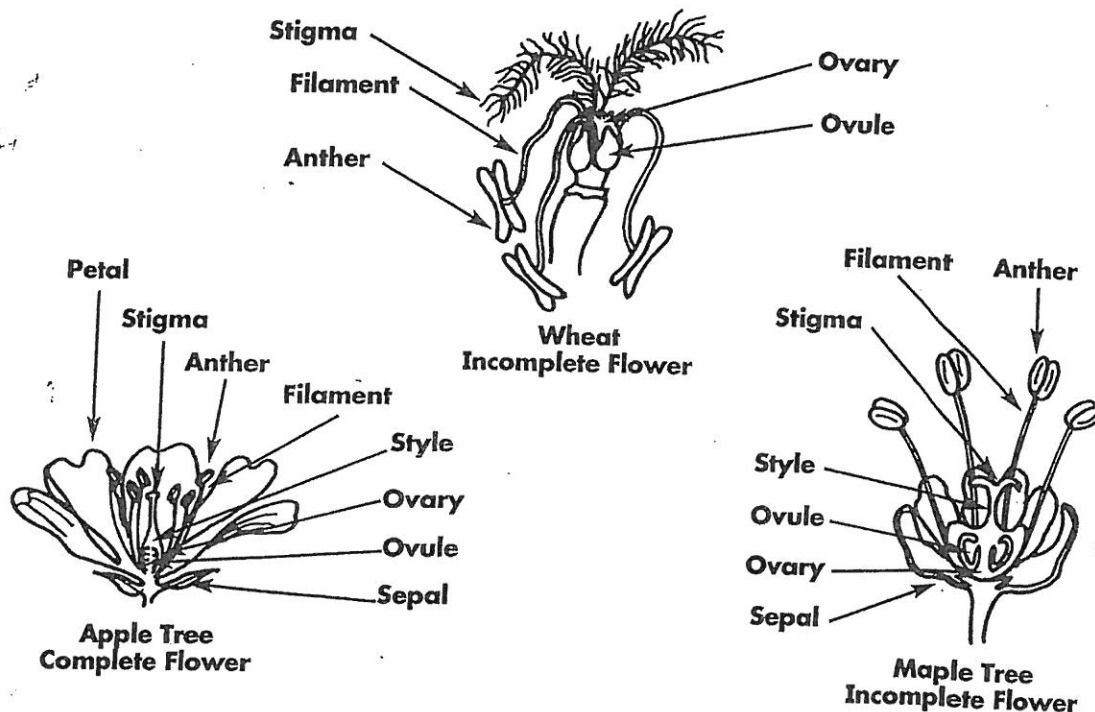
NTI

Day 5

You use your senses of sight, hearing, smell, and touch to study the world around you. Sometimes you use instruments to extend your senses. When you compare observations, you look for what they have in common and how they are different.

Think About Observing and Comparing

Flowers come in a great variety of colors, sizes, shapes, and scents. Some flowers, such as those of the wheat plant, look very different from the flowers you usually find in a typical flower garden. The drawing on the left below shows the parts of what is called a complete flower. The other drawings are also of flowers, but nature has left out some parts. Those flowers are called incomplete flowers.



1. Observe and compare the three drawings. What parts do all the flowers have?

2. Which of the flowers shown are so incomplete that the plant cannot reproduce?

3. If insects and birds are attracted by the colors of a flower's petals, what can you infer about how the wheat flower is pollinated? _____

Standardized Test Practice



ACTIVITY 5

Perceiving Cause-and-Effect Relationships

KCCA: Cultures and Societies SS-08-2.3.1; Economics SS-08-3.1.1; Geography SS-08-4.3.2

Any condition or event that makes something happen is known as a **cause**. What happens as a result of a cause is an **effect**. Cause-and-effect relationships explain why things happen and how actions produce other actions. Cause-and-effect relationships can be simple or complex. Sometimes several different causes produce a single effect. At other times, one cause can produce several effects.

★ Learning to Perceive Cause and Effect

Use the following guidelines to help you perceive cause-and-effect relationships:

- Select an event.
- Compare the situation at the time of the event with conditions before it happened (*causes*) and after it happened (*effects*).
- Look for vocabulary clues to help decide whether one event caused another. Words or phrases such as *brought about*, *produced*, *resulted in*, *when*, and *therefore* indicate cause-and-effect relationships.
- Describe the causes and effects of the event.
- Look for other relationships between the events. Check for other, more complex, connections beyond the immediate cause and effect.

★ Practicing the Skill

DIRECTIONS: Read the selection below and complete the activity that follows.

Indian Removal Act of 1830

While the United States had expanded westward by the 1830s, large numbers of Native Americans still lived in the eastern part of the country. In Georgia, Alabama, Mississippi, and Florida, the Cherokee, Creek, Choctaw, Chickasaw, and Seminole held valuable land. Many white Americans wanted to obtain this land for themselves.

Because the area west of the Mississippi River was dry and seemed unsuitable for farming, few white Americans lived there. Many settlers wanted the United States government to relocate Native Americans living in the Southeast, to force them to leave their land and move west of the Mississippi River. President Andrew Jackson, a man of the frontier himself, supported the settlers' demand for Native American land.

Congress responded by passing the Indian

Removal Act of 1830. The law allowed the federal government to pay Native Americans to move west. Jackson then sent federal officials to negotiate treaties with Indians of the Southeast. Most accepted payment for their lands and agreed to move. In 1834 Congress created the Indian Territory, an area in present-day Oklahoma, for Native Americans of the Southeast.

The Cherokee Nation, however, refused to give up its land. In 1835 the federal government persuaded a few Cherokee to sign a treaty giving up their people's land. Yet most of the 17,000 Cherokees refused to honor the treaty and stayed on their land. In 1838 President Martin Van Buren ordered General Winfield Scott to use troops to remove the Cherokee from their homes and move them west.

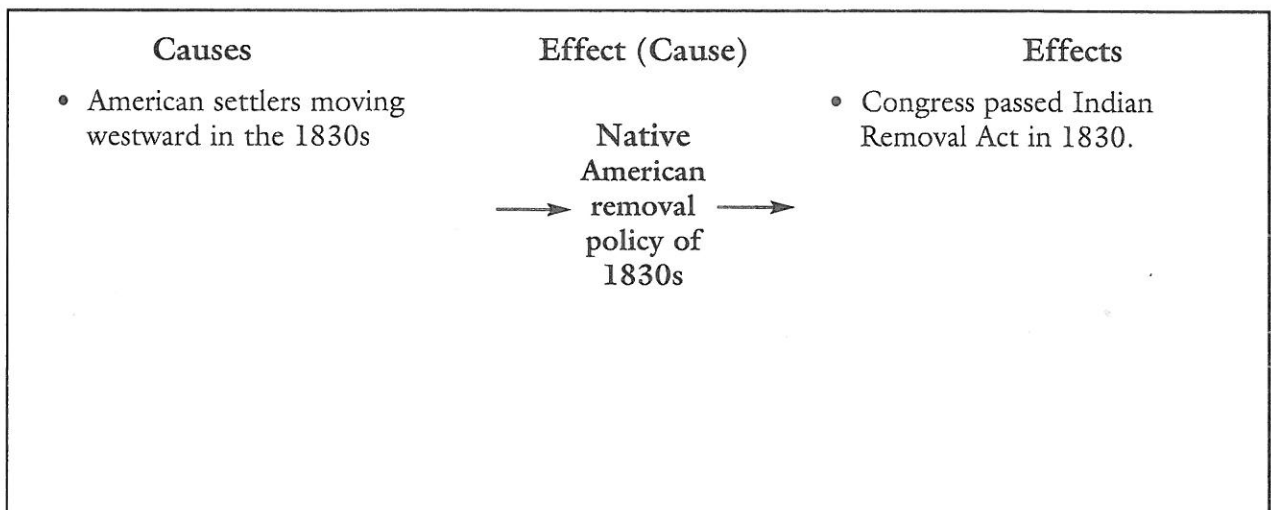
Name _____ Date _____ Class _____

The Cherokee knew that fighting would only lead to their destruction. Filled with sadness and anger, their leaders gave in, and the long march to the west began. One Kentuckian wrote of seeing hundreds of Cherokee marching by: "Even [the] aged. . . nearly ready to drop in the grave, were traveling with heavy burdens attached to their backs, sometimes on frozen ground and

sometimes on muddy streets with no covering for their feet."

Brutal weather along the way claimed thousands of Cherokee lives. The forced journey west became known to the Cherokee as the "Trail Where They Cried." Historians call it "The Trail of Tears."

DIRECTIONS: When studying complex historical events such as the Indian Removal Act and the Trail of Tears, a graphic organizer can help in understanding multiple causes and effects. Fill in the graphic organizer below with information you just read about the causes and effects of removing Native Americans and the Trail of Tears. The first one is done for you.



Standardized Test Practice

DIRECTIONS: After reading the paragraphs above and on the previous page about the removal of Native Americans in the 1830s, answer the following questions.

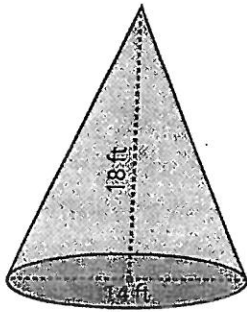
- | | |
|--|--|
| <p>1 Which of the following was a major cause of removing Native Americans and the Trail of Tears in the 1830s?</p> <p>A Native Americans were running out of buffalo to hunt on their original land.</p> <p>B White Americans wanted Native American lands in the Southeast for themselves.</p> <p>C A Supreme Court decision giving Native Americans land in Oklahoma.</p> <p>D The fertile land west of the Mississippi River.</p> | <p>2 Which of the following was a major effect of removing Native Americans and the Trail of Tears in the 1830s?</p> <p>A Thousands of Native Americans died on the march west to Indian Territory.</p> <p>B Native Americans were able to hold onto their lands in the Southeast.</p> <p>C The Supreme Court enforced its decision in favor of Native Americans.</p> <p>D Presidents Jackson and Van Buren supported the claims of Native Americans.</p> |
|--|--|

Volume - Mixed Shapes

ES1

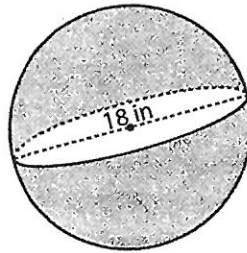
- Find the surface area of each shape.
- Find the exact volume of each shape.

