

7th Grade English Language Arts

Life in the Food Chain -

What Do You Have in Common with Corn, Mushrooms, Cows, and Grass?

by Ellen R. Braaf

Like all living things, you need energy. The energy you use to live every day travels from one living thing to another, in a chain that starts with the sun.

The energy in all your food comes from the sun, 93 million miles away. How did the sun's energy end up in the things you eat? You can thank green plants. They contain chlorophyll--a substance that traps the energy in sunlight. This energy then helps plants change water from the soil and carbon dioxide from the air into oxygen and carbohydrates that power their cells. This process is called photosynthesis.

Most plants make more food than they need. They store the extra in their roots, leaves, stems, flowers, fruit, and seeds. So, when you eat carrots, spinach, celery, cauliflower, bananas, or walnuts, some of the energy stored in plants passes on to you.

Certain bacteria also make their own food. So do most algae. Found just about everywhere on Earth--in lakes, streams, oceans, deserts, soil, boiling hot springs, snow, and ice--algae range from 200-foot-long kelp to tiny ocean plants called phytoplankton. Living things that make their own food are called producers. All others--including humans--are consumers. They need to eat other living things to survive.

Living Links

Food chains link producers and consumers together. When scientists talk about food chains, they're not talking about the E-Z Burger restaurant chain. They mean the paths along which energy and nutrients pass from one living thing to another in our "eat-or-be-eaten" world. Food chains everywhere--in grasslands and deserts, oceans and tropical rainforests--begin with the producers. They are the first link.

The consumers come next, starting with the plant eaters, or herbivores, the vegetarians of the animal kingdom. Elephants grazing on grass, caterpillars munching leaves and pandas chomping bamboo get energy directly from producers. So do the shrimplike krill that dine on one-celled plants in the ocean.

Carnivores, who consume other animals, come next. These predators get energy from plants indirectly. When an owl eats a mouse that nibbled seeds, it tops a three-link chain. But if its prey is a snake that ate a mouse that nibbled seeds, the snake becomes the third link, and the owl, the fourth.

Because all organisms use the energy they get from food to live, grow, and reproduce, only small amounts remain to pass between the living links in a food chain. That's why most chains are short--usually about two to five links--and why it takes a lot of producers at the bottom of a food chain to support a few supercarnivores at the top. It's also why life on Earth depends on a constant supply of sunlight.

Isle Royale: Predators, Prey, and Producers

On Isle Royale--a small, remote island in Lake Superior--wolves, moose, and balsam fir trees are bound together in a three-link food chain. Moose came to the island around 1900. These long-legged herbivores probably swam 15 miles to the island from Canada. There they found moose heaven--lots of plants and no large predators. As a result, they thrived, and their numbers grew. Many lived a long time for moose, about 17 years.

In summer, moose eat a variety of ferns, shrubs, wildflowers, leaves, and water plants. An 800-pound moose can scarf down 40 pounds of vegetation a day, packing on an extra 200 pounds in just a couple of months. That's like an 80-pound kid gaining 20 pounds over summer vacation by eating 4 pounds of salad every day.

But in winter when food is scarce, moose eat mostly the twigs and needles of balsam fir trees. These meals are much less nutritious than their summer fare, and the moose use up lots of energy plodding through deep snow to feed. They lose all the weight they gained in summer.

Wolves came to Isle Royale around 1950. Scientists think a mated pair probably walked across an ice bridge between the island and Canada. Wolves are the island's only big predators. Their arrival changed the lives of Isle Royale's moose forever.

Ups and Downs

Scientists have been studying this isolated food chain for 50 years to understand how changes in one link can cause changes in another. As more moose are born on the island, they eat more balsam fir. The more they consume, the more they damage the trees. Stunted trees mean less food. Eventually, there's not enough food to support all the moose. Many starve, and their numbers decrease. With fewer moose dining on them, fir trees gradually recover.

A similar boom-and-bust cycle occurs between predator and prey. Ten times the size of a wolf, a moose has long, strong legs and a dangerous kick. So wolves prey mainly on old and weak animals. Good hunting means food for the whole pack. Wolves then raise lots of pups, and their numbers increase. More wolves mean more mouths to feed and more moose get eaten. However, when the moose population decreases, wolves starve.

With fewer predators stalking the moose, more survive to old age. The moose population increases, and the cycle begins again.

