6

ELA

Independent Reading!

What is the main topic of this text? How do you know?
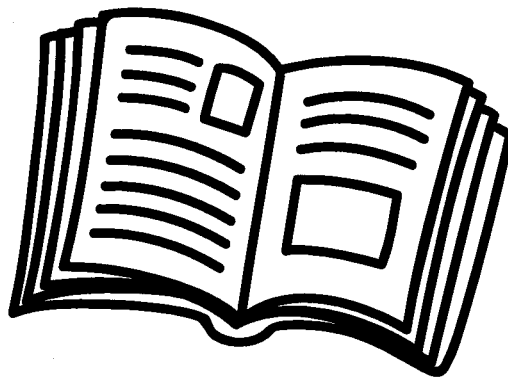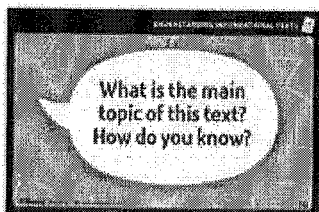
Use the questions/ prompts on the Discourse Card resource to start a conversation about something the student has read. You may talk about a text the student read in one of the lessons above, or anything else the student is reading.

Encourage daily reading. And remember, reading isn't just about the books on the shelves—it's about anything around you with letters! Turn on the closed captioning feature on your TV or read catalogs that come in the mail. The backs of cereal boxes work, too, as do directions to board games!

Running out of stuff to read? **Grab some sticky notes, and label household objects, or make up new, silly names for things!** Communicating with sticky notes, instead of talking, is fun, too—start with a half hour and see if you can go all afternoon. Reading is everywhere!

Don't worry about right/wrong answers when you talk about text—the important thing is that you and your student share a reading experience and have fun!

Here are some websites that offer fun, free, high–quality material for kids:

www.starfall.com

www.storyplace.org

www.uniteforliteracy.com

www.storynory.com

www.freekidsbooks.org

en.childrenslibrary.org

Lesson 9
Varying Sentence Patterns

Introduction Good writers use a variety of sentence types. They mix short and long sentences, and they find different ways to start sentences. Here are ways to improve your writing:

- Use different sentence types: statements, questions, imperatives, and exclamations.
- Use different sentence structures: simple, compound, complex, and compound-complex.
- Sometimes begin a sentence with a prepositional phrase or a dependent clause.

Draft

We went on an impressive field trip. We went to the science museum. The building was huge. It had many exhibits. I especially liked the laser exhibit. You should make sure to visit the museum.

Revision

Our field trip to the science museum really impressed me. The building itself was huge, and it was filled with exhibits. Do you dream of seeing actual lasers? At some point, then, be sure to visit the museum. You won't be sorry!

Guided Practice Follow the directions to rewrite each sentence or pair of sentences.

Hint

When a sentence begins with a dependent clause, use a comma to separate it from the main clause. When a sentence begins with a prepositional phrase, usually use a comma after the phrase.

1. Change this sentence to a question: It is fun to learn about insect colonies.

_____

2. Use the word *when* to combine these sentences: I looked at the museum map. I noticed a new insect exhibit.

_____

_____

3. Combine these sentences so that the new sentence begins with a prepositional phrase: It was near the entrance to the exhibit. The first thing I saw was a giant grasshopper.

_____

_____

_____

Read the paragraphs for numbers 1–4. Then answer the questions that follow in each column.

> (1) Many of the insects were robots. (2) I almost thought they were real. (3) They moved like real insects. (4) They were much larger than real insects.

1 Which is the best way to revise sentence 1?

A For me, the insects were robots.

B When looking, many of the insects were robots.

C To my surprise, many of the insects were robots.

D Surprised, many of the insects were robots.

2 Which best combines sentences 3 and 4?

A They moved like real insects, or they were much larger.

B They moved like real insects, so they were much larger.

C They moved like real insects, but they were much larger.

D They moved like real insects, because they were much larger.

> (5) The tour guide told us that the robots show insect behavior. (6) A wolf spider seemed to rush toward me. (7) I was scared. (8) I remembered it was a robot spider.

3 Which is the best way to revise sentence 6?

A After a long time, a wolf spider seemed to rush toward me.

B At that moment, a wolf spider seemed to rush toward me.

C After the trip, a wolf spider seemed to rush toward me.

D Along with others, a wolf spider seemed to rush toward me.

4 Which is the best way to combine sentences 7 and 8?

A Remembering it was a robot spider, I was scared.

B I looked scared, but the robot looked like a spider.

C I was scared until I remembered it was a robot spider.

D I was scared when I remembered it was a robot spider.

Using Context Clues

Introduction When you come across a word you do not know in your reading, look for clues. **Context clues** are words and phrases in the text that give hints to a word's meaning.

Context Clue	Signal Words	Example
Definition	*are, is, means, or*	Larger animals often treat smaller animals as prey, **or** something to be killed and eaten.
Example	*like, such as, for example*	Predators, **such as** hawks, wolves, and coyotes, hunt rabbits.
Cause and Effect	*as a result of, because, and thanks to*	**Because** many animals eat rabbits, the number of wild rabbits has decreased.
Comparison and Contrast	*like, too, similarly, but, unlike, although*	**Although** wolves eat both plants and animals, hawks are completely carnivorous.

A word's position and function in the sentence can also be a clue to its meaning. For example, read the sentence below:

Brown bears are solitary animals and are often found alone.

You can tell that *solitary* is an adjective in this sentence. The adjective describes the bears. Then the word *solitary* is defined in the sentence. Since the bears *are often found alone,* this gives a good clue to what the word *solitary* means.

Guided Practice Read the paragraph below. Circle context clues to help you figure out the meaning of the underlined words. Then tell a partner the meaning of the underlined words.

Hint

Think about the different types of context clues. Look for words that signal examples, cause and effect, and contrasts. Then use the clues to help you figure out the meanings of the underlined words.

Marsupials are mammals that carry their young in pouches. The American opossum is a marsupial. Thanks to its defense mechanisms, the opossum keeps itself safe from predators. When threatened, it hisses, growls, and bites. If this doesn't work, the opossum reacts in an unusual way. Although many animals move quickly to escape danger, the opossum collapses and pretends to be dead. This is an unconscious response to stress that is similar to jerking your hand away from a hot object before thinking.

i-Ready

Read the paragraph. Then answer the questions that follow for numbers 1–4.

Pangolins have a physical resemblance, or likeness, to an armadillo, with claws and armored bodies. When attacked, pangolins thwart combat by rolling into a hard ball and hiding. Like bats and other animals that sleep all day, pangolins are nocturnal. Because they lack teeth, eating tiny stones with their food is critical for digestion.

1 Which phrase from the paragraph best helps you understand the meaning of the word resemblance?

A have a physical
B or likeness
C with claws
D armored bodies

2 What does the phrase thwart combat mean in the paragraph?

A get attacked
B attack others
C avoid a fight
D start a fight

3 What does the word nocturnal suggest about the pangolins?

A They roll into hard balls.
B They are awake at night.
C They are like all other animals.
D They lack teeth.

4 What does the word critical mean in the paragraph?

A safe
B possible
C necessary
D imaginable

Citing Evidence to Make Inferences

Writers don't always tell you exactly what's on their minds. Sometimes you need to make a reasonable guess about what the writer thinks. A reasonable guess, which is based on both evidence and your prior knowledge of a topic, is called an **inference**.

The passage below is about a creature known as the giant squid. You will read it twice.

> For many years, both sailors and scientists suspected that a creature they called the giant squid lived in the ocean depths. Over the years, the evidence mounted, and in 2012 came solid proof: They filmed giant squids swimming in the ocean.
>
> Before the 2012 video, nobody had answers to several significant questions about giant squids. How did they act in the wild? Were they hunters? Or did they just float in the water, eating what came their way? What purpose did their huge eyes serve? Thanks to the video, we have some answers. We know that the squid is a hunter that uses its large eyes to spot prey and avoid being eaten. But many fascinating mysteries about the creature still need solving. Will this important research continue?

Read the passage again. This time, underline any evidence suggesting whether the writer feels scientists should keep researching the giant squid.

So, does the writer think that scientists should keep researching the giant squid? You can use evidence from the text to make and support an inference about what she thinks.

Study the chart. It shows how you can support an inference using textual evidence.

What You Know	+	What the Text Says	=	Inference
A person with positive feelings about a type of work usually wants that work to continue.		• "Before the 2012 video, nobody had answers to several significant questions about giant squids." • "But many fascinating mysteries about the creature still need solving." • "Will this important research continue?"		The author thinks that scientists should keep researching the giant squid.