1)



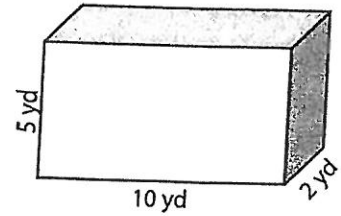
Volume = _____

2)



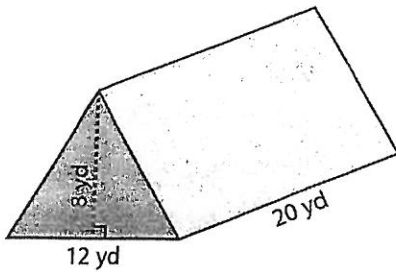
Volume = _____

3)



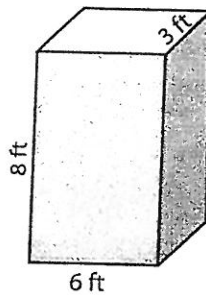
Volume = _____

4)



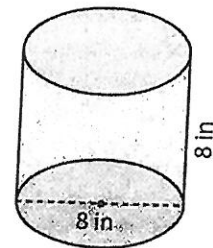
Volume = _____

5)



Volume = _____

6)



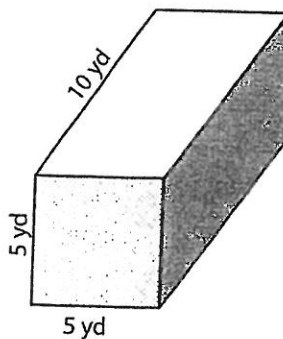
Volume = _____

7)



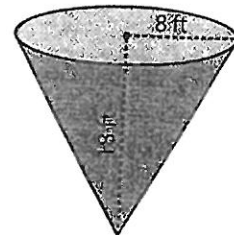
Volume = _____

8)



Volume = _____

9)



Volume = _____

KENTUCKY MATHEMATICS REFERENCE SHEET

Grades 7 and 8

FORMULAS FOR PLANE FIGURES

Parallelogram: $A = bh$

Trapezoid: $A = \frac{1}{2}(b_1 + b_2)h$

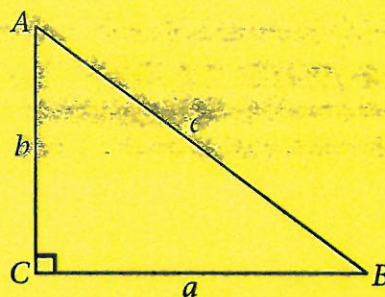
Triangle: $A = \frac{1}{2}bh$

Circle: $C = 2\pi r$
 $A = \pi r^2$

Right Triangle:

The Pythagorean Formula

$$c^2 = a^2 + b^2$$



FORMULAS FOR SOLID FIGURES

Right Prism: $V = Bh$ (B is the area of the base.) *SA = sum of the area of each face*

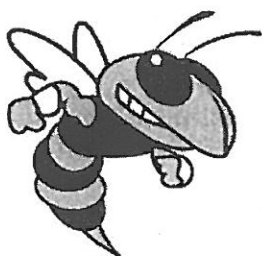
Right Cylinder: $V = \pi r^2 h$ *SA = $2\pi r^2 + 2\pi r h$*

Regular Pyramid: $V = \frac{1}{3}Bh$ *SA = sum of the area of each face*

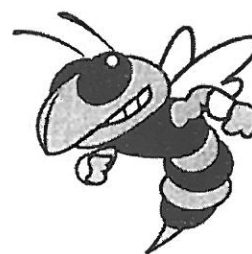
Cube: $V = e^3$
 $SA = 6e^2$

Cone: $V = \frac{1}{3}\pi r^2 h$ *SA = $\pi r^2 + \pi r l$ or $SA = \pi r^2 + \pi r \sqrt{r^2 + h^2}$*

Sphere: $V = \frac{4}{3}\pi r^3$ *SA = $4\pi r^2$*



MMS 8th Grade



NTI Day 6

Math <u>Erica.Arnette@mboro.kyschools.us</u>	Surface Area & Volume
Language Arts <u>Wendy.Pillion@mboro.kyschools.us</u>	"From the Mixed- Up Files of Mrs. Basil E. Frankweiler"
Science <u>Alex.Pratt@mboro.kyschools.us</u>	Identifying Cause & Effect
Social Studies <u>Amanda.Day@mboro.kyschools.us</u>	Distinguishing Between Fact & Opinion

9

From the Mixed-Up Files of Mrs. Basil E. Frankweiler

by E. L. Konigsburg

In this passage young Claudia decides to go on a great adventure and wants someone to go with her.

Claudia had planned her speech. "I want you, Jamie, for the greatest adventure in our lives."

Jamie muttered, "Well, I wouldn't mind if you'd pick on someone else."

Claudia looked out the window and didn't answer. Jamie said, "As long as you've got me here, tell me."

Claudia still said nothing and still looked out the window. Jamie became impatient. "I said that as long as you've got me here, you may as well tell me."

Claudia remained silent. Jamie erupted, "What's the matter with you, Claude? First you bust up my card game, then you don't tell me. It's undecent."

"Break up, not bust up. Indecent, not undecent," Claudia corrected.

"Oh, baloney! You know what I mean. Now tell me," he demanded.

"I've picked you to accompany me on the greatest adventure of our mutual lives," Claudia repeated.

"You said that." He clenched his teeth. "Now tell me."

"I've decided to run away from home, and I've chosen you to accompany me."

"Why pick on me? Why not pick on Steve?" he asked.

Claudia sighed, "I don't want Steve. Steve is one of the things in my life that I'm running away from. I want you."

Despite himself, Jamie felt flattered. (Flattery is as important a machine as the lever, isn't it? Give it a proper place to rest, and it can move the world.) It moved Jamie. He stopped thinking, "Why pick on me?" and started thinking, "I am chosen." He sat up in his seat, placed his hands over his bent knee, and said out of the corner of his mouth, "O.K., Claude, when do we bust out of here? And how?"

Claudia stifled the urge to correct his grammar again. "On Wednesday. Here's the plan. Listen carefully."

Jamie squinted his eyes and said, "Make it complicated, Claude. I like complication."

Claudia laughed. "It's got to be simple to work. We'll go on Wednesday because Wednesday is music lesson day. I'm taking my violin out of its case and am packing it full of clothes. You do the same with your trumpet case. Take as much clean underwear as possible and socks and at least one other shirt with you."

"All in a trumpet case? I should have taken up the bass fiddle."

"You can use some of the room in my case. Also use your book bag. Take your transistor radio."

"Can I wear sneakers?" Jamie asked.

Claudia answered, "Of course. Wearing shoes all the time is one of the tyrannies

NTI 6
Lang. Arts

you'll escape by coming with me."

Jamie smiled, and Claudia knew that now was the correct time to ask. She almost managed to sound casual. "And bring all your money." She cleared her throat. "By the way, how much money do you have?"

Jamie put his foot back down on the floor, looked out the window, and said, "Why do you want to know?"

"For goodness' sake, Jamie, if we're in this together, then we're together. I've got to know. How much do you have?"

"Can I trust you not to talk?" he asked. Claudia was getting mad. ■

- ✓ Enter your reading time below. Then look up your reading speed on the Words-per-Minute table on page 130.

Reading Time _____

Reading Speed _____

Enter your reading speed on the Reading Speed graph on Page 131.

Comprehension

Put an **X** in the box next to the correct answer for each question or statement. Do not look back at the selection.

1. Claudia is planning to
 - ☐ a. go on a vacation.
 - ☐ b. have a party.
 - ☐ c. run away from home.
2. What was Jamie doing when Claudia interrupted him?
 - ☐ a. playing a card game
 - ☐ b. practicing his trumpet
 - ☐ c. counting his money

3. Claudia felt the need to correct Jamie's
 - ☐ a. manners.
 - ☐ b. spelling.
 - ☐ c. grammar.


4. Who does Claudia say she does *not* want to go with her?
 - ☐ a. Steve
 - ☐ b. her mother
 - ☐ c. her music teacher

5. How did Jamie feel about being asked to go with Claudia?
 - ☐ a. annoyed
 - ☐ b. flattered
 - ☐ c. not interested

6. Claudia wants to pack their clothing in
 - ☐ a. paper bags.
 - ☐ b. instrument cases.
 - ☐ c. suitcases.

7. Claudia plays the
 - ☐ a. trumpet.
 - ☐ b. bass fiddle.
 - ☐ c. violin.

8. Jamie wants to wear
 - ☐ a. sneakers.
 - ☐ b. dress shoes.
 - ☐ c. boots.

 _____ Number of correct answers
Enter this number on the
Comprehension graph on page 132.

Identify Cause and Effect

Read each statement below about coral reefs. Indicate which part of the sentence indicates cause and which part indicates effect.

	Cause	Effect
Statement 1 When tropical forests are cleared, topsoil washes into coastal ecosystems, blocking the light.		
Statement 2 Coral skeletons are popular in home saltwater aquariums because they are natural biological filters.		
Statement 3 Fishers have damaged coral reefs by carelessly handling lobster traps, lines, and nets.		

Standardized Test Practice



ACTIVITY 6

Distinguishing Between Fact and Opinion

KCCA: Cultures and Societies SS-08-2.3.1; Historical Perspective SS-08-5.1.1, SS-08-5.2.2

Learning to distinguish fact from opinion can help you make reasonable judgments about what others say. A **fact** is a statement that can be proven by evidence such as records, documents, statistics, or historical sources. An **opinion** is a statement that may contain some truth but also contains a personal view or judgment. An opinion cannot be proven.

★ Learning to Distinguish Fact from Opinion

Use the following guidelines to help you sift facts from nonfacts, or opinions, and to judge the reliability of what you read or hear.

- Identify the facts. Ask yourself the following:
Can these statements be proved? Where can I find information to verify them?
- Identify the nonfacts or opinions. Sometimes opinions contain phrases such as *I believe, in my view, it is my conviction, and I think*. They often describe the way a person feels.
- Adjectives, such as *terrible, tyrannical, and wonderful*, also indicate opinions.
- Identify the statement's purpose. What does the speaker or author want you to believe or to do?

★ Practicing the Skill

DIRECTIONS: Read the following information and complete the activity that follows.

The American Revolution

The American Revolution was more than a fight between rebellious colonists and Great Britain. It was also a civil war that pitted colonist against colonist. Some colonists, refusing to abandon their allegiance to the king, remained loyal to the British government. They were called Loyalists. Many Loyalists joined the British army.

Rebel colonists, who wanted to break away from Great Britain, were sometimes called Patriots. The struggle between Patriots and Loyalists was as bitter as the struggle between the rebels and the British. Patriots believed that the Loyalists were traitors. The two viewpoints are expressed in the quotations that follow.