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1. **Underline** or **highlight** the sentences that support the inference that the area is in danger of losing its moose population.

A similar boom-and-bust cycle occurs between predator and prey. Ten times the size of a wolf, a moose has long, strong legs and a dangerous kick. So wolves prey mainly on old and weak animals. Good hunting means food for the whole pack. Wolves then raise lots of pups, and their numbers increase. More wolves mean more mouths to feed and more moose get eaten. However, when the moose population decreases, wolves starve.

2. Which of the following sentences from the passage **best** support the conclusion that all living organisms are part of the food chain?

- a. "The energy you use to live every day travels from one living thing to another, in a chain that starts with the sun."
- b. "This energy then helps plants change water from the soil and carbon dioxide from the air into oxygen and carbohydrates that power their cells."
- c. "Food chains everywhere – in grasslands and deserts, oceans and tropical rainforests – begin with producers."
- d. "Scientists have been studying this isolated food chain for 50 years to understand how changes in one link can cause changes in another."

3. Summarize the central idea in the section "Ups and Downs." Use key evidence from the text to support your summary.

4. Read the sentence from the text.

On Isle Royale—a small, remote island in Lake Superior—wolves, moose, and balsam fir trees are bound together in a three-link food chain.

The word remote has multiple meanings. What does the word remote **most likely** suggest about human contact with the island?

- a. The island can only be reached by radio signals.
- b. The island is an uncomfortable environment for humans.
- c. The animals and plants on the island are rarely disturbed by humans because the island is isolated.
- d. The animals and plants on the island

5. This question has two parts. First, answer part A. Then, answer part B.

Part A

Which of these inferences about the author's point of view is **best** supported by the text?

- a. The author believes that all living things are connected.
- b. The author believes that wolves are weaker animals than moose.
- c. The author believes that all of the animals on the island will eventually disappear.
- d. The author believes that the moose population will cause the extinction of the balsam fir.

Part B

Which sentence from the text supports your answer in part A?

- a. "Scientists have been studying this isolated food chain for 50 years to understand how changes in one link can cause changes in another."
- b. "As more moose are born on the island, they eat more balsam fir."
- c. "Ten times the size of a wolf, a moose has long, strong legs and a dangerous kick."
- d. "However, when the moose population decreases, wolves starve."

6. What is the author's **most likely** reason for including the "Isle Royale" section in the text?

- a. to explain why wolves are the island's only big predator
- b. to provide a related example of the information in the introduction
- c. to prove that plants in a food-chain are not an ideal source of food
- d. to demonstrate how much vegetation a moose can consume in a day

7. What are the **most likely** reasons the author included the section “Living Links” before the sections “Isle Royale: Predators, Prey, and Producers” and “Ups and Downs”? Select **two** options.
- a. The section “Living Links” introduces carnivores, and carnivores are mentioned in the last two sections.
 - b. The section “Living Links” identifies humans as consumers, and humans are addressed in the sections that follow.
 - c. The section “Living Links” defines a food chain before the other sections give an example of a specific food chain.
 - d. The section “Living Links” explains how the sun provides energy for all living things, and the sections that follow prove that this is the case.
 - e. The section “Living Links” gives examples of food chains that are recognizable before the other sections introduce a possibly unfamiliar food chain.

When Winning Took a Backseat

by Bruce Nash and Allan Zullo

Scott Bennett and Brad Howes grew up south of Salt Lake City in the fertile valley between the Jordan River and the towering Wasatch Mountains of Utah. The boys lived just far enough apart not to attend the same schools, but close enough to compete in the same leagues in baseball, football, and basketball.

No matter whose team won, Scott and Brad always shook hands and complimented each other on the way they played. The two didn't become close friends because they were always on opposite sides. But the boys grew up admiring each other's athletic skills.

And it was their childhood competition that forged a lasting friendship and set the stage for an extraordinary display of sportsmanship seldom seen in track and field.

It happened while the boys were members of school cross-country teams at Murray High and Brad at nearby Cottonwood High. During meets, as they pounded out mile after mile across the empty fields, Scott and Brad formed an unspoken bond. They learned to respect one another's competitive spirit and strengths. Brad liked to set a blistering pace early in the race, which wore down most other runners who tried to keep up with him. Scott, meanwhile, had a strong finishing kick, which had him breathing down the leader's neck on the final stretch.