By using text evidence and what you already know, you can make and support inferences. In a way, you make the same kinds of educated guesses that scientists do when they study mysterious creatures of the deep!

Read the first part of a scientific account about Bigfoot.

A Scientist's Search for Bigfoot　*by Tetsuo Fujii*

Dr. Jeffrey Meldrum is an Associate Professor of Anatomy and Anthropology at Idaho State University. He specializes in primate foot structure—a category that includes apes, monkeys, and humans. His interests also include evaluating footprints that some claim are left by a mythical North American ape known as Bigfoot.

Meldrum's laboratory houses more than 200 casts and artifacts relating to Bigfoot. Although he believes that some samples are hoaxes, others interest him, such as unidentified hair and unique casts of muscle and foot-bone anatomy.

(continued)

Explore how to answer this question: *"Dr. Meldrum thinks that some samples are hoaxes, but others interest him. Why is he most likely interested in those other samples?"*

Reread the second paragraph. It suggests what Dr. Meldrum thinks, but does not state it directly.

Look for details suggesting why Meldrum is interested in the other samples. One detail is listed in the second column; write another detail there. Then complete the inference statement.

What You Know	+	What the Text Says	=	Inference
• If a scientist is interested in something, he or she might think it has scientific value. • A scientist might keep samples that could lead to a discovery.		• "Meldrum's laboratory houses more than 200 casts and artifacts relating to Bigfoot." •		Dr. Meldrum is most likely interested in those other samples because …

On the lines below, explain how the details you presented in the chart support your inference.

_____

_____

_____

Continue reading the account about Meldrum's research. Use the Close Reading and the Hint to help you answer the question.

Close Reading

What do most other scientists think about Meldrum's work? **Underline** the sentence that tells how they feel about it.

(continued from page 20)

Many anthropologists criticize Meldrum's work. They feel he is trying to find an imaginary creature that exists only in folklore. Meldrum tells critics he is not saying that Bigfoot exists. He just believes there is enough evidence to justify scientific investigation.

Unsurprisingly, most anthropologists reject Meldrum's evidence. Dr. David J. Daegling, a University of Florida anthropologist who thinks Meldrum's methods of analyzing data are unscientific, sums up this feeling: "Meldrum's evidence doesn't look better on deeper analysis; it looks worse."

Hint

Which choice gives evidence of what most scientists think of Bigfoot research?

Circle the correct answer.

Which sentence from the account best supports the idea that most scientists do not find value in investigating Bigfoot artifacts?

A   "Many anthropologists criticize Meldrum's work."

B   "They feel he is trying to find an imaginary creature that exists only in folklore."

C   "Meldrum tells critics he is not saying that Bigfoot exists."

D   "He just believes there is enough evidence to justify scientific investigation."

Show Your Thinking

Look at the answer you chose above. Explain how the evidence in your answer helped show that most scientists do not find value in investigating Bigfoot artifacts.

_____

_____

_____

Read the scientific account. Then answer the questions that follow.

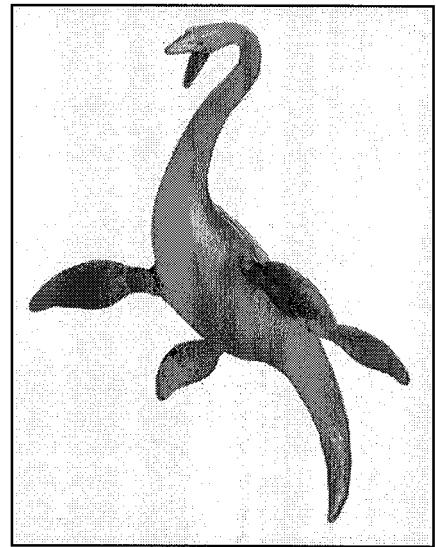# Looking for the Loch Ness Monster

by Stuart Clyburn

1   The word *loch* is a Scottish Gaelic word for *lake*. And there are a whole lot of lochs in Scotland—more than 500 of them! But one loch, Loch Ness in the Scottish Highlands, is known around the world. The reason for its fame is not its great size or beauty. People know the name *Loch Ness* because it is said to be the home of a mysterious, giant creature known as "the Loch Ness monster." Whether the creature really exists or not has been a matter of great debate for decades.

2   What does "Nessie," the popular nickname for the monster, supposedly look like? By most accounts, she has a small head on a very long neck. Her body is broad and rounded, with four flippers and a long tail. If you know your prehistoric creatures, you might be thinking: Nessie sounds like a *plesiosaur*, a giant sea reptile that lived hundreds of millions of years ago. One common theory about Nessie is that she actually *is* a plesiosaur. Other explanations for Nessie are far less dramatic. Some people think that the "mysterious" creature people have mistaken for a monster may have been nothing more than a walrus, seal, or eel.

an artist's depiction of a plesiosaur

3   How could a creature as big as a plesiosaur hide in a lake? Well, Loch Ness is a huge body of water. It's the second largest loch in Scotland, based on the surface area of its water. Loch Ness covers more than 21 square miles, and only Loch Lomond is bigger. But if you look at the volume of water, Loch Ness is the biggest. And that's because it's deep—about 755 feet at its deepest point. This single loch contains more water than all the freshwater lakes in England. In other words, it's one big place to hide.

4   Some people who believe in Nessie say that she's made her home in the region for more than a thousand years. A book written in the seventh century tells about an Irish monk who saw a giant "water beast" in the River Ness in 565 c.e. No one thought much about that story until 1933. A couple was driving home along the loch late one night. They said they were forced to stop when a giant, dragon-like creature crossed the road and slid into the water. Their story appeared in newspapers. Soon, many more people claimed to have seen the monster. The following year, in 1934, a doctor from England took a photo that became famous worldwide. The poorly lit, grainy photo shows what looks like the head and long neck of a plesiosaur-like creature rising from the water. The photo served as "proof" of the monster until 60 years later—when it was revealed to be a fake.

5   Since the 1930s, dozens of serious, scientific searches have been undertaken to find the Loch Ness monster. One early effort involved placing scouts with cameras and binoculars around the loch for five weeks. Later searches relied on the use of sonar. This method involves bouncing sound waves through the deep

waters of the loch to detect moving objects. In 2003, the famous British Broadcasting Corporation (BBC) sponsored one of the most thorough searches ever. Scientists used 600 sonar beams and satellite tracking. What did they find? Nothing of note, really. They concluded that Nessie was a myth.

6   After so many attempts, you have to wonder why people keep looking for the Loch Ness monster. It may just be that there's something exciting about the idea of mysterious creatures living so close to us, always just out of view. There's a word for such creatures: *cryptids*. It comes from a Greek word meaning "to hide." The Loch Ness monster is one of many cryptids that have captured the public imagination. Others include Bigfoot in North America, the Yeti in the Himalaya Mountains, and the chupacabra in the southwestern United States and Mexico.

7   Many animals whose existence we take for granted today might once have been considered cryptids. Komodo dragons and giant squids were once thought to be tall tales. Until 1902, people regarded stories of "giant ape-men" living in Africa as just a myth. Today, we know them as mountain gorillas. The odds of "Nessie" turning out to be real may not be quite as good. But if it were true, we'd all love it, wouldn't we? It's exciting to think that a real live monster lives deep in a loch in Scotland.

Answer Form

1 Ⓐ Ⓑ Ⓒ Ⓓ
2 Ⓐ Ⓑ Ⓒ Ⓓ
3 Ⓐ Ⓑ Ⓒ Ⓓ **Number** ╱4
4 Ⓐ Ⓑ Ⓒ Ⓓ **Correct**

1 According to the account, what is one reason many people believe the Loch Ness monster does not exist?

A The earliest sighting of the Loch Ness monster occurred in 565 c.e.

B The photo taken in 1934 has been proven to be a fake.

C Plesiosaurs, like the dinosaurs, lived hundreds of millions of years ago.

D Sonar beams and satellite tracking found no evidence in the loch.

2 Which detail provides evidence that a creature as huge as a plesiosaur could really hide in Loch Ness?

A Loch Ness has a surface area of 21 square miles and is 755 feet deep.

B The Loch Ness monster might actually be an ordinary walrus, seal, or eel.

C Dozens of scientific searches of Loch Ness have been conducted.

D The Loch Ness monster is known as a cryptid, a word whose root word means "to hide."

3   Which statement is **best** supported by the account?

    A   It is illogical to think that a plesiosaur could still be living in Loch Ness today.

    B   Someday, scientists will prove that no giant creatures live in Loch Ness.

    C   Some people want to believe in the Loch Ness monster and ignore scientific evidence showing it does not exist.