Loyalist viewpoint, Charles Inglis, 1776:

"I think it no difficult matter to point out many advantages which will certainly attend our reconciliation and connection with Great Britain. . . .

By a reconciliation with Britain, a period would be put to the present calamitous war, by which so many lives have been lost, and so many more must be lost if it continues. . . .

By a reconciliation with Great Britain, peace—that fairest offspring and gift of heaven—will be restored. In one respect peace is like health—we do not sufficiently know its value but by its absence. . . .

But if America should now mistake her real interest . . . they will infallibly destroy this smiling prospect. They will dismember this happy country, make it a scene of blood and slaughter, and entail wretchedness and misery on millions yet unborn."

Source: Charles M. Dollar and Gary W. Reichard, *American Issues, A Documentary Reader* (New York: Glencoe/McGraw-Hill, 1994, pp. 77-78)

Patriot viewpoint, "Declaration of the Causes and Necessity of Taking Up Arms, 1775"

" . . . We are reduced to the alternative of choosing an unconditional submission to the tyranny of irritated ministers, or resistance by force. – The latter is our choice. – We have counted the cost of this contest and find nothing so dreadful as voluntary slavery. – Honour, justice, and humanity, forbid us tamely to surrender that freedom which we received from our gallant ancestors, and which our innocent posterity have a right to receive from us.

Our cause is just. Our union is perfect. Our internal resources are great, and, if necessary, foreign assistance is undoubtedly attainable. . . .

In our own native land, in defence of the freedom that is our birthright, . . . for the protection of our property, acquired solely by the honest industry of our fore-fathers and ourselves, against violence actually offered, we have taken up arms."

Source: Charles M. Dollar and Gary W. Reichard, *American Issues, A Documentary Reader* (New York: Glencoe/McGraw-Hill, 1994, pp. 76-77)

DIRECTIONS: Remember that opinions often include expressions of approval or disapproval, or qualifying phrases. Study the opposing views about the American Revolution. Then answer the following questions.

1. Is there a way to prove that many lives had been lost? What could you do to check this and other statements?

2. Notice the nonfacts or opinions. What phrases do the writers sometimes use to signal their own points of view?

3. What is the intention of each writer? What does each writer want readers to believe?

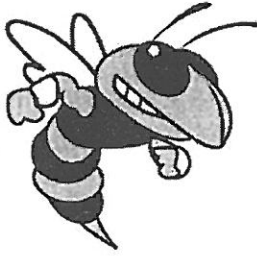
4. How does knowing the intention of each writer help you distinguish fact from opinion in their material?



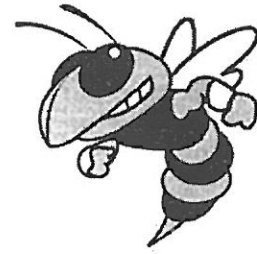
Standardized Test Practice

DIRECTIONS: After reading the viewpoints on this and on the previous page, answer the following questions.

- | | |
|---|--|
| <p>1 Which of the following is an opinion expressed in the viewpoints?</p> <p>A Many lives had been lost in the war.</p> <p>B The Patriots chose to use force to resist the British.</p> <p>C The cause of the Patriots was just.</p> <p>D Reconciliation with Britain would end the war.</p> | <p>2 Which of the following is a statement of fact?</p> <p>A The cause of the patriots was just.</p> <p>B Many lives had been lost in the war.</p> <p>C Future Americans would have suffered if the Loyalists had won the war.</p> <p>D Honour and humanity justified the efforts of the Patriots.</p> |
|---|--|



MMS 8th Grade



NTI Day 7

Math <u>Erica.Arnette@mboro.kyschools.us</u>	Transformations
Language Arts <u>Wendy.Pillion@mboro.kyschools.us</u>	"We're Having Our Say"
Science <u>Alex.Pratt@mboro.kyschools.us</u>	Compare & Contrast
Social Studies <u>Amanda.Day@mboro.kyschools.us</u>	Drawing Conclusions

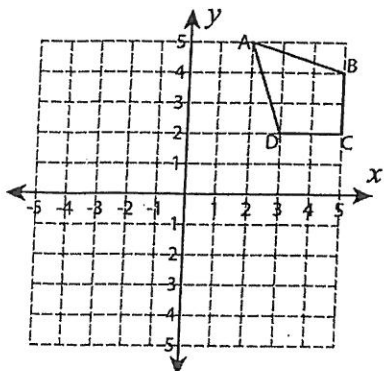
NTI Day 7

Transform the Quadrilaterals

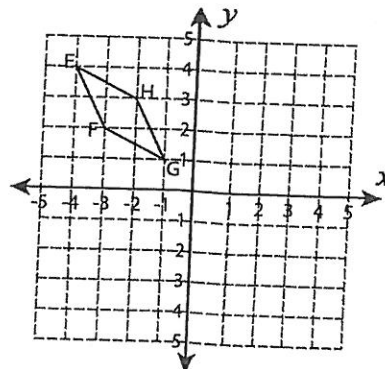
Sheet 1

Graph the image of each quadrilateral after the given transformation.

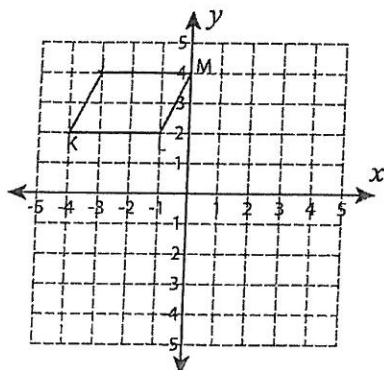
- 1) Reflection across the line $y = 1$



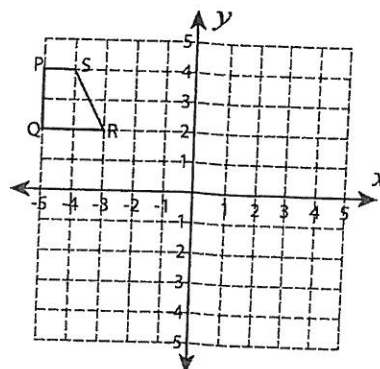
- 2) 90° counterclockwise rotation about the origin



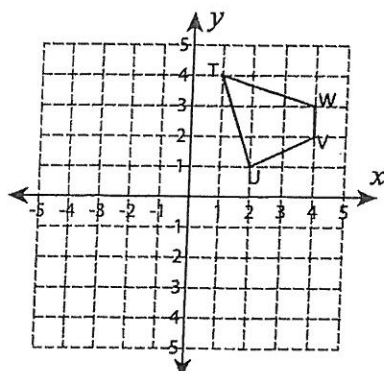
- 3) Translate 3 units down and 4 units right



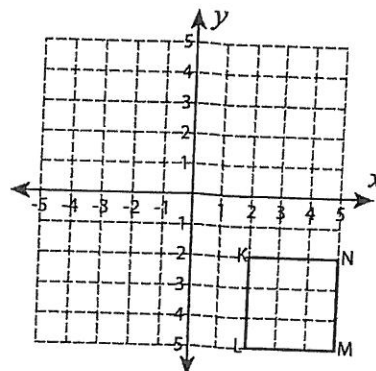
- 4) Reflection across the line $x = -1$



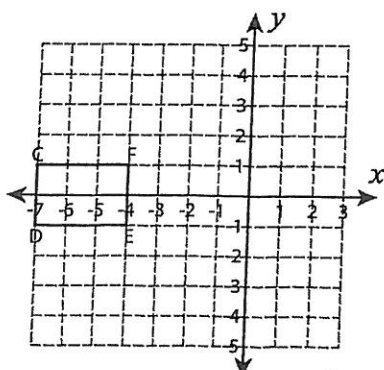
- 5) 90° clockwise rotation about the origin



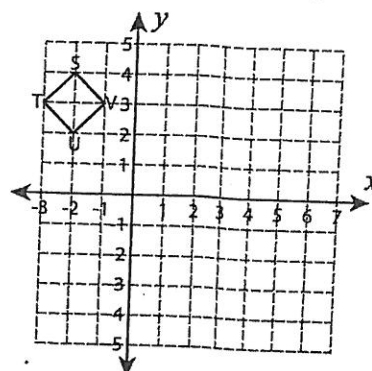
- 6) Translate 6 units up and 2 units left



- 7) Reflection across the line $y = -2$



- 8) 180° rotation about the origin



10 We're Having Our Say

NTI 7
Lang. Arts

Having Our Say: The Delany Sisters' First 100 Years is the autobiography of Sarah and Elizabeth (Bessie) Delany. The bestseller was published in 1993, when both sisters were more than 100 years old. The book was later made into a play. Bessie died in 1995 at the age of 104. Sarah was 109 years old when she died in January 1999.

The Delany sisters' father, Henry Beard Delany, was born a slave. He grew up on a Georgia plantation. Even though he was a slave, Henry Delany was taught to read and write. Later, he went to Saint Augustine's School for Negroes in Raleigh, North Carolina. There he studied to become an Episcopal priest. He went on to become the first elected black Episcopal bishop in the United States.

Their mother was Nanny James Logan Delany. She and Henry met at Saint Augustine's. Both parents worked at the school for most of their lives. They raised 10 children who all went on to finish college. Two of the Delany children became dentists. One became a doctor. Another became a lawyer and judge.

The Delany sisters were full of praise for their parents. Bessie said, "Everyone thinks their parents were special, but I *know* ours were. Our father was wise, and he was very proud of his family. We were always a loving family, very close to each other."

Sarah added that their parents gave them strong values as well as independence and a sense of pride. The sisters knew they would have to try harder than other people. When they were growing up, neither black people nor

women were treated very well, and neither was expected to be successful.

In 1916, Sarah moved to New York City to study teaching. When she finished school, she applied by mail for a high school teaching job in the city schools. After three years, her name reached the top of the list of applicants. She received a letter saying that she would have to come in for an interview. Sarah knew that being black would count against her, so she skipped the appointment. She sent a letter instead, acting as if there had been a mix-up. Then she just showed up the first day of class. She became the first black teacher of domestic science in New York City.

Bessie moved to New York two years after Sarah did. She wanted to become a dentist. But New York University did not permit women to enroll in dental school. Columbia University did, so that's where Bessie went. Out of 170 students, she was the only black woman. And she was the second black woman to get a dentist's license in New York State.

Bessie and Sarah never married. When they were young, many working women chose to remain single. The sisters shared the special closeness of best friends. When

asked to talk about their lives, they willingly answered questions.

Despite their closeness, the two sisters were very different. The family called Sarah "Sweet Sadie." Bessie was outspoken. She once remarked, "If Sadie is molasses, then I am vinegar. Sadie is sugar, and I'm the spice."