Usually, the boys finished first and second when their schools competed. Sometimes Brad won; other times it was Scott who broke the tape first.

Their most memorable race the one track and field coaches still talk about occurred during the 1970 cross-country regional meet, with the winner going to the state finals. The event, held as part of Cottonwood High's homecoming festivities, was run during halftime of the football game between Cottonwood and Murray. Since the schools were only about ten miles apart, the stands were jammed with rooters from both sides.

At halftime, Murray was leading by two touchdowns and threatening to spoil Cottonwood's homecoming. So when Scott and Brad took their places at the starting line, each knew there was a lot more at stake than just a race. Brad felt that by winning he could salvage some of Cottonwood's pride at homecoming. Scott wanted to win to prove that Murray was the best at everything.

There were three other runners in the race, but all eyes were on Scott and Brad when the starter's gun went off. The group circled the track that ringed the football field and headed out the exit for the 2.6-mile cross-country run.

As expected, Brad quickly took the lead in a race that went through the rolling, grassy hills of Sugarhouse Park bordering the school grounds. At the halfway point, Brad had pulled ahead of Scott by nearly 300 yards while the other runners had fallen out of contention.

Despite the gap, Scott wasn't worried. In past races, Brad usually grabbed the lead, but Scott, with his strong finish, often caught Brad on the final stretch. Sticking to his race strategy, Scott steadily gained on Brad. By the time the two reached the stadium, Scott was only a couple of steps behind.

When the pair dashed through the stadium tunnel and onto the track for the final lap, the capacity crowd rose to its feet to cheer the runners who were now racing stride for stride.

But coming around the final turn, Scott cut to the inside to pass Brad and get in position for a sprint down the stretch. Just then, Brad also moved inside and the runners' legs tangled. Both stumbled. Scott managed to keep his feet, but Brad sprawled headfirst onto the track.

Scott ran a few more paces. But suddenly, he became aware of an eerie silence. The crowd that had been shouting moments before fell deathly silent when Brad tripped and hit the ground. So Scott stopped and looked back at his lifelong rival. Brad, whose knees and hands were scraped and bleeding from falling on the cinders, was struggling to regain his feet.

Who won or lost the race no longer mattered to Scott. His friend and competitor was hurt. Scott knew what he had to do and went back to help. "Give me your hand, Brad," said Scott. "Let me help you."

Brad looked up at Scott, smiled, and said, "Man, you're something else." Scott pulled his injured rival to his feet but Brad was hurting so badly that he couldn't run very well. So Scott put his arm around Brad and the two began trotting down the final stretch. The thousands of fans in the stands gasped when they saw Scott's gallant gesture and then erupted into thunderous applause.

Shocked by the unexpected spill, the track judges had dropped the tape that marked the finish line. "Get that tape back up!" a coach yelled. "They're coming in together!"

With Brad limping the final 50 yards, and Scott helping him every step of the way, the two competitors crossed the finish line arm in arm. The coaches and the track judges then huddled over what to do about the incredibly unselfish act of sportsmanship they had just witnessed.

"One of the runners has to win, but that doesn't mean the other one has to lose," said Scott's coach, Sam Moore. "I know Scott wouldn't want to have his victory tainted. I say we give both kids first place."

Moore's suggestion won unanimous approval from Brad's coach and the judges. The race was declared a dead heat.

"I have never seen such sportsmanship," said Moore. "I doubt if I ever will again."

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8. Which sentences from the text **best** support the conclusion that, despite their sportsmanship, the boys were highly competitive? Select **all** that apply.

 - "The two didn't become close friends because they were always on opposite sides."
 - "During meets, as they pounded out mile after mile across the empty fields; Scot and Brad formed an unspoken bond."
 - "In past races, Brad usually grabbed the lead, but Scott, with his strong finish often caught Brad on the final stretch."
 - "But coming around the final turn, Scott cut to the inside to pass Brand and get in position for a sprint down the stretch."
 - "Brad, whose knees and hands were scraped and bleeding from falling on the cinders, was struggling to regain his feet."
 - "With Brad limping the final 50 yards, and Scott helping him every step of the way, the two competitors crossed the finish line arm in arm."