    D   People have always been fascinated by the idea of strange creatures such as Bigfoot and the Loch Ness monster.

4   Despite the great interest in the Loch Ness monster, it is highly unlikely that such an animal actually exists. Which sentence from the passage **best** supports this conclusion?

    A   "Whether the creature really exists or not has been a matter of great debate for decades."

    B   "Some people who believe in Nessie say that she's made her home in the region for more than a thousand years."

    C   "Since the 1930s, dozens of serious, scientific searches have been undertaken to find the Loch Ness monster."

    D   "Many animals whose existence we take for granted today might once have been considered cryptids."

5   Some people firmly believe that the Loch Ness monster is actually a plesiosaur. Use at least **three** details from the account to explain why some people believe this.

_____

_____

_____

_____

_____

_____

✓ **Self Check**   *Go back and see what you can check off on the Self Check on page 1.*

Introduction Many words have more than one definition and can serve as more than one part of speech. When you are reading or writing, use a dictionary to check the precise meaning of a word or phrase.

- Words in a **dictionary** appear in alphabetical order. Each entry provides the pronunciation, the part of speech, and the meanings of the word. Sample sentences are often included to clarify meaning.

account (ə kount') *n.* 1. a record of events or time period 2. money in a bank 3. worth, importance
account for *v.* 1. to be the main reason for: *Heavy rain accounted for the flooding.* 2. to explain: *I can't account for the dog's barking.*

> When there is more than one meaning, each definition is numbered.

> The abbreviations show the part of speech: *n.* stands for *noun* and *v.* stands for *verb*.

extract (ĭk sträkt') *v.* 1. to pull out 2. to obtain or get meaning, pleasure, or information from something   extract (ĕk' sträkt) *n.* 3. an excerpt or part of a text 4. a flavoring

> The pronunciation of the word is in parentheses. For some words, the pronunciation depends on the part of speech.

- A **glossary** is similar to a dictionary. It is an alphabetical list of special words that are used in a book. Each entry defines the word as it is used in that book.

Guided Practice Read the paragraph. Use the entries above to find the meanings of the underlined words and phrases. Write the number of the correct meaning above each word or phrase.

Hint

Identify how a word is used in a sentence before you use the dictionary. If the word is used as a noun, then you should read the definitions given for a noun.

Our museum has an exhibit on Chinese art. The catalog includes <u>extracts</u> from books about the landscape paintings. Many people <u>extract</u> pleasure from viewing these paintings. However, various <u>accounts</u> suggest that these paintings were also used to teach life lessons. If the paintings were used to teach morals, then scholars could <u>account for</u> the wide use of symbols that stand for character traits.

For numbers 1–4, use the dictionary entries to answer the questions.

express (ĭk sprĕs') *v.* **1.** to say or state **2.** to communicate ideas or feelings **3.** to squeeze or press something out   *n.* **4.** type of transportation that moves with few or no stops   *adj.* **5.** specific: *I bought these apples for the express purpose of baking a pie.* **6.** stated **7.** moving with few or no stops

reflect (rĭ flĕkt') *v.* **1.** to bend back light **2.** to show an image, to mirror **3.** to show clearly or reveal: *The novel reflects the writer's unhappiness.* **4.** to consider seriously: *You need to reflect on your actions.* **5.** to bring negative attention to: *The team's rowdiness reflected on the school.*

1 What part of speech is express as used in this sentence?

My mother and I took the express train to the museum.

A noun

B adjective

C verb

D adverb

2 Which definition of express best fits this sentence?

One artist painted a gloomy landscape to express the theme of grief and loss.

A Definition 2

B Definition 3

C Definition 5

D Definition 6

3 Which definition best fits reflect as used in this sentence?

Many landscape paintings reflected the artist's mood.

A Definition 1

B Definition 3

C Definition 4

D Definition 5

4 Which definition best fits the way reflect is used in this sentence?

When you view a Chinese landscape painting, reflect on the artist's message.

A Definition 2

B Definition 3

C Definition 4

D Definition 5

Introduction You can use a thesaurus to make your writing more precise or interesting. A **thesaurus** provides synonyms and antonyms for particular words.

- A thesaurus lists words in alphabetical order. Each entry gives the part of speech, the definition, and a list of synonyms. Antonyms, if any, are also included.

> **bitter** *adj.* 1. a strong, unpleasant taste: *The white part of a lemon rind is bitter.* acrid, unpleasant *Antonyms: sugary, sweet* 2. harsh and cold: *Winter has been bitter this year.* rough, severe *Antonyms: mild, pleasant* 3. having or showing resentment: *Al felt bitter when he lost his job.* angry, resentful, sullen *Antonym: friendly*
>
> **claim** *v.* 1. to need: *This issue claims our attention.* deserve, demand, require 2. to say that something is true: *Nola claims that bees sleep at night.* state, declare, insist *Antonym: deny* *n.* 3. a statement that something is true: *The ad makes the claim that Brand X is the best flour.* assertion, allegation, declaration *Antonym: denial*

When there is more than one meaning, each definition is numbered.

Sometimes there is a sample sentence.

Some words can serve as more than one part of speech.

Guided Practice Read the paragraph. Use the thesaurus entries above to answer the questions about the underlined words.

Hint

Remember: A *synonym* is similar in meaning to another word. An *antonym* has the opposite meaning of the word.

Nearly 2,600 years ago, people in Mexico and Central America drank a <u>bitter</u> chocolate drink, which they made from cocoa beans. Some scholars <u>claim</u> that people drank chocolate even longer ago.

1 Which words are synonyms of *claim* as used in the paragraph?

_____

2 Which word is an antonym of *claim*? _____

3 Which words are synonyms of *bitter* as used in the paragraph?

_____

4 Which words are antonyms of *bitter*? _____

For numbers 1–4, read the sentence. Then use the thesaurus entry to answer the question.

---

significant *adj.* **1.** expressing a meaning: *Dad gave Lee and Arlo a significant glance when they started to argue.* **meaningful, informative** *Antonym: meaningless* **2.** having influence: *Thu has a significant job with the Government.* **important** *Antonyms: insignificant, unimportant*

---

1 As the food of rulers, gods, and everyday people, chocolate was significant for the Maya.

Which is a synonym for significant as it is used above?

A meaningful

B unimportant

C insignificant

D meaningless

---

permit *v.* **1.** to allow to do something: *I'll permit you to pick plums.* **allow, authorize** *Antonyms: forbid, prohibit* **2.** to be favorable: *We'll have a picnic if the weather permits.* **accommodate, oblige** *n.* **3.** written permission: *The contractor got a permit to build a home.* **license, permission**

---

2 The Aztecs, however, would permit only certain people to drink it.

Which is an antonym for permit as it is used above?

A license

B allow

C forbid

D oblige

---

powerful *adj.* **1.** physically strong: *The oxen are powerful.* **strong, mighty** *Antonyms: weak, frail* **2.** able to influence: *Leaders are powerful people.* **high-ranking, influential** *Antonym: low-ranking*

---

3 Only the powerful members of Aztec society drank the sacred beverage.

Which is a synonym for powerful as it is used above?

A high-ranking

B powerless

C weak

D frail

---

valuable *adj.* **1.** having monetary worth: *Gold is valuable.* **precious** *Antonym: cheap* **2.** having use or importance: *A job teaches you valuable skills.* **useful, worthwhile** *Antonym: worthless*

---

4 Cocoa beans were so valuable that the Aztecs used the beans as money.

Which is an antonym for valuable as it is used above?

A useful

B worthwhile

C precious

D cheap

---

i-Ready

Citing Evidence to Make Inferences

Have you heard the story of Pinocchio, the wooden boy who came to life? Each time he lies, his nose grows. Later in the story, Pinocchio says he has been to school, and—*zoink!*—his nose grows. Now, the author doesn't say at this particular point in the story that Pinocchio lied. But you can make an **inference**—a conclusion based on what you already know and text evidence—that he did.

Good inferences are supported with textual evidence. You can practice this right now.

Read the paragraph below. Then use the chart to support an inference about the narrator.

> Abraham Lincoln once said, "Whatever you are, be a good one." Easy for him to say—he was good at *everything*. It's nice advice, I guess. Still . . . you can say that you're going to be good at playing the piano. You can even say that you'll perform beautifully at the big recital. You can say that all you want, and you can still forget the notes to your song halfway through and run off the stage in tears. I wonder what Lincoln would have said about that! He probably wouldn't have felt as miserable as I do right now, at the very least.

The chart below states an inference about the narrator. Complete the chart by writing one more phrase from the paragraph that directly supports the inference.