Sarah and Bessie thought the values they learned from their parents were good for everybody. "Be your own person, owing no one. Help others. Be proud of what you are. And struggle for the best and most education you can get." ■

- ✓ Enter your reading time below. Then look up your reading speed on the Words-per-Minute table on page 130.

Reading Time _____

Reading Speed _____

Enter your reading speed on the Reading Speed graph on Page 131.

Comprehension

Put an X in the box next to the correct answer for each question or statement. Do not look back at the selection.

1. The Delany sisters were the daughters of a
 - ☐ a. dentist.
 - ☐ b. teacher.
 - ☐ c. former slave.
2. Their father, Henry Beard Delany, grew up in
 - ☐ a. North Carolina.
 - ☐ b. Georgia.
 - ☐ c. New York.

3. Henry Beard Delany was the first elected black
 - ☐ a. Catholic priest.
 - ☐ b. Episcopal bishop.
 - ☐ c. Baptist minister.

4. How many children did the parents of the Delany sisters have?
 - ☐ a. 4
 - ☐ b. 10
 - ☐ c. 12

5. In 1916 Sarah moved to
 - ☐ a. New York City.
 - ☐ b. Mount Vernon, New York.
 - ☐ c. Raleigh, North Carolina.

6. Bessie's desire was to become a
 - ☐ a. dentist.
 - ☐ b. doctor.
 - ☐ c. teacher.

7. The two sisters were
 - ☐ a. a little like each other.
 - ☐ b. very much like each other.
 - ☐ c. very different from each other.

8. The Delany sisters learned from their parents that it is important to have
 - ☐ a. independence.
 - ☐ b. friends.
 - ☐ c. courage.

_____ Number of correct answers
Enter this number on the
Comprehension graph on page 132.

Name 8th Grade Science
Date NTI Day 7



Compare and Contrast

After reading the selection below, fill in the chart with details about how the octopus and the squid are alike and different.

Octopods and squid belong to the class Cephalopoda, which means "head-footed." Both of these unusual sea creatures have blue blood, which is caused by the oxygen-carrying molecule in their blood that contains copper. All cephalopods eat meat.

The octopus lives alone in a den at the bottom of the sea. This sea animal is known for its intelligence. In one experiment, an octopus removed a cork from a jar to get to the food inside.

The squid is known as a fast swimmer. It has been clocked at speeds up to 20 knots (23 mph 37 kph). It swims in schools and lives in the open seas. Squid have been used in medical studies of the nervous system.

Shared Characteristics	Different Characteristics

Standardized Test Practice**ACTIVITY 7**
Drawing Conclusions**KCCA: Historical Perspective SS-08-5.1.1, SS-08-5.2.3**

A judgment made after thinking about the facts is known as a **conclusion**. To be valid, a conclusion must be supported by logical and factual evidence. Drawing conclusions allows you to understand indirectly stated ideas, so that you can apply your knowledge to a wide range of situations. Drawing conclusions is the last step in the process of reasoning.

★ Learning to Draw a Conclusion

Use the following guidelines to help you draw a conclusion.

- Make a list of the important facts or ideas in the reading or visual you are studying.
- Study the list and ask what more needs to be known.
- Write down several conclusions that explain the meaning of the information.
- Test each conclusion against the facts.

★ Practicing the Skill

DIRECTIONS: Read the introduction and the excerpt from Lewis and Clark's 1804 message to the Otoes below. Then complete the activity that follows.

After purchasing the Louisiana Territory from France, President Jefferson sent Captains Meriwether Lewis and William Clark to explore the newly acquired land. The journey took two years to complete (1804-1806) and carried them up the Missouri River, across the Rocky Mountains, down the Columbia River, and on to the Pacific Ocean. The primary purpose of the expedition was to chart the Louisiana Territory. Jefferson also ordered Lewis and Clark to inform Native Americans they encountered that the United States now controlled these lands. The language used by Lewis and Clark reflected the tone Jefferson wanted to set for the relationship between the American government and its new "children."

"Children. From what has been said, you will readily perceive, that the great chief of the Seventeen great nations of America, has become your only father; he is the only father; he is the only friend to whom you can now look for protection, or from whom you can ask favours, or receive good councils, and he will take care that you shall have no just cause to regret this change; he will serve you, & not deceive you.

"Children. If you open your ears to the councils of your great father, the great chief of the Seventeen great nations of America, & strictly pursue the advice which he has now given you through us, he will as soon as possible after our return, send a store of goods to the mouth of the river Platte to trade with you for your pelteries and furs; these goods will be furnished you annually in a regular manner, and in such quantities as will be equal to your necessities. . . ."

Name _____ Date _____ Class _____

DIRECTIONS: Review the guidelines for drawing conclusions. Reread the excerpts from Lewis and Clark's message to the Otoes. Then answer the questions that follow.

1. Who are the "children" and the "father" to whom Lewis and Clark refer?

2. What do the Otoes have to do in order to receive payment from the American government?

3. What conclusions can you draw about how the American government regarded the Native American people?



Standardized Test Practice

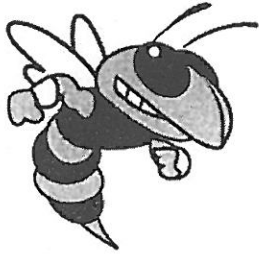
DIRECTIONS: Answer the following questions based on the reading on the previous page.

- 1 What reward did Lewis and Clark offer to the Otoes if they cooperated and accepted American authority?

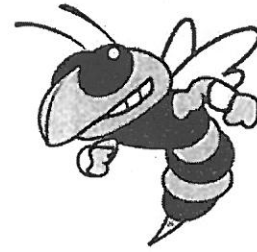
A money
B pelts
C furs
D trade goods

- 2 What conclusion can you draw from the tone and language of the message to the Otoes?

A Lewis and Clark respected the Otoes as free citizens of a foreign nation.
B Lewis and Clark recognized the authority and government of the Otoes.
C Lewis and Clark believed the Otoes to be subject to the authority of the United States government.
D Lewis and Clark believed the Otoes were still subject to the laws of France.



MMS 8th Grade

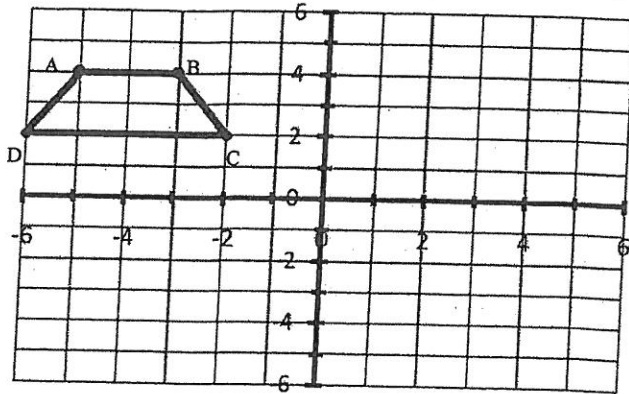


NTI Day 8

Math <u>Erica.Arnette@mboro.kyschools.us</u>	Transformations
Language Arts <u>Wendy.Pillion@mboro.kyschools.us</u>	"Mom, You're Fired"
Science <u>Alex.Pratt@mboro.kyschools.us</u>	Sequence & Compare
Social Studies <u>Amanda.Day@mboro.kyschools.us</u>	Detecting Bias

DIRECTIONS: For each transformation below, place an x next to each true statement. \cong means congruent, \parallel means parallel, and \sim means similar. *Perform each transformation.*

1) Transformation: Figure ABCD will be reflected across the y-axis.



☐ a. $AB \cong A'B'$

☐ e. Point C' is at $(2, 2)$

☐ b. $AB \parallel B'C'$

☐ f. Point D' is at $(3, 4)$

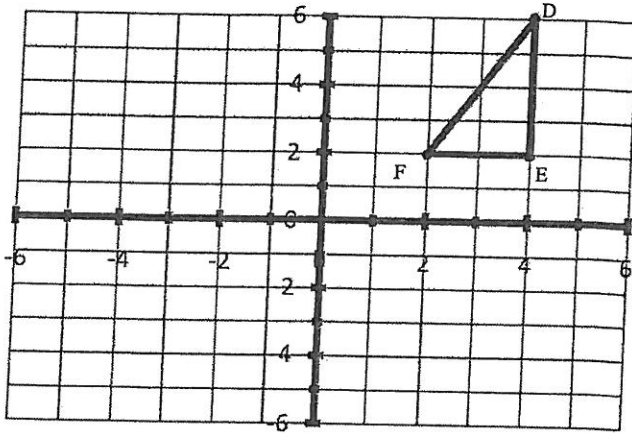
☐ c. $AD \cong A'B'$

☐ g. $\angle ABC \cong \angle A'B'C'$

☐ d. $AD \parallel B'C'$

☐ h. $ABCD \cong A'B'C'D'$

2) Transformation: Figure DEF will be rotated 180 degrees clockwise about the origin.



☐ a. $D'E' = 2$ units

☐ e. Point F' is at $(-2, -2)$

☐ b. $EF \cong DE$

☐ f. Point F' is at $(2, -2)$

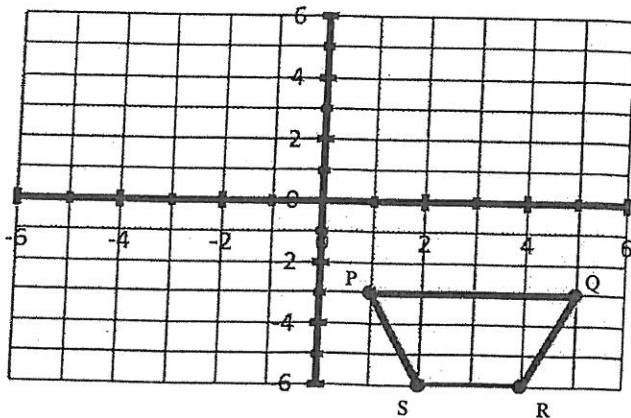
☐ c. $DF \cong F'D'$

☐ g. Point D' is at $(-4, 6)$

☐ d. $FD \parallel D'E'$

☐ h. Point D' is at $(-4, -6)$

3) Transformation: Figure PQRS will be translated 2 units to the left and 3 units up.



☐ a. $PQ \parallel R'S'$

☐ e. Point R' is at $(1, -4)$

☐ b. $\angle QRS \cong \angle Q'R'S'$

☐ f. Point P' is at $(-1, 0)$

☐ c. $PQ \cong R'S'$

☐ g. Point Q' is at $(0, 3)$

☐ d. $PQRS \cong P'Q'R'S'$

☐ h. Point S' is at $(0, -3)$

by Nancy K. Robinson

In this passage two children try to distance themselves from their embarrassing mother.