9. Determine the central idea of the text. Analyze the development of the central idea by using key events in the text.

10. Read the sentences from the text. Then, answer the questions.

"One of the runners has to win, but that doesn't mean the other one has to lose," said Scott's coach, Sam Moore. "I know Scott wouldn't want to have his victory tainted. I say we give both kids first place."

Moore's suggestion won unanimous approval from Brad's coach and the judges. The race was declared a dead heat.

Which word means the opposite of unanimous?

- a. accepted
- b. cheerful
- c. divided
- d. expected

11. This question has two parts. First, answer part A. Then, answer part B.

Part A

What is **most likely** the authors' intent by recounting the techniques Scott and Brad use to run the race?

- a. to show that the boys are good athletes
- b. to build suspense about who will win the race
- c. to create doubt that the boys are following the rules of racing
- d. to show that the race is the most important element in the story

Part B

Which sentence from the text **best** supports your answer in part A?

- a. "Their most memorable race – the one track and field coaches still talk about – occurred during the 1970 cross-country regional meet, with the winner going to the state finals."
- b. "In past races, Brad usually grabbed the lead, but Scott, with his strong finish, often caught Brad on the final stretch."
- c. "When the pair dashed through the stadium tunnel and onto the track for the final lap, the capacity crowd rose to its feet to cheer the runners who were now racing stride for stride."
- d. "But coming around the final turn, Scott cut to the inside to pass Brad and get in position for a sprint down the stretch."

12. This question has two parts. First, answer part A. Then, answer part B.

Part A

Choose the statement that **best** provides an inference about Brad that is supported by the text.

- a. Brad is angry at his bad luck
- b. Brad is grateful for Scott's help
- c. Brad is upset that he injured himself.
- d. Brad is embarrassed by Scott's gesture.

Part B

Underline or **highlight** the sentence from the text that **best** supports your answer in part A. Choose **one** sentence.

Who won or lost the race no longer mattered to Scott. His friend and competitor was hurt. Scott knew what he had to do and went back to help. "Give me your hand, Brad," said Scott. "Let me help you."

Brad looked up at Scott, smiled, and said, "Man, you're something else." Scott pulled his injured rival to his feet but Brad was hurting so badly that he couldn't run very well. So Scott put his arm around Brad and the two began trotting down the final stretch. The thousands of fans in the stands gasped when they saw Scott's gallant gesture and then erupted into thunderous applause.

13. This question has two parts. First, answer part A. Then, answer part B.

Part A

Click on the statement that **best** explains how the characters' interactions develop over the course of the text.

- a. The boys begin as athletic rivals and become friends.
- b. The boys are not friendly, but they respect each other.
- c. The boys never become friends since they are from different areas.
- d. The boys grow to dislike each other as the competitions between them grow more intense.

Part B

Underline or **highlight** **all** the sentences from the text that **best** support your answer in part A.

Scott Bennett and Brad Howes grew up south of Salt Lake City in the fertile valley between the Jordan River and the towering Wasatch Mountains of Utah. The boys lived just far enough apart not to attend the same schools, but close enough to compete in the same leagues in baseball, football, and basketball.

No matter whose team won, Scott and Brad always shook hands and complimented each other on the way they played. The two didn't become close friends because they were always on opposite sides. But the boys grew up admiring each other's athletic skills.

14. How do the **first two** paragraphs add to the development of the characters in the text?

- a. The paragraphs indicate that the boys are from two very different environments.
- b. The paragraphs help the reader to understand how athletic both of the boys are.
- c. The paragraphs help set the story among mountains and rivers which shape how the boys grow.
- d. The paragraphs help the reader to understand how unlikely it is that a friendship would develop between the boys.

15. Read the sentences from the text.

Brad liked to set a blistering pace early in the race, which wore down most other runners who tried to keep up with him. Scott, meanwhile, had a strong finishing kick, which had him breathing down the leader's neck on the final stretch.

Select the statement that **best** describes what the use of the underlined phrases "blistering pace" and "breathing down the leader's neck" adds to the reader's understanding of the text.

- a. The phrases show the competitive nature of both runners.
- b. The phrases share the character's experience with the reader.
- c. The phrases establish a serious tone to use throughout the story.
- d. The phrases create a picture of the heat experienced by the runners.

16. A student is writing a story for class about camping. Read the draft of the story and complete the task that follows.

Wilderness Getaway