What You Know	╬	What the Narrator Says	═	Inference
People sometimes feel bad when embarrassed.		• "Still . . . you can say that you're going to be good at playing the piano." •		The narrator has just had a bad experience performing in a piano recital.

When reading, always support your inferences with textual evidence. An unsupported inference won't make your nose grow an inch, but you won't be on your way to a better understanding of the story, either!

Read the first two paragraphs of an ancient Greek myth.

Athena, Arachne, and the Weaving Contest

by Sofia Lillios

Athena, the goddess of wisdom, was an exceptional weaver. She shared her knowledge with humans, as long as they consistently showed her their deepest gratitude. Athena's most talented student was a young woman named Arachne.

Each day, Athena and Arachne sold their creations at a country market, and everyone said Arachne's cloth was incredible. Athena overheard Arachne tell customers she taught herself to weave. Athena cringed as she listened to Arachne's lies. Then, on one fateful day, Arachne kept bragging to customers that she was the greatest weaver in the world, and that her creations were more beautiful than all the others at the market.

(continued)

Explore how to answer this question: *"How does Athena feel about Arachne's bragging? Make an inference about how Athena feels. Support your inference with two details from the text."*

Look for details from the text that hint at how Athena feels about Arachne. One detail is shown in the chart below. Write a second detail next to the second bullet point. Then write down your inference.

What You Know	+	Details from the Text	=	Your Inference
Someone who expects gratitude would likely be upset if she did not receive it.		• She shared her knowledge with humans, as long as they consistently showed her their deepest gratitude." •		

Use details from the chart to support the inference that Athena is upset about Arachne's bragging.

_____

_____

_____

Continue reading "Athena, Arachne, and the Weaving Contest." Use the Close Reading and the Hint to help you answer the question.

Close Reading

On page 46, the author says that Athena shares her skills with humans on one condition. **Circle** the phrase stating this condition.

(continued from page 46)

An old woman in a cloak smiled and challenged Arachne to a weaving contest, which Arachne gladly accepted. The rules were simple: each would weave one complete tapestry by nightfall, and customers would judge the winner.

Throughout the day, the two sat at looms, weaving furiously. Just before sunset, they finished. Both tapestries were marvelous to behold, but the crowd chose the old woman, for her creation was flawless. "Spin and weave forever without my help, fool," the old woman suddenly said, and pointing one finger at Arachne, turned her into a spider.

Hint

The question asks *why* Arachne was turned into a spider, not how.

Circle the correct answer.

Which sentence best explains why Arachne was turned into a spider?

A The old woman had special powers.

B Arachne did not show her thanks to Athena.

C Athena was disguised as the old woman.

D Like Arachne, spiders are good at weaving.

Show Your Thinking

Look at the answer you chose above. Explain how the details in the story helped you infer why Arachne was turned into a spider.
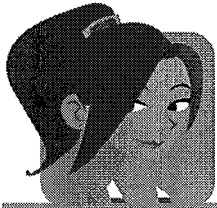
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Read the Native American story. Use the Study Buddy and the Close Reading to guide your reading.

The Wisdom of the Willow Tree

by Wilson Mekashone

Based on the first paragraph, I think Young Man is a patient and determined person. I'll underline the phrase that tells me about Young Man's character.

Close Reading

What does Young Man learn on his journey? **Underline** the sentences that explain the lesson of his journey.

The willow tree is kind and wise. **Circle** words and phrases that describe the tree.

1   Young Man often felt lost and pondered questions about the purpose of his life. He decided to journey far away, seeking wisdom. He <u>hiked tirelessly</u> for several days.

2   One day, the sun blazed down and he was hot, thirsty, and desperate for shade. In the distance, he saw a willow tree and crawled to it. Exhausted, he lay between its roots and had a vivid dream. In the dream, the tree had a wise old face that smiled at him and looked strangely familiar.

3   Young Man said to the tree, "I have failed on my journey. I still don't understand how to live my life. I'm thirsty and weary, and I cannot summon the strength to return home."

4   The tree then reached down its oldest branch, stroked Young Man gently on the cheek, and said, "Sleep in my shade. I am old and know the value of rest. When you wake up, follow my roots. They are wrinkled but know the way."

5   Young Man awoke and followed the tree's enormous roots to a burbling stream. As he drank, he saw his reflection and was shocked when he realized that the face he had seen in the willow's trunk had been his own, only much older.

6   He smiled as he now understood that he must age like the wise tree and help others find their way when they feel lost and defeated. Over time, he would gradually become Wise Man, whom people would seek out for help, shelter, and advice. This, he knew, would take much strength and patience.

Hints

Which choice describes what it takes for Young Man to become Wise Man?

Use the Hints on this page to help you answer the questions.

1 A student makes the following claim about Young Man in "The Wisdom of the Willow Tree."

> Young Man has to develop skills if he wants to become Wise Man.

Which sentence from the text best supports this claim?

A "He decided to journey far away, seeking wisdom."

B "This, he knew, would take much strength and patience."

C "I am old and know the value of rest."

D "In the distance, he saw a willow tree and crawled to it."

Read each answer choice carefully. Which answer contains a word that describes something people do when they are happy?

2 Which sentence from the text best shows that Young Man is happy about his encounter with the willow tree?

A "Young Man awoke and followed the tree's enormous roots to a burbling stream."

B "As he drank, he saw his reflection and was shocked when he realized that the face he had seen in the willow's trunk had been his own, only much older."

C "I'm thirsty and weary, and I cannot summon the strength to return home."

D "He smiled as he now understood that he must age like the wise tree and help others find their way when they feel lost and defeated."

How does Young Man feel when he approaches the willow tree? How does the willow tree encounter change Young Man's feelings?

3 Explain how the willow tree's kindness and wisdom help Young Man. Include at least one detail from the story to support your explanation.

_____

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i-Ready

Read the story. Then answer the questions that follow.

A Sewing Sensation

by William Rivera

1   Juan sat on the floor of Mom's sewing room with one eye on his soccer magazine and one eye on his mother. His mother was making a wedding dress for their neighbor's daughter, and Juan could see that the dress was going to be beautiful. Juan's mother had designed and sewn dresses for many of the girls in his town, and Juan felt proud that people wanted to wear his mother's creations on their special days.

2   Juan glanced up again from his magazine and asked, "Is your machine running okay, Mom? I think it's making a weird noise."

3   Mom hardly looked up and said, "I think it's working just fine. It's whirring and humming away, just as always."

4   Juan looked disappointed, but he went back to pretending to read his magazine. A few minutes later, he asked, "Do you want me to sew the hem of the dress so that you can rest your fingers? I've watched you do it millions of times, so I could do it if you are really tired." This time, Juan's mother studied Juan's face carefully.

5   "You know, I could use a break," she said, "and we need some new pillowcases. I've got the pattern cut out, and all you'd have to do is stitch up the sides." Juan dropped his magazine and was sitting in Mom's sewing chair in no time. Juan's mom carefully removed the dress she was working on, showed Juan how to thread the sewing machine, and brought him some pillowcases to sew.

6   In his enthusiasm, Juan stomped on the foot pedal and almost sewed over his finger. Then he remembered the patience that his mother always showed, and he slowed down. His seams were straight and even. Juan had a huge smile on his face when he looked over his shoulder at his mom.

7   "I can't believe you sewed that so perfectly on your first try," Mom said, patting Juan on the back. "It took me years of practice to perfect my technique, and you're already a sensation. Why don't you try making a pillow for your room? You can design it, and I'll show you how to make the pattern and cut it out."

8   Juan's face lit up, but then a dark shadow seemed to pass over it. "I think I should probably just go outside and kick the ball with my friends." To himself, he muttered, "What would Anthony think if he saw me at a sewing machine?" as he headed outdoors.

9   Mom didn't say anything as she watched Juan's reaction, but that night at dinner, she and Juan's dad began talking about a local fashion designer who had moved to Dallas and become a very successful clothing designer. Juan pretended he wasn't listening, but the scowl slowly vanished from his face. "Many of the best fashion designers are men," Juan's dad continued. "They can make a lot of money for their designs."

10   After dinner, Juan got out his notebook and began sketching. Then he showed his notebook to his mother, and she nodded approvingly. Together, they headed to the sewing room for pattern tracing paper and scissors.

11   Juan cut out two large round pieces of cloth and began stitching them together, leaving one section open. He turned the cloth inside out, stuffed the opening with cotton batting, and then sewed up the open section. Finally, he used fabric markers to add details. He placed his finished creation on his bed.