"Is this the bus to Davenport Street?" Tina's mother called up to the bus driver, but he didn't seem to hear her.

Tina's mother stepped up onto the bus. She was carrying two shopping bags under one arm and Tina's little sister Angela under the other arm. Angela twisted around until she was almost hanging upside down.

"New shoes," said Angela to the man in back of her, pointing proudly to her new white shoes. "Much too expensive," she added.

Tina and her brother Nathaniel looked at each other. Then they stepped back in line and let two ladies get in front of them. They each had their own bus fare and wanted to get as far away from their mother and little sister as possible.

They heard their mother ask in an even louder voice:

"Driver, I asked if this was the bus to Davenport Street."

"Read the sign, lady," they heard the bus driver shout.

"The sign outside is stuck," their mother said crossly.

There was no answer from the bus driver.

"Hurry up, lady," called a man at the end of the line.

Their mother wasn't in any hurry. She was giving the bus driver a lecture.

"... and the least you could do is tell

me whether or not I'm on the right bus. It would only be common courtesy. . . ."

"Oh, no." Nathaniel grabbed Tina's arm. "Here she goes again." He pulled Tina back and let a boy carrying a large transistor radio get in front of them.

"Look lady," hollered the bus driver. "Are you getting on or off? I don't have all day."

Everyone in line was very quiet.

Tina stared hard at a crack in the sidewalk. She felt like pulling her mother off the bus and shaking her.

"Move it, lady," the man at the back of the line called again.

"It's the right bus," a lady called out. "It's a number 8. This one goes to Davenport Street."

"Thank you." Tina's mother turned around and nodded to the lady, "But I don't see why the bus driver couldn't have told me that. If I had a choice, I wouldn't even take this bus."

Nathaniel groaned. "Why can't she just get on the bus and be quiet like everyone else?"

Slowly the line of people began to move ahead.

"Nathaniel, Christina, are you there?" Now their mother was inside the bus, pounding on the window and waving at them. Tina and Nathaniel pretended not to notice.

As they were paying their fare, they saw a man get up and give their mother his

seat. Tina and Nathaniel tried to squeeze to the rear of the bus, but it was too crowded to move. They were stuck right across the aisle from their mother, who had Angela on her lap.

"New shoes," said Angela to everyone who passed by.

Nathaniel grabbed onto a pole and began to read an advertisement posted above the window.

YOU TOO CAN BE A NATURAL
BLONDE OR REDHEAD ■

- ✓ Enter your reading time below. Then look up your reading speed on the Words-per-Minute table on page 130.

Reading Time _____

Reading Speed _____

Enter your reading speed on the Reading Speed graph on Page 131.

Comprehension

Put an X in the box next to the correct answer for each question or statement. Do not look back at the selection.

1. Tina's mother and family were trying to get to
 - ☐ a. the shopping mall.
 - ☐ b. the back of the bus.
 - ☐ c. Davenport Street.
2. What had Tina's mother bought for Tina's little sister, Angela?
 - ☐ a. new shoes
 - ☐ b. new mittens
 - ☐ c. new glasses

3. Tina's mother asked the bus driver in a very loud voice,
 - ☐ a. "Is this the bus to Davenport Street?"
 - ☐ b. "Is this the bus to the shopping mall?"
 - ☐ c. "How much is the fare?"
4. Before getting on the bus, Tina's mother
 - ☐ a. had an argument with a lady.
 - ☐ b. gave the bus driver a lecture.
 - ☐ c. scolded Tina and Nathaniel.
5. Tina felt like
 - ☐ a. walking home.
 - ☐ b. pulling her mother off the bus and shaking her.
 - ☐ c. helping her mother get on the bus.
6. Nathaniel wished that his mother would
 - ☐ a. be quiet like everyone else.
 - ☐ b. let him sit with her.
 - ☐ c. let him sit with Tina.
7. As their mother waved to them from the window, Tina and Nathaniel
 - ☐ a. started to get on the bus.
 - ☐ b. started to walk home.
 - ☐ c. pretended not to see her.

Show the Sequence and Compare


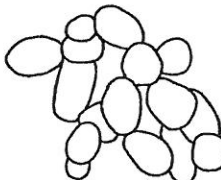

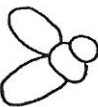
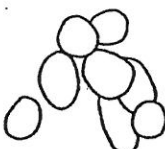


One way to order data is to show the sequence in which the events occur. Ordering data this way makes it easier to understand the parts of a process. When you compare data, you identify characteristics of objects or processes that are similar and different.

Think About Ordering and Comparing

The period of time from the beginning of one cell division to the beginning of the next cell division is called the cell cycle. This is the time it takes for a cell to divide and form two cells. In most growing plant and animal cells, the cell cycle is between ten hours and twenty hours. In this yeast cell, the cell cycle is two hours. During that time, the cell takes in nutrients and makes all the material needed for the new cell. If nutrients aren't available, the cell won't divide. A cell slows down and its cell cycle gets longer if the temperature gets too low.

At noon this yeast cell was put into a dish in a lab and its cell cycle began. At 2 P.M. the dish had no more nutrients in it. At 4 P.M. the lab technician added nutrients to the dish. At 8 P.M. the heat went out in the building and the lab got cold. The yeast cells slowed down, and their cell cycle became twice as long.

Using the information in the paragraphs above, match the pictures of the yeast cells with the times at which they occurred. Then write the number of yeast cells present at each time on the line.

_____ noon		
_____ 2 P.M.		
_____ 4 P.M.		
_____ 6 P.M.		
_____ 8 P.M.		
_____ 10 P.M.		
_____ midnight		

- How many new yeast cells were produced between 2 P.M. and 4 P.M.? _____
- How many new yeast cells were produced between 8 P.M. and 10 P.M.? _____
- How are the results obtained between 2 P.M. and 4 P.M. similar to the results obtained between 8 P.M. and 10 P.M.? How are they different? _____

Standardized Test Practice**ACTIVITY 8**
Detecting Bias

KCCA: Cultures and Societies SS-08-2.1.1, SS-08-2.3.2; Historical Perspective SS-08-5.1.1, SS-08-5.2.4

A viewpoint or set opinion that a person brings to a subject is called a bias. People have preconceived feelings, opinions, and attitudes that affect their judgment on many topics. For this reason, ideas presented as facts may actually be opinions. Detecting bias enables us to evaluate the accuracy of information.

★ Learning to Detect Bias

Use the following guidelines to help detect bias.

- Identify the writer's or speaker's purpose.
- Find emotionally charged visuals or words, such as *hate*, *terrorize*, and *cheat*.
- Look for generalizations such as *always*, *never*, *nobody*, and *everybody*.
- Examine the writing for imbalances—leaning only to one viewpoint and failing to provide equal coverage for other possible viewpoints.
- Watch for opinions stated as facts.
- Analyze the material to see if it presents equal coverage of differing views.

★ Practicing the Skill

DIRECTIONS: Read the selection below and complete the activity that follows.

The Debate Over Slavery

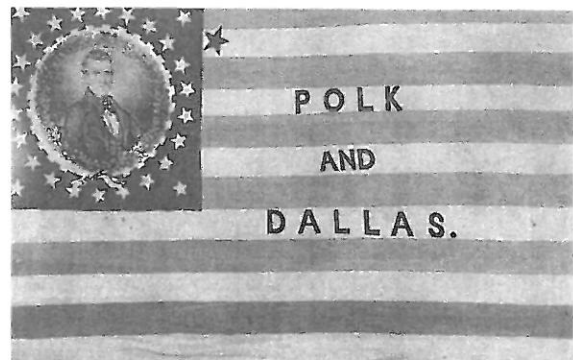
The Missouri Compromise (1820) brought only a temporary lull in the controversy over slavery. As the United States expanded westward, the issue of whether to allow slavery in the territories continued to reappear.

In the 1840s the debate over slavery once again heated up. Texas, which won its independence from Mexico in 1836, New Mexico, and California, became the focus of disagreement between pro-slavery and anti-slavery forces.

Many Southerners hoped to see Texas, where slavery already existed, join the Union as a slave state. This would give pro-slavery advocates more votes in Congress. The annexation of Texas became a major issue in the election of 1844. James Polk, a Democrat from Tennessee, favored

annexing Texas. He won the election and Texas became a state in 1845.

At the same time, support for taking over New Mexico and California grew in the South. Eventually, the federal government's actions on these lands led to war with Mexico.



Name _____ Date _____ Class _____

DIRECTIONS: Usually factual statements answer the *who? what? where? and when?* questions. Statements of bias, on the other hand, reflect emotion or opinion. Read the following two statements made during the 1830s and 1840s about slavery. Then, on the lines below, list words or phrases from the comments that you think reflect bias. Explain your choices.

John C. Calhoun, while serving as Secretary of State, 1844:

“On the other hand, the census and other authentic sources of information establish the fact, that the condition of the African race throughout all the States where the ancient relation [i.e., slavery] between the two has been retained, enjoys a degree of health and comfort which may well compare with that of any laboring population in any country in Christendom; and, it may be added, that in no other condition, or in any other age or country, has the negro race ever attained so high an elevation in moral, intelligence, and civilization.”

Source: Charles M. Dollar and Gary W. Reichard, *American Issues, A Documentary Reader* (New York: Glencoe/McGraw-Hill, 1994).

Angelina Grimké, abolitionist, from an address to the National Anti-Slavery Convention, 1838:

“As a Southerner, I feel that it is my duty to stand up here to-night and bear testimony against slavery. I have seen it! I have seen it! I know it has horrors that can never be described. I was brought up under its wing. I witnessed for many years its demoralizing influences and its destructiveness to human happiness. I have never seen a happy slave. I have seen him dance in his chains, it is true, but he was not happy. There is a wide difference between happiness and mirth [high spirits]. Man can not enjoy happiness while his manhood is destroyed.”

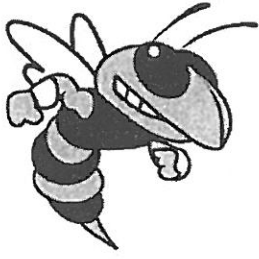
Source: Diane Ravitch, ed., *The American Reader, Words That Moved a Nation* (New York: Harper Collins, 1990).



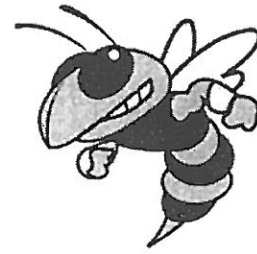
Standardized Test Practice

DIRECTIONS: Answer the following questions based on the above comments about slavery.

- | | |
|---|--|
| <p>1 With which of the following statements would John C. Calhoun have agreed?</p> <ul style="list-style-type: none"> A Africans in America enjoyed as high a standard of living as laborers in other nations. B Africans in America lived in very poor conditions. C Northern wage laborers enjoyed a higher standard of living than enslaved Africans in America. D Africans in America would be better off if they were freed from slavery. | <p>2 According to Angelina Grimké, what effect did slavery have upon Africans in America?</p> <ul style="list-style-type: none"> A Africans in America received economic benefits from slavery. B Slavery had a destructive effect on Africans in America. C Slavery made Africans in America happy. D Enslaved Africans in America were better educated than whites. |
|---|--|



MMS 8th Grade



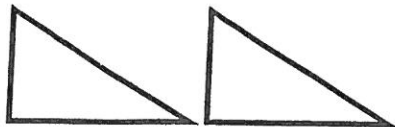
NTI Day 9

Math <u>Erica.Arnette@mboro.kyschools.us</u>	Congruence & Similarity
Language Arts <u>Wendy.Pillion@mboro.kyschools.us</u>	"We Live in Mexico"
Science <u>Alex.Pratt@mboro.kyschools.us</u>	Summarize & Paraphrase
Social Studies <u>Amanda.Day@mboro.kyschools.us</u>	Making Inferences

Name: 8th Grade Math NTI Day 9

Congruent Shapes

CONGRUENT figures are the same size and shape.



CONGRUENT



CONGRUENT

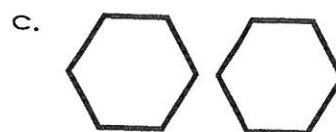


NOT CONGRUENT

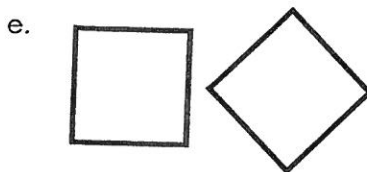
Write CONGRUENT or NOT CONGRUENT for each.

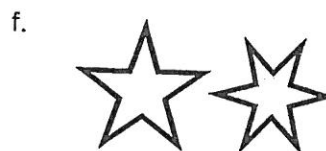




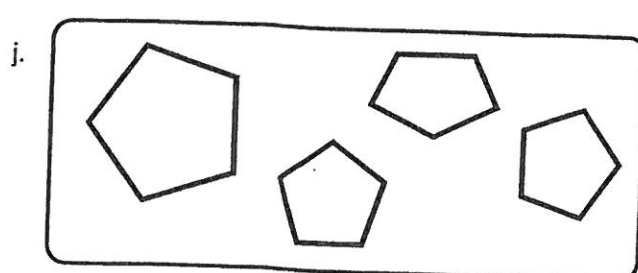
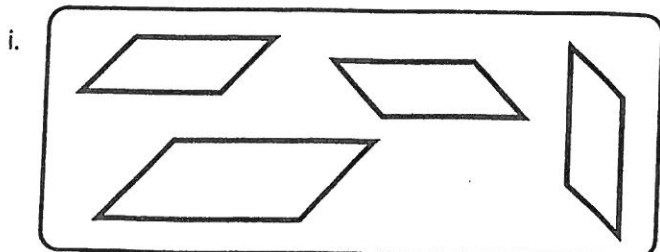
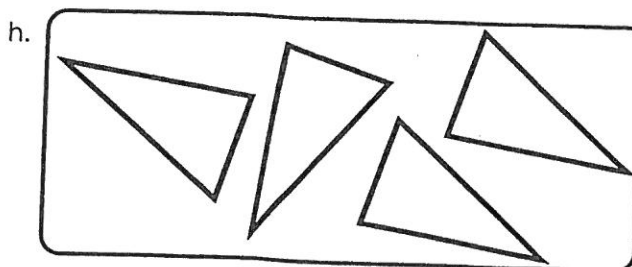
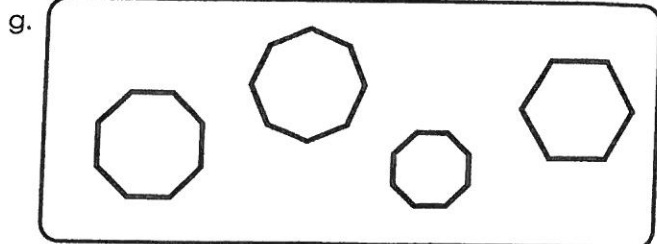








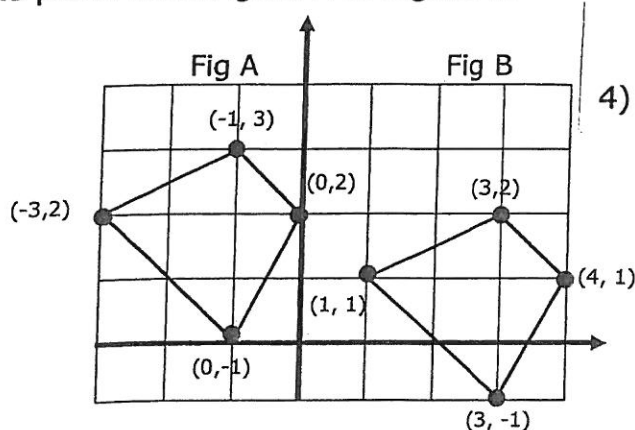
Color all the congruent shapes in each box.



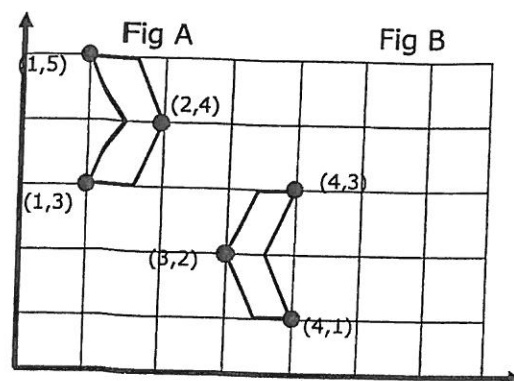
Two-Dimensional Congruent Figures - Independent Practice Worksheet

Complete all the problems. Describe the sequence of transformations that take place from Figure A to Figure B.

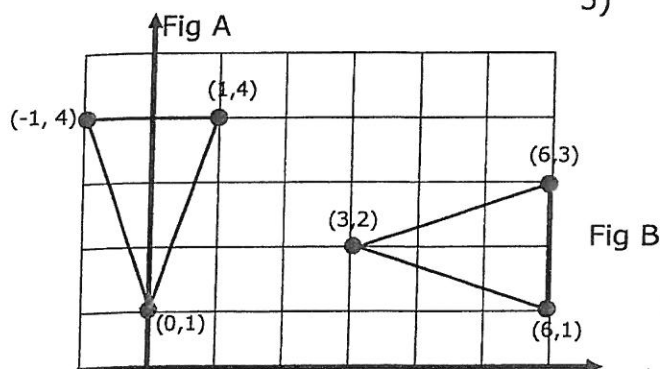
1)



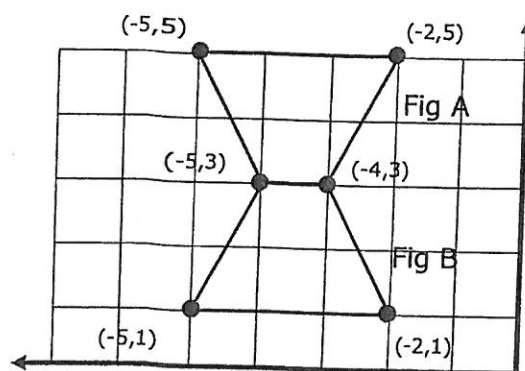
4)



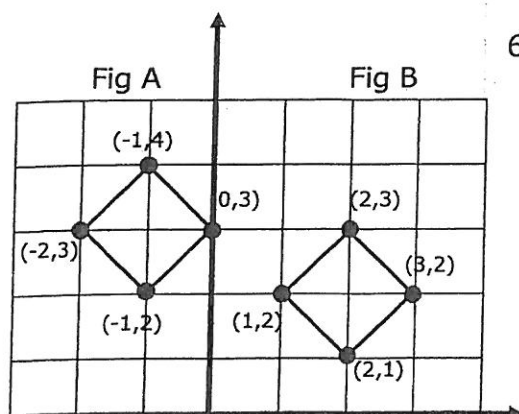
2)



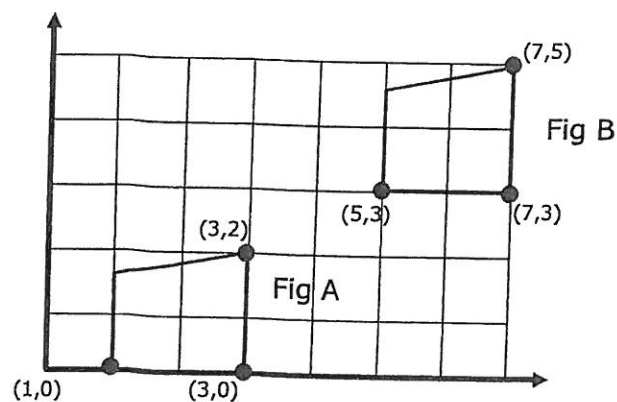
5)



3)



6)



by Carlos Somonte

A young boy describes growing up in a small Mexican fishing village. As you read, think about how the boy's childhood compares to your own.

My father taught me to swim when I was two years old, and I could fish by the time I was five. And now these two activities, along with exploring, are my favorite pastimes. My village, Paraiso Escondido, has water all around it. The Pacific Ocean laps onto the beach where the village is situated. There's a wide river just inland a short way, with palm trees and mangroves on its banks. So you can see that there's plenty of opportunity for me to do what I like to do most.

My village is not large enough to have a school. Only fifty families live here. So I have to travel every day, from Monday to Friday, to a nearby town for my classes. The school hours are from 8 A.M. to 2 P.M. To get there on time I have to leave the village by 7 A.M. I then get in my *cayuco*—a small wooden boat which I propel with a wooden pole—and cross the river, before walking 3 km (2 miles) to the school.

My school is an elementary school. The children here are between the ages of six and twelve. Some towns also have nursery schools for younger children, but in many rural areas these don't exist. When I'm thirteen I'll be going on to secondary school where my education will last for three years. And if I do well in my exams, I can then decide whether I should go on to high school and then to a college or perhaps to a university, or leave

the educational system altogether and become a fisherman like my father. If I go on to higher education, I wouldn't finish being a student until I was twenty-four!