12   The next day, Anthony came over to kick the ball with Juan, but it started to rain. The two headed to Juan's room to watch soccer videos instead. When Anthony saw the new oversized soccer ball on Juan's bed, he asked Juan where he got it. Juan grinned at his friend and said, "Mine is one-of-a-kind, but I think I know how to get you one that's almost like it."

Answer the questions. Mark your answers to questions 1–4 on the Answer Form to the right.

Answer Form

1 Ⓐ Ⓑ Ⓒ Ⓓ
2 Ⓐ Ⓑ Ⓒ Ⓓ
3 Ⓐ Ⓑ Ⓒ Ⓓ   **Number** ╱ 4
4 Ⓐ Ⓑ Ⓒ Ⓓ   **Correct**

1 Juan does not have a lot of experience with sewing. Which sentence from the passage is the **best** evidence of this claim?

A   "Juan glanced up again from his magazine and asked, 'Is your machine running okay, Mom? I think it's making a weird noise.'"

B   "'I can't believe you sewed that so perfectly on your first try,' Mom said, patting Juan on the back."

C   "To himself, he muttered, 'What would Anthony think if he saw me at a sewing machine?' as he headed outdoors."

D   "'Many of the best fashion designers are men,' Juan's dad continued."

2 Juan is very excited about learning to sew. Which of the following sentences from the passage **best** supports this statement?

A   "Juan felt proud that people wanted to wear his mother's creations on their special days."

B   "Juan sat on the floor of Mom's sewing room with one eye on his soccer magazine and one eye on his mother."

C   "Juan had a huge smile on his face when he looked over his shoulder at his mom."

D   "Then he remembered the patience that his mother always showed, and he slowed down."

3 Which detail **best** supports the idea that Juan's mother encourages her son's interests?

A She tells him that her sewing machine doesn't require fixing.

B She gives him some pillowcases to sew on his own.

C She sends him outside to play ball instead of sewing.

D She gives him a notebook for sketching and drawing.

4 What is one reason Juan chooses to play soccer with his friends instead of continuing to sew?

A He knew that he needed to practice if he wanted to improve his soccer skills.

B He did not want his friends to think he was rude for keeping them waiting.

C He thought that his father would not approve of his interest in sewing.

D He was concerned that his friends might make fun of his sewing talent.

5 Juan seems somewhat embarrassed about his strong interest in sewing. Write a paragraph in which you agree or disagree with that statement. Use at least **two** details from the story to support your answer.

_____

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✓ **Self Check** *Go back and see what you can check off on the Self Check on page 43.*

i-Ready

Read the story. Then answer the questions that follow.

In the 1930s, the United States was stuck in a deep economic depression that left millions of people without jobs. In part of the Great Plains, an environmental disaster known as the Dust Bowl added to the hard times. A long drought combined with years of poor farming practices made the land vulnerable to extreme wind erosion. Farmers watched helplessly as the topsoil that had once nourished their crops blew away. In this fictional selection, a boy and his family struggle with the hardships of the Dust Bowl.

Dust

by Charles Grayson

1   As Edwin rested his cheek against the side of his cow, Nelly, he could hear the wind whistling through the barn walls and see the air begin to darken with dust. Annie and Jewel were giggling as they played in the hayloft above him when one of the girls began to wheeze. Edwin quickly finished milking the cow and called to his sisters. "Hurry up, girls," he said, "another black blizzard is coming."

2   The wind suddenly picked up strength, and before Edwin's eyes, the farmhouse—only 50 feet away—became nearly invisible. Without hesitation, Edwin grabbed two pieces of heavy twine, tied one around each girl's waist, and then tied the two girls together. He took Annie's hand and instructed her to hold tightly to Jewel. Leaning into the blinding wind, Edwin slowly navigated them back to the house.

3   Inside, Ma was relieved to see the children. With a sigh, she took the milk from Edwin, eyeing the familiar dust that she would try to skim off before serving the milk to her family. Although it was early morning, the dust storm outside made the small farmhouse dark and dismal. Edwin slapped the dirt from his jacket with his hands. He was weary of the dust, too, but he was smiling inside because tomorrow his father was coming home.

4   The next morning dawned clear and calm. Edwin swept the house while his mother worked in the yard, rescuing her daffodils from the dust that had drifted against the foundation of the house like gritty snow. The clatter of a rundown automobile heralded the arrival of Edwin's father, and the boy raced outside.

5   The family gathered around Pa, who hugged each one of them tightly. He had been in Arizona for three weeks picking cotton. This spring the ground was hard and barren, and the constant dust storms made it impossible to cultivate crops. Pa had to find some way to earn money—his children were wearing tattered hand-me-downs, and his small herd of cattle was slowly starving.

6   When Ma asked about the work, Pa said that the wages he earned were far less than what had been promised. Still, he'd brought home enough money to see them through another month. Eventually, the joy of being reunited with his family faded, and the careworn expression returned to Pa's face.

7   After Pa had been home a few days, Edwin overheard his parents having a serious discussion. "I just don't know if I can leave our home," Ma said, a note of grief in her voice. Pa had heard there was work on commercial farms in California, where cotton, oranges, and other crops grew nearly year round.

8   "I know it's not like owning our own farm, but what choice do we have?" Pa pleaded. Afterward, Ma went into the yard and stood for a long time by her beloved lilac bush, staring out at the desolate fields.

9   Later, Pa asked Edwin to ride the horse into town to purchase provisions. Edwin rode at a slow pace, thinking. He didn't like it when his parents argued, and he didn't like it when his father had to leave home to work. Most of all, Edwin wished there was something he could do to assist his family. At the store, he walked past the half-empty shelves to the back counter and asked Mr. Harburger for beans and flour.

10   As Edwin waited, something bright and orange caught his eye. It was an old advertisement on the shelf in front of him—a photograph of a glistening orange grove with the words "Sunny California" splashed across the top. Edwin had never seen an orange grove before. Studying the picture, Edwin's face brightened. "Take it," Mr. Harburger said with a wink. At home, Edwin tacked the picture up next to his bed. One day, Edwin even caught his mother examining the photograph of the orange grove, smiling for the first time in a long time.

11   When autumn arrived, Edwin's parents learned the government was offering to buy starving livestock for slaughter. Most farmers knew their animals could not survive another winter, so they accepted the offer in exchange for some much-needed cash. After a long discussion, Edwin's parents did the same. Edwin sensed a change was coming.

12   The cow Nelly remained, but Edwin could see that she was becoming desperately thin. The next day, Edwin sold Nelly at the Baileys' farm. The Baileys were doing better than most folks, though Edwin couldn't say why. He returned home with 16 dollars in his pocket and a little relief knowing that Nelly would be cared for.

13   Later that evening, Edwin's parents made an important announcement: they would be packing whatever would fit into their old automobile and moving to California. Then Edwin made his own announcement. "Here," he said, handing his father the 16 dollars. "We can buy fuel with this!"

1 Read this sentence.

> Edwin wants to help his family during this difficult time.

Which of the following sentences from the story **best** supports this statement?

A "After Pa had been home a few days, Edwin overheard his parents having a serious discussion."

B "Later, Pa asked Edwin to ride the horse into town to purchase provisions."

C "At home, Edwin tacked the picture up next to his bed."

D "The next day, Edwin sold Nelly at the Baileys' farm."

2 Which statement **best** supports the idea that the Dust Bowl made it difficult for families to survive?

A "With a sigh, she took the milk from Edwin, eyeing the familiar dust that she would try to skim off before serving the milk to her family."

B "Although it was early morning, the dust storm outside made the small farmhouse dark and dismal."

C "He was weary of the dust, too, but he was smiling inside because tomorrow his father was coming home."

D "Edwin swept the house while his mother worked in the yard, rescuing her daffodils from the dust that had drifted against the foundation of the house like gritty snow."

3 Which statement **best** expresses the theme of this story?

A Don't rely on others for help.

B You can't make a person change.

C Try to find the good in every situation.

D Be content with what you have.

4 The family in the story demonstrates the idea that people are adaptable, or willing to change when needed. Which sentence from the passage **best** shows this idea?

  A "Annie and Jewel were giggling as they played in the hayloft above him when one of the girls began to wheeze."

  B "Although it was early morning, the dust storm outside made the small farmhouse dark and dismal."

  C "Most farmers knew their animals could not survive another winter, so they accepted the offer in exchange for some much-needed cash."

  D "He returned home with 16 dollars in his pocket and a little relief knowing that Nelly would be cared for."

5 Answer Parts A and B below.

Part A

  Based on the passage, how do Ma's feelings about moving change over time?

  A She becomes more and more resistant to the idea of moving.