At school I learn Spanish—Mexico's official language—mathematics, geography, and history. But my favorite class is phys. ed. when we play football or basketball. I don't get much homework at the moment, perhaps only an hour or two to do each week, but in a year's time I expect this to increase.

When I'm on vacation, I like to get up early and explore the river in my *cayuco*. I always take with me a fishing line and some bait to catch catfish and some small traps called *jaiberos* for catching crabs. And with my net I catch river shrimps which Mom always likes to put in her tasty broth. I also like to climb the trees along the river banks and jump from the branches into the water.

I like living here and am looking forward to the day very soon when I can join my father fishing in the open sea from his motor boat. Then I might be able to catch a very big fish, such as a shark or barracuda! But first I need to gain some weight and grow a bit taller. Until then I'll practice fishing for catfish and other fish in the river where it's safe. ■

✓ Enter your reading time below. Then look up your reading speed on the Words-per-Minute table on page 130.

Reading Time _____

Reading Speed _____

Enter your reading speed on the Reading Speed graph on Page 131.

Comprehension

Put an **X** in the box next to the correct answer for each question or statement. Do not look back at the selection.

1. When he was five years old the boy learned to
☐ a. swim.
☐ b. fish.
☐ c. explore.
2. The boy's village is situated next to the
☐ a. Pacific Ocean.
☐ b. Atlantic Ocean.
☐ c. Andes Mountains.
3. At what time does the boy leave for school?
☐ a. 7 A.M.
☐ b. 8 A.M.
☐ c. 2 P.M.
4. A *cayuco* is a
☐ a. type of fishing pole.
☐ b. trap for catching crabs.
☐ c. small wooden boat.
5. The boy attends
☐ a. a secondary school.
☐ b. a high school.
☐ c. an elementary school.

6. If the boy goes on to higher education, he wouldn't finish being a student until he was


☐ a. thirteen.
☐ b. eighteen.
☐ c. twenty-four.

7. What language does the boy study at school?

☐ a. English
☐ b. Spanish
☐ c. Mexican

8. What are *jaiberos*?

☐ a. bait used to catch catfish
☐ b. traps used to catch crabs
☐ c. a kind of river shrimp

 _____ Number of correct answers
Enter this number on the
Comprehension graph on page 132.

Critical Thinking

Put an **X** in the box next to the best answer for each question or statement. You may look back at the selection if you'd like.

1. In this article, who is telling about life in a Mexican village?
☐ a. a young boy
☐ b. a boy's father
☐ c. a local fisherman

Date _____

8th Grade Science NTI Day 9

Summarize and Paraphrase a Selection

Read the selection below, and write a one-sentence summary of each paragraph. Then summarize the entire selection in one or two sentences.

Many types of plants have adapted to the harsh environment of the desert. They have done so by altering their behavioral and physical mechanisms.

The cactus has special ways to store water and, to reduce transpiration, usually has very few leaves. The organ pipe cactus, one of the few types of cactus to have its own national monument, blooms only at night, when the temperatures are cooler. From May through July, lavender-white flowers 6 centimeters (2.4 in.) wide open after sunset. Native Americans have eaten the fruit from these flowers, which also can be made into jelly or a beverage.

Phreatophytes, such as the mesquite tree, are a type of desert plant that adapts to the dry desert environment by growing unusually long roots that reach close to the water table. The roots can grow to just over 24 meters (79 ft.) long!

There are desert perennials that become dormant during the driest periods when water is not available. One such plant is the ocotillo. Its waxy leaves maintain moisture during dormancy, and it may bloom up to five times per year.



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Standardized Test Practice



ACTIVITY 9 Making Inferences

KCCA: Cultures and Societies SS-08-2.3.1; Historical Perspective SS-08-5.2.4

Using diagrams, charts, and other data sources requires careful reasoning skills. Sometimes you have to draw conclusions based on the evidence in a source. This is known as making an **inference**. Making an inference involves combining the limited facts at hand and your general knowledge to form a reasonable conclusion.

★ Learning to Make Inferences

Use the following guidelines to help you use data to make accurate inferences.

- Observe the key features and details of the source.
- Decide what general topic is being presented or illustrated.
- Review what you already know about the topic.
- Use logic and common sense to form a conclusion about the topic.
- If possible, find specific information that proves or disproves your inference.

★ Practicing the Skill

DIRECTIONS: Read the paragraphs below. Complete the activity that follows.

Despite general distrust of political parties, toward the end of Washington's second term as president Americans began to divide into opposing groups and formed **factions**, as political parties were then called.

One group, or party, came to be called the Federalists. They generally supported the policies of Alexander Hamilton and stood for a vigorous federal government. They admired Britain because of its stability, and distrusted France because of the violent changes following the French Revolution. Federalist policies tended to favor shipping and banking interests and their strongest support came from the Northeast, especially New England, and from wealthy plantation owners in the South.

Opposition to the Federalists became organized in the early 1790s. Thomas Jefferson and James Madison were the leaders of this anti-Federalist party, which came to be called the Republicans, or the Democratic-Republicans.

The Republicans wanted to leave as much power as possible to the state governments. They feared that a strong federal government would endanger people's liberties. They supported the French and condemned what they regarded as the Washington administration's pro-British policies. Republican policies appealed to small farmers and urban workers, especially in the Middle Atlantic states and the South.

The Federalists also favored a loose interpretation of the Constitution. In other words, they believed that the federal government had implied powers that were not specifically mentioned in the Constitution. Hamilton used the idea of implied powers to justify a national bank. The Republicans disagreed. They believed in a strict interpretation of the Constitution. In their view, unless the Constitution specifically mentioned government powers in a particular area, the government had no authority to act.

DIRECTIONS: Observing details can help you make inferences. Analyze the chart below that shows the differences between the first political parties in the United States. Answer the questions that follow, based on this chart and the information on the previous page.

1. What details and key features are shown on the chart?

2. What information do you already know about early political parties that might help you in drawing conclusions about the chart?

3. What inferences can you make about the first political parties in the United States?

Differences Between the First Political Parties

Federalists

Leader:
Alexander Hamilton

Favored:

- ★ Rule by the wealthy class
- ★ Strong federal government
- ★ Emphasis on manufactured products
- ★ Loose interpretation of the Constitution
- ★ British alliance
- ★ National bank
- ★ Protective tariffs

Democratic-Republicans

Leader:
Thomas Jefferson

Favored:

- ★ Rule by the people
- ★ Strong state governments
- ★ Emphasis on agricultural products
- ★ Strict interpretation of the Constitution
- ★ French alliance
- ★ State banks
- ★ Free trade



Standardized Test Practice

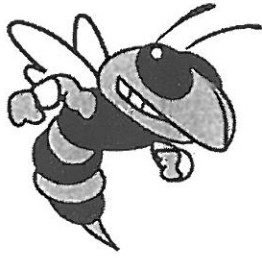
DIRECTIONS: Answer the following questions based on the chart and your knowledge of social studies.

- 1 Based on the chart, what inference can you make about early political parties in the United States?

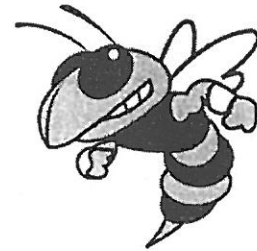
- A** They were defined mostly by the personalities of their leaders, not by their viewpoints on specific political issues.
- B** Economic issues were a basis of political disagreement between the parties.
- C** The parties agreed on most issues.
- D** In the early years of the nation, most Americans were not concerned about politics or political parties.

- 2 Based on the chart and the reading on the previous page, which of the following would Federalists in the 1790s likely oppose?

- A** a tax on machinery imported from Europe
- B** a trade agreement with Great Britain
- C** a law that supported tariffs on imports
- D** tax breaks for businessmen who build factories



MMS 8th Grade

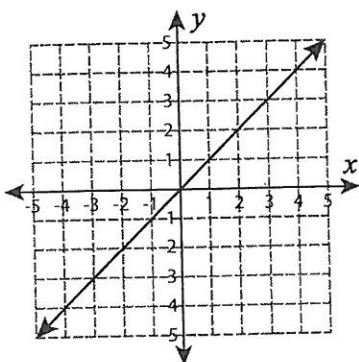


NTI Day 10

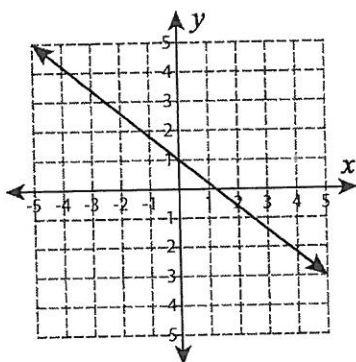
Math <u>Erica.Arnette@mboro.kyschools.us</u>	Slope & Slope-Intercept Form
Language Arts <u>Wendy.Pillion@mboro.kyschools.us</u>	"The Last Voyage of the SS Edmund Fitzgerald"
Science <u>Alex.Pratt@mboro.kyschools.us</u>	Distinguishing Fact & Opinion
Social Studies <u>Amanda.Day@mboro.kyschools.us</u>	Comparing & Contrasting

Identify the slope as positive, negative, zero or undefined from each graph.

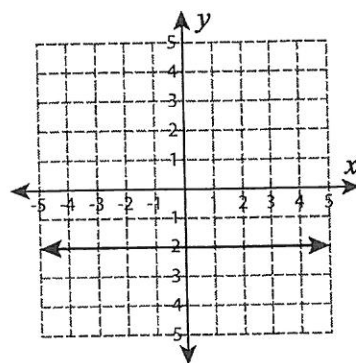
1)



2)

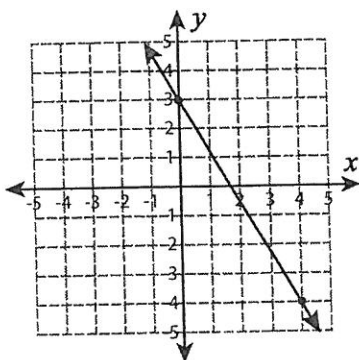


3)

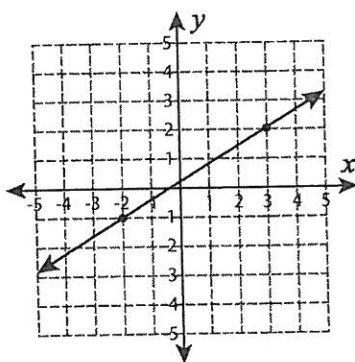


Calculate the rise and run to find the slope of each line.

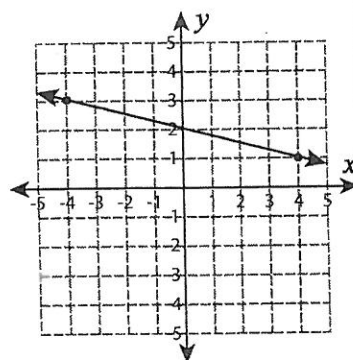
4)



5)

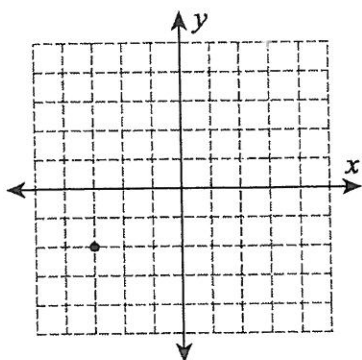


6)

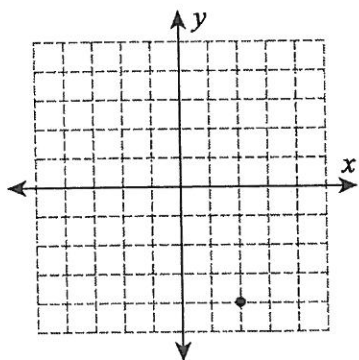


Draw a line through the point for the given slope.

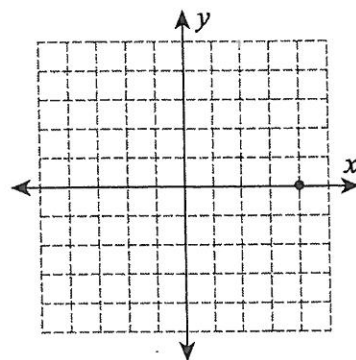
7) Slope = $\frac{3}{2}$



8) Slope = $-\frac{8}{5}$



9) Slope = $\frac{1}{3}$



Equation of a Line

Part - A

Find the equation of the line with the given slope and the y-intercept.

1) slope = -3 ; y-intercept = 4

2) slope = -1 ; y-intercept = 0

3) slope = $\frac{1}{5}$; y-intercept = -5

4) slope = 2 ; y-intercept = -9

5) slope = -8 ; y-intercept = 8

6) slope = -4 ; y-intercept = $-\frac{7}{2}$

Write the slope and y-intercept of each equation.

7) $y = 7x + 2$

8) $y = -x + 6$

9) $y = -4x + 7$

10) $y = -6x - 8$

11) $y = 8x - 5$

12) $y = 9x + 3$

NTI
10
Lang. Arts

13

The Last Voyage of the S.S. Edmund Fitzgerald

The S.S. Edmund Fitzgerald had made many trips across the Great Lakes over the years. But this voyage would be its last.

It was a beautiful day—almost picture-perfect. The 29 crew members of the S.S. *Edmund Fitzgerald* looked forward to a pleasant journey. They had made the trip across Lake Superior many times before. Unfortunately, this time would be different.

The *Edmund Fitzgerald* was built in 1958. At the time, it was the biggest ship ever to sail on the Great Lakes. It measured 729 feet long. For 17 years, the ship had made many trips across these lakes. On November 9, 1975, it set out again, carrying thousands of tons of iron ore. The crew loaded the ore in Superior, Wisconsin. They planned to take it to Detroit, Michigan, for use in steel mills.

The ship departed at 4:30 P.M. That night, the crew received a weather update on the radio. A storm was headed their way. Captain Ernest McSorley, however, was not too concerned. The *Edmund Fitzgerald* had seen its share of storms.

Even so, McSorley took proper notice of the warning. He talked to the captain of a nearby ship, the S.S. *Arthur M. Anderson*. Just 15 miles from the *Fitzgerald*, the *Anderson* was crossing Lake Superior as well.

The two captains agreed that they should alter course. They would both steer their ships farther north, near the Canadian shore. It would be a longer

route than usual, but a safer one.

By the morning of November 10, the storm had moved in. The *Fitzgerald*'s crew knew the ride ahead would be rough. November storms tended to be nasty. A bad one was called a "Witch of November." And this witch did look mean. A heavy rain was falling. The wind was gusting up to 60 miles per hour, and the crests of the waves were already 10 feet high.

By 3:00 P.M., the *Fitzgerald* was near the Canadian shore. By then, the ship had begun to list. Such listing meant that the ship was taking on water.

Meanwhile, the rain had turned to snow. The *Anderson* was still just 16 miles behind the *Fitzgerald*. But with the wind and snow, it became impossible for the two crews to see each other.

By 4:00 P.M., the wind had intensified. The gusts now reached 100 miles per hour. The waves rose 15 feet or higher.

By 6:40 P.M., the waves had reached frightening heights. Some were close to 25 feet tall. In a radio call to the *Anderson*, McSorley said it was one of the worst storms he had ever seen.

At 7:00 P.M., McSorley called the *Anderson* again to say that he was decreasing speed. That way, the *Anderson* could pull closer to the *Fitzgerald*. Before the call ended at 7:10 P.M., McSorley was

asked if the *Fitzgerald* was still listing.

"We are holding our own," McSorley answered. No one knew it at the time, but those would be his last words to the world.

By 7:20 P.M., the *Anderson's* crew saw that the *Fitzgerald* was no longer on their radar screen. They tried to call the ship but got no answer. The *Fitzgerald* had disappeared. ■

- ✓ Enter your reading time below. Then look up your reading speed on the Words-per-Minute table on page 130.

Reading Time _____

Reading Speed _____

Enter your reading speed on the Reading Speed graph on Page 131.

Comprehension

Put an **X** in the box next to the correct answer for each question or statement. Do not look back at the selection.

1. The *Edmund Fitzgerald* made its last voyage in
 - ☐ a. 1958.
 - ☐ b. 1970.
 - ☐ c. 1975.
2. What was the *Edmund Fitzgerald* carrying on that last voyage?
 - ☐ a. iron ore
 - ☐ b. steel
 - ☐ c. oil
3. The *Fitzgerald* planned to deliver its cargo to
 - ☐ a. Canada.
 - ☐ b. Detroit, Michigan.
 - ☐ c. Superior, Wisconsin.

4. Storms tended to be nasty on the Great Lakes in
 - ☐ a. March.
 - ☐ b. September.
 - ☐ c. November.

5. The first sign that the *Fitzgerald* might be in trouble was when the
 - ☐ a. rain turned to snow.
 - ☐ b. ship began to list.
 - ☐ c. ship's engines stopped.

6. The crews of the *Anderson* and the *Fitzgerald* could no longer see each other because
 - ☐ a. there was too much wind and snow.
 - ☐ b. they were too far apart.
 - ☐ c. it became too dark.

7. At what time was the *Anderson's* last attempt to contact the *Fitzgerald*?
 - ☐ a. 7:20 P.M.
 - ☐ b. 4:30 P.M.
 - ☐ c. 3:00 P.M.

8. On which of the Great Lakes did the *Fitzgerald* make its last trip?
 - ☐ a. Lake Erie
 - ☐ b. Lake Michigan
 - ☐ c. Lake Superior

_____ Number of correct answers
Enter this number on the
Comprehension graph on page 132.

Name N.T.F. Day 10
Date 8th Grade Science



Reading Skills
Practice

Distinguish Fact and Opinion

Read each fact below. Then write an opinion statement based on the fact, using the words above each box.

1. Although rain forests cover less than 7 percent of Earth's land surface, more than 50 percent of all known organisms live there.

I believe...

2. More than 500 species of birds live in 414 square kilometers (160 sq. mi.) of forest between Costa Rica and Panama.

I think...

3. Only a small portion of the plants and insects in the rain forest have been studied and classified.

I believe...

Standardized Test Practice



ACTIVITY 10

Comparing and Contrasting

KCCA: Government and Civics SS-08-1.3.1; Historical Perspective SS-08-5.2.3

When you **compare** two or more subjects, you explain how they are similar. When you **contrast** them, you explain how they are different. As you compare and contrast, you are also exploring relationships and drawing conclusions.

★ Learning to Compare and Contrast

Use the following guidelines to help you compare and contrast.

- Identify or decide what subjects will be compared and contrasted.
- Determine common categories, or areas, in which comparisons and contrasts can be made.
- Look for similarities and differences within these areas.
- Organize your comparisons/contrasts by using a graphic organizer.

★ Practicing the Skill

DIRECTIONS: Read the selection below and complete the activity that follows.

While fighting for their independence from Britain, the American colonies faced the difficult task of creating a new government. Most Americans agreed that their nation should be a republic, a government in which citizens rule through elected officials. They could not agree, however, on the organization and powers of the new republic.

In November 1777, the Second Continental Congress adopted the Articles of Confederation, America's first constitution. Under the Articles of Confederation the national government—consisting of the Confederation Congress—had the authority to conduct foreign affairs, maintain armed forces, borrow money, and issue currency. But it had no power to regulate trade, force

soldiers to join the army, or impose taxes. In the government established by the Articles of Confederation there was no chief executive or president.

The weaknesses of the government under the Articles of Confederation soon became apparent. George Washington described the government as “little more than a shadow without substance.” Many Americans began to agree that the nation needed a stronger central government. Consequently, delegates from across the country met in 1787 in Philadelphia to correct the problems with the Articles of Confederation. The result was an entirely new constitution and a new government—the government that still exists in the United States today.

Name _____ Date _____ Class _____

DIRECTIONS: The table below compares and contrasts government under the Articles of Confederation and the Constitution. Analyze how these governments are alike and different. Answer the following questions based on the information on this table and the previous page.

The Articles of Confederation and the United States Constitution		
Characteristics of Federal Government	Articles of Confederation	United States Constitution
Central government	weak	strong
Legislative branch	one-house	two-house
Executive branch	none	President
Judicial branch	none	Supreme Court and lower courts
Amendment procedure	unanimous; all 13 states required for passage	Two-thirds vote in congress; three-fourths votes of state legislatures
Power to declare war; make peace	yes	yes
Power to coin money	yes	yes
Power to manage foreign affairs	yes	yes
Power to establish a postal system	yes	yes
Power to impose taxes	no	yes
Power to regulate trade	no	yes
Power to organize a court system	no	yes
Power to call state militia for service	no	yes
Power to protect copyrights	no	yes
Power to take other necessary actions to run the federal government	no	yes

1. What problem led to a meeting of delegates in Philadelphia in 1787?

2. In general, what did the delegates do to make the national government stronger?



Standardized Test Practice

DIRECTIONS: Use the above table to answer the following questions.

1 Under both the Articles of Confederation and the United States Constitution, the national government

- A could organize a court system.
- B had a president.
- C could collect taxes.
- D could conduct foreign affairs.

2 It was only under the United States Constitution that the national government could

- A coin money.
- B regulate trade.
- C declare war.
- D set up a postal system.