  B She grows more comfortable with the idea of moving.

  C She likes the idea of moving initially, then comes to dislike it.

  D She becomes more confident that the family should not move.

Part B

  Which sentence from the passage **best** shows Ma's changing feelings about moving?

  A "With a sigh, she took the milk from Edwin, eyeing the familiar dust that she would try to skim off before serving the milk to her family."

  B "'I just don't know if I can leave our home,' Ma said, a note of grief in her voice."

  C "Afterward, Ma went into the yard and stood for a long time by her beloved lilac bush, staring out at the desolate fields."

  D "One day, Edwin even caught his mother examining the photograph of the orange grove, smiling for the first time in a long time."

6   What evidence in the story helped you to know that the family would move to California, even before Edwin's parents made their announcement? Describe how the events in the story support this inference.

_____

_____

_____

_____

_____

7   Write a summary that includes the conflict in the story and how it is resolved. Use details from the story to support your answer.

_____

_____

_____

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_____

_____

8   Answer Parts A, B, and C below.

Part A

Circle only **one** word that describes Edwin based on evidence from the text. There is more than one correct choice listed below.

thoughtless   resourceful   timid

observant   optimistic   stubborn

Part B

Find **one** sentence in the passage with details that support your response to Part A. Write that sentence on the lines below.

_____

_____

_____

_____

Part C

Find a **second** sentence in the passage with details that support your response to Part A. Write that sentence on the lines below.

_____

_____

_____

_____

Performance Task—Extended Response

9 What inferences can you make about Edwin's character based on his actions in the story? What events and details from the text helped you make those inferences? Write an essay of two to three paragraphs explaining your answer.

In your answer, be sure to
- explain what inferences you made about Edwin while reading the story
- explain what events and details from the text support your inferences
- cite evidence from the story in your answer

Check your writing for correct spelling, grammar, capitalization, and punctuation.

_____

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6

Math

Understanding Ratio Concepts

➤ **Complete each problem about ratio relationships.**

1 Ms. Omar runs the school tennis club. She has a bin of tennis balls and rackets. For every 5 tennis balls in the bin, there are 3 tennis rackets. Draw a model to show the ratio of tennis balls to tennis rackets.

Write the following ratios.

tennis balls to tennis rackets _____

tennis balls to total pieces of tennis equipment _____

2 Christian has a collection of 18 shark teeth. He identified them as 6 tiger shark teeth, 8 sand shark teeth, and the rest as bull shark teeth.

What does the ratio 6 : 8 represent in this situation?

What does the ratio 4 : 18 represent in this situation? Explain your reasoning. Include a model in your explanation.

3 How are part-to-part ratios different from part-to-whole ratios?

Using Equivalent Ratios

➤ **Solve each problem.**

1 Josie is training for a race. The ratio of the number of minutes she runs to the number of miles she runs is 24 to 3. She plans to run 10 miles. How many minutes will it take her?

2 A chef planning for a large banquet thinks that 2 out of every 5 dinner guests will order his soup appetizer. He expects 800 guests at the banquet. Use equivalent ratios to estimate how many cups of soup he should prepare.

3 Fred is making a fruit salad. The ratio of cups of peaches to cups of cherries is 2 to 3. How many cups of peaches will Fred need to make 60 cups of fruit salad?

4 A community garden center hosts a plant giveaway every spring to help community members start their gardens. Last year, the giveaway supported 50 families by giving away 150 plants. Based on this ratio, how many plants will the center give away this year in order to support 65 families?

5 The first week of January, there are 49 dogs and 28 cats in an animal shelter. Throughout the month, the ratio of dogs to cats remains the same. The last week of January, there are 20 cats in the shelter. How many dogs are there?

6 A wedding planner uses 72 ivy stems for 18 centerpieces. When she arrives at the venue, she realizes she will only need 16 centerpieces. How many ivy stems should she use so that the ratio of ivy stems to centerpieces stays the same?

Understanding Rate Concepts

1 It takes Maya 30 minutes to solve 5 logic puzzles, and it takes Amy 28 minutes to solve 4 logic puzzles. Use models to show the rate at which each student solves the puzzles, in minutes per puzzle.

If Maya and Amy had the same number of puzzles to solve, who would finish first? Explain.

2 A garden hose supplies 36 gallons of water in 3 minutes. Use a table of equivalent ratios to show the garden hose's water flow in *gallons per minute* and *minutes per gallon*.

How many gallons of water does the hose supply in 10 minutes? Explain.

Understanding Rate Concepts *continued*

3 Max travels to see his brother's family by car. He drives 216 miles in 4 hours. What is his rate in miles per hour? Use a double number line to show your work.

Suppose he makes two stops of 10 minutes each during his journey. Will he be able to reach the town in 4 hours if he keeps the speed the same?

Using Unit Rates to Find Equivalent Ratios

➤ **Solve each problem. Show your work.**

1 Rachel mows 5 lawns in 8 hours. At this rate, how many lawns can she mow in 40 hours?

2 A contractor charges $1,200 for 100 square feet of roofing installed. At this rate, how much does it cost to have 1,100 square feet installed?

3 It takes Jill 2 hours to run 14.5 miles. At this rate, how far could she run in 3 hours?

4 Bobby catches 8 passes in 3 football games. At this rate, how many passes does he catch in 15 games?

5 Five boxes of crackers cost $9. At this rate, how much do 20 boxes cost?

6 It takes a jet 2 hours to fly 1,100 miles. At this rate, how far does it fly in 8 hours?

Using Unit Rates to Find Equivalent Ratios *continued*

7 It takes Dan 32 minutes to complete 2 pages of math homework. At this rate, how many pages does he complete in 200 minutes?

8 Kendra gets a paycheck of $300 after 5 days of work. At this rate, how much does she get paid for working 24 days?

9 Tim installs 50 square feet of his floor in 45 minutes. At this rate, how long does it take him to install 495 square feet?

10 Taylin buys 5 ounces of tea leaves for $2.35. At this rate, how much money does she need to buy 12 ounces of tea leaves?

11 In problem 10, how would your work be different if you were asked how many ounces of tea leaves Taylin could buy with $10?

Using Unit Rates to Compare Ratios

➤ **Solve each problem. Show your work.**

1 Shawn sells 36 vehicles in 4 weeks. Brett sells 56 vehicles in 7 weeks. Who sells more vehicles per week?

2 The table shows the gas mileage of two vehicles. Which vehicle travels more miles per gallon?

Car	Miles	Gallons
Pickup Truck	120	8
Minivan	180	10

3 Joe and Chris each have a lawn mowing business. Joe charges $40 to mow 2 acres. Chris charges $30 to mow 1.2 acres. Who charges more per acre?

4 The table shows the time it took two athletes to run different races. Who ran faster?

Athlete	Seconds	Meters
Ellen	28	200
Lindsay	60	400

Using Unit Rates to Compare Ratios *continued*

5 Branden and Pete each play running back. Branden carries the ball 75 times for 550 yards, and Pete has 42 carries for 380 yards. Who runs farther per carry?

6 The table shows the price of two cereal brands and the number of ounces per box. Which is the better price per ounce?

Cereal	Ounces	Price
Brand A	18	$2.50
Brand B	24	$3.50

7 Describe two different ways you could change the values in the table so that the answer to problem 6 is different.

Using Unit Rates to Convert Measurements

➤ **Solve each problem. Show your work.**

1 Susan has a 12-inch board for constructing a wooden chair. The directions say to use a board that is 29 centimeters long. Is her board long enough to cut? (1 inch = 2.54 centimeters)

2 Kevin uses 84 fluid ounces of water to make an all-purpose cleaner. The directions call for 4 fluid ounces of concentrated soap for every 3 cups of water. How many fluid ounces of soap should he use? (1 cup = 8 fl oz)

3 Shannon test-drives a car in Germany and drives 95 kilometers per hour. What is her speed in miles per hour? (1 kilometer ≈ 0.62 mile)

4 Keith works 8 hours per day for 5 days per week. Melba works 2,250 minutes each week. Who spends more time at work?

Using Unit Rates to Convert Measurements *continued*

5 Jason runs 440 yards in 75 seconds. At this rate, how many minutes does it take him to run a mile? (1 mile = 1,760 yards)

6 Boxes of granola are on sale at a price of 2 for $4.50. There are 12 ounces of granola in each box. What is the unit price in dollars per pound?

7 Sam is delivering two refrigerators that each weigh 105 kilograms. There is an elevator with a weight limit of 1,000 pounds. Can he take both refrigerators on the elevator in one trip? (1 kilogram ≈ 2.2 pounds)

8 For every 140 feet that Kelly rides on her bicycle, the wheels turn 20 times. About how many times do the wheels turn in 5 miles? (1 mile = 5,280 feet)

i-Ready
12

Understanding Percents

1 Emma is saving for a bicycle that costs $300. This month, she reaches 60% of her goal. Label and shade the bar model to show her progress. How much money has she saved? Explain.

$0 $300

0%   100%
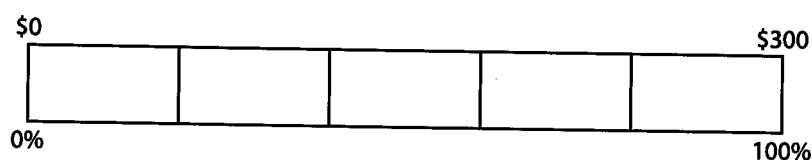
2 Justin needs to make 80 illustrations for an art book. He has made 40% of the illustrations. Make a bar model to show his progress. How many illustrations does he still need to make? Explain.

3 In a classroom of 28 students, 75% of the students have met their reading goal.

Label the double number line. How many students met their reading goal? What fraction of 28 students met their reading goal? Explain.

Students   28

Percent   100%
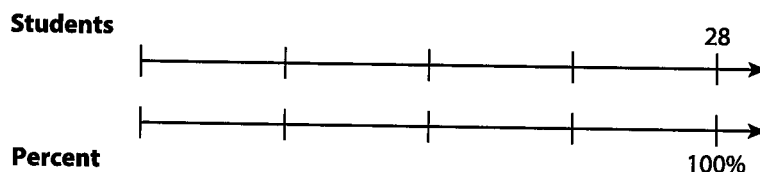
Finding a Percent of a Quantity

➤ **Find the percent of the number. The answers are mixed up at the bottom of the page. Cross out the answers as you complete the problems.**

1 40% of 80

2 25% of 60

3 10% of 90

_____

_____

_____

4 50% of 70

5 80% of 500

6 75% of 80

_____

_____

_____

7 90% of 250

8 65% of 400

9 85% of 800

_____

_____

_____

10 55% of 140

11 45% of 160

12 95% of 180

_____

_____

_____

13 70% of 720

14 15% of 220

15 65% of 200

_____

_____

_____

Answers

9	77	504	72	225
260	171	33	60	35
400	32	130	680	15

Finding the Whole

➤ **Solve each problem.**

1 25% of what number is 13?

_____

2 50% of what number is 140?

_____

3 10% of what number is 60?

_____

4 5% of what number is 12?

_____

5 30% of what number is 72?

_____

6 70% of what number is 56?

_____

7 95% of what number is 57?

_____

8 75% of what number is 66?

_____

9 85% of what number is 102?

_____

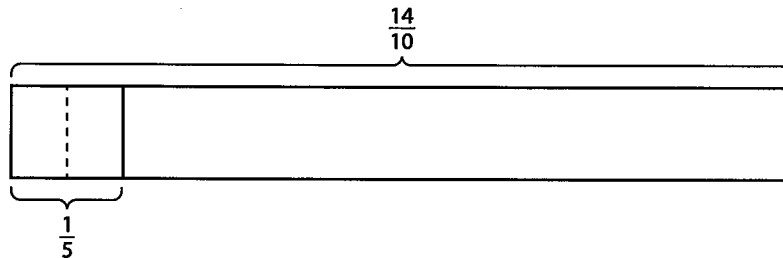**10** 45% of what number is 63?

_____

11 Explain how you could use 25% of a number to find the number.

Understanding Division with Fractions

1 Complete the bar model to show how many $\frac{1}{5}$s make $\frac{14}{10}$.

$$\frac{14}{10}$$

$$\frac{1}{5}$$

How many $\frac{1}{5}$s make $\frac{14}{10}$? _____

Complete the equations.

$\frac{14}{10} \div$ _____ $= 7$ _____ $\cdot \frac{1}{5} = \frac{14}{10}$

2 Use the number line to show $\frac{2}{3} \div \frac{1}{12}$.

$$0 \qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad \frac{2}{3}$$

What is the quotient? _____

3 Which type of model do you like better, the bar model or the number line? Explain.

Using Multiplication to Divide by a Fraction

➤ **Write the missing digits in the boxes to make each equation true.**

1 $\dfrac{1}{2} \div \dfrac{2}{3} = \dfrac{1}{2} \times \dfrac{\boxed{}}{2} = \dfrac{3}{\boxed{}}$

2 $\dfrac{4}{5} \div \dfrac{1}{4} = \dfrac{4}{5} \times \dfrac{4}{\boxed{}} = \dfrac{\boxed{}}{\boxed{}}$

3 $\dfrac{2}{5} \div \dfrac{3}{4} = \dfrac{2}{5} \times \dfrac{\boxed{}}{\boxed{}} = \dfrac{\boxed{}}{15}$

4 $\dfrac{5}{6} \div \dfrac{5}{12} = \dfrac{5}{6} \times \dfrac{\boxed{}}{\boxed{}} = \dfrac{\boxed{}}{30} = 2$

5 $\dfrac{3}{4} \div \dfrac{5}{7} = \dfrac{3}{4} \times \dfrac{\boxed{}}{\boxed{}} = \dfrac{\boxed{}}{\boxed{}}$

6 $1\dfrac{1}{3} \div \dfrac{3}{7} = \dfrac{\boxed{}}{3} \times \dfrac{7}{\boxed{}} = \dfrac{\boxed{}}{\boxed{}}$

7 $4\dfrac{\boxed{}}{2} \div \dfrac{2}{5} = \dfrac{9}{2} \times \dfrac{\boxed{}}{\boxed{}} = \dfrac{\boxed{}}{\boxed{}}$

8 $3\dfrac{1}{2} \div \dfrac{\boxed{}}{8} = \dfrac{7}{\boxed{}} \times \dfrac{8}{7} = \dfrac{\boxed{}}{\boxed{}} = \boxed{}$

9 $1\dfrac{2}{3} \div 2\dfrac{1}{4} = \dfrac{\boxed{}}{3} \times \dfrac{\boxed{}}{9} = \dfrac{\boxed{}}{\boxed{}}$

10 $3\dfrac{3}{5} \div 1\dfrac{3}{\boxed{}} = \dfrac{18}{\boxed{}} \times \dfrac{4}{7} = \dfrac{\boxed{}}{\boxed{}}$

11 Write a word problem that could be solved by the equation in problem 8.

Understanding Positive and Negative Numbers

1 The points on the number line are opposite numbers. The tick marks represent intervals of 1 unit.

Label 0 at the correct spot on the number line.

Label the point plotted to the right of 0.

Label the point plotted to the left of 0.

2 Use this list of numbers to answer the following questions:

$0, 4, -2, \frac{2}{3}, -1.8, 16, 3.2, -\frac{5}{4}$

Which numbers are rational numbers that are not integers?

Of the remaining numbers, which are integers but not whole numbers?

Of the remaining numbers, which are whole numbers?

3 Use the following terms to complete the following statements: *integers, rational numbers,* and *whole numbers*. Use each term only once.

The counting numbers and zero are _____.

The counting numbers and their opposites, along with zero, are _____.

Integers and the decimal equivalents of fractions are _____.

Understanding Positive and Negative Numbers *continued*

4 Plot and label 4, −3, 1, and their opposites on the number line.

5 If several points are graphed on a number line, is the point that is the farthest from 0 always the greatest? Explain.

Comparing Positive and Negative Numbers

➤ **Write < or > to make each comparison true.**

1 $7 \bigcirc 10$

2 $7 \bigcirc -10$

3 $-7 \bigcirc -10$

4 $\frac{2}{3} \bigcirc -1\frac{2}{3}$

5 $-50 \bigcirc 0.3$

6 $-12 \bigcirc -35$

7 $-5 \bigcirc 4.5$

8 $\frac{1}{2} \bigcirc -80$

9 $-\frac{1}{4} \bigcirc -1.4$

➤ **Write each set of numbers in order from least to greatest.**

10 $5, -2, -1, 4$

11 $3.4, 7, -3.5, -3$

12 $-2.1, -2, -3, 0$

_____

13 $-\frac{3}{4}, -2, -\frac{1}{4}, 2$

14 $5, 0, -6, -0.1$

15 $7.5, -200, -1.5, -8$

_____

16 $\frac{1}{2}, -\frac{1}{2}, -\frac{1}{3}, \frac{1}{3}$
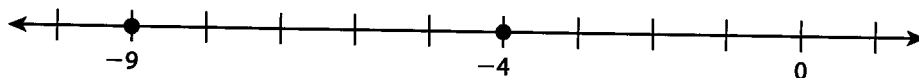
17 $1.2, -2.1, -21, 0.12$

18 $0.1, -0.2, 0.55, -0.31$

_____

19 Describe how to determine which of two negative numbers is greater. Give an example.

Understanding Absolute Value

1 Answer the questions about this number line.

Which is greater, −9 or −4? Explain.

Which is greater, |−9| or |−4|? Explain.

2 A football team tries to move the ball forward as many yards as possible on each play, but sometimes they end up behind where they started. The distances, in yards, that a team moves on its first five plays are 2, −1, 4, 3, and −5. A positive number indicates moving the ball forward, and a negative number indicates moving the ball backward.

Which number in the list is the greatest?

What is a better question to ask to find out which play went the farthest from where the team started?

The coach considers any play that moves the team more than 4 yards from where they started a "big play." Which play(s) are big plays?

3 When does it make sense to compare the absolute values of numbers rather than the numbers themselves?

Understanding the Four-Quadrant Coordinate Plane

➤ **For problems 1–6, plot and label each point in the coordinate plane. Name the quadrant or axis where the point is located.**
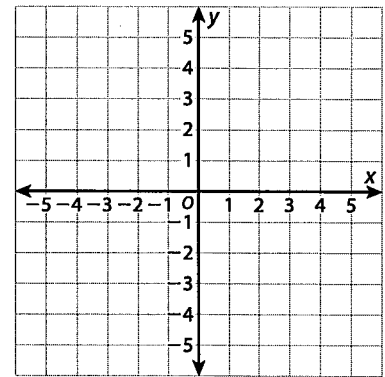
1 $A(-3, -2)$

2 $B(4, -4)$

3 $C(2, 3)$

4 $D(-2, 4)$

5 $E(3, -3)$

6 $F(4, 0)$

7 If point E above is reflected across the x-axis, what would be the coordinates of the reflection? Explain.

8 Imagine that one of the points given in problems 1–6 has been reflected. The reflection is in Quadrant II. What are the possible coordinates of the reflected point? Explain.

9 Bradley says that if point B is reflected across the y-axis and its reflection is then reflected across the x-axis, the result is point D. Is Bradley correct? Explain.

Writing and Interpreting Algebraic Expressions

➤ **Write an algebraic expression for each word phrase or situation.**

1 12 more than 8.2 times a number n

2 3 less than the quotient of 18 and a number m

3 5.6 times the sum of 4 and a number p

4 the quotient of 2 and a number x, times 3

5 Five friends split the cost of parking at an amusement park. Each of them also buys a $30 ticket. Write an algebraic expression that represents the amount of money each friend spends. Identify any variables.

6 A movie theater is open x hours Monday through Thursday and y hours Friday through Sunday. Write an algebraic expression that represents the number of hours per week the theater is open.

➤ **Interpret the meaning of the algebraic expression in each problem.**

7 Andrew writes the algebraic expression $2s + 2.79$ to represent the cost of his lunch. He bought 2 sandwiches and a large drink. Identify any variables, coefficients, and terms in the expression. Tell what each represents.

Writing and Interpreting Algebraic Expressions *continued*

8 A teacher writes the algebraic expression $24c + 5m + 19.99$ to represent the cost of supplies she purchased for her classroom. She bought 24 packages of colored pencils, 5 packages of markers, and a beanbag chair. Identify any variables, coefficients, and terms in the expression. Tell what each represents.

9 Write a situation that could be represented by the algebraic expression $3s + 2.15$.

Evaluating Algebraic Expressions

➤ **Check each answer to see whether the student evaluated the expression correctly. If the answer is incorrect, cross out the answer and write the correct answer.**

Algebraic Expressions	Student Answers
1 $5m + 26$ when $m = 3$	$5(3) + 26 = 15 + 26$ ~~$= 31$~~ Possible answer: $5(3) + 26 = 15 + 26$ $= 41$
2 $8(x + 2)$ when $x = 6$	$8(6 + 2) = 48 + 2$ $= 50$
3 $7p + 5$ when $p = 12$	$7(12) + 5 = 7(17)$ $= 119$
4 $q + 9p$ when $q = 18$ and $p = 4$	$18 + 9(4) = 18 + 36$ $= 54$
5 $6w - 19 + k$ when $w = 8$ and $k = 2$	$6(2) - 19 + 8 = 12 - 19 + 8$ $= 1$
6 $12x + y$ when $x = 3$ and $y = 52$	$12(3) + 52 = 36 + 52$ $= 88$

7 Check your answer to problem 2 by using a different strategy.

Using Order of Operations with Expressions with Exponents

➤ **Simplify or evaluate each exponential expression using the order of operations. The answers are mixed up at the bottom of the page. Cross out the answers as you complete the problems.**

1 $(6 + 3)^4$

2 $6 + 3^4$

3 $2(4^3) - 1$

_____

_____

_____

4 $2(4^3 - 1)$

5 $5 + 9(1 + 2)^2$

6 $5 + 9(1) + 2^2$

_____

_____

_____

7 $(18 - 4)^2$

8 $18 - 4^2$

9 $9 + 2(3^2)$

_____

_____

_____

10 $(9 + 2)3^2$

11 $12 + x^4 - 6$ when $x = 8$

12 $m^3 + 9n$ when $m = 4$ and $n = 5$

_____

_____

_____

Answers

27	196	2	18	126	99
127	86	109	4,102	87	6,561

Identifying Equivalent Expressions

➤ **Determine whether each pair of expressions is equivalent. Show your work.**

1 $2(x - y)$ and $2x - 2y$

2 $4(x + y)$ and $4y + 4x$

3 $4p + 3c$ and $(c + 2p)(2)$

4 $21q - 7p$ and $(3q - p)(7)$

5 $4(2a - 3v)$ and $8a + 6v$

6 $8(3x + c) - 1$ and $8c + 24x - 1$

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Identifying Equivalent Expressions *continued*

7 $3(2x + 11)$ and $(3x + 15)(2)$

8 $2x + 2x + 2c + 6$ and $(2x + c + 3)(2)$

9 $3e + 7 - e$ and $2e + 10 + 2e - 3$

10 $5c + 4c + 2$ and $5c + 2(2c + 1)$

11 How can you check your answer to problem 8 by choosing values for the variables?

Writing and Solving One-Variable Equations

➤ **Solve each problem by writing and solving a one-variable equation.**

1 In the first three innings of a baseball game, the home team scored some runs. In the rest of the game, they scored 5 runs more than the number of runs scored in the first three innings. If the home team scored 9 runs in all, how many runs did they score during the first three innings? How many runs did they score in the remainder of the game? Let x = the runs scored in the first three innings.

2 The punch bowl at Felicia's party is getting low, so she adds 12 cups of punch to the bowl. Two guests serve themselves 1.25 cups and 2 cups of punch. The punch bowl now contains 11.5 cups of punch. How many cups were in the punch bowl before Felicia refilled it? Let n = number of cups in bowl before Felicia refilled it.

3 Vanessa is a caterer. She made several batches of appetizers last weekend for an event. This weekend, Vanessa made 4 times as many batches. She made a total of 25 batches of appetizers for the two weekends. Determine the number of batches Vanessa made last weekend and the number of batches she made this weekend. Let b = the number of batches of appetizers Vanessa made last weekend.

Writing and Solving One-Variable
Equations *continued*

4 Wanda earned $350 babysitting over the months of July and August. She earned $90 more in August than in July. How much did she earn babysitting in July? In August?

5 Charlene is 8 years older than Aaron. The sum of their ages is 44. What are their ages?

6 On Saturday, 45% of the music Brianna listened to was country songs. She listened to 27 country songs on Saturday. How many songs did Brianna listen to on Saturday?

Writing and Graphing One-Variable Inequalities

➤ **Write an inequality to represent each situation.**

1 A farmer weighs a dozen chicken eggs. The heaviest egg is 56 g.

_____

2 A light bulb is programmed to turn on when the temperature in a terrarium is 72°F or cooler.

_____

3 Martin is building a sandcastle at the beach. He pours no less than 5 cups of wet sand into each plastic mold.

_____

4 The shortest tree in a park is at least 25.5 ft tall.
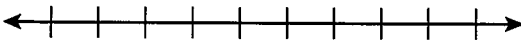
_____

➤ **Graph each inequality.**

5 $n \geq -2$

6 $h \leq 5$

7 $t \leq 7.1$

8 $r \geq -\frac{2}{3}$

9 What is the difference between the inequality $x \leq 5$ and the equation $x = 5$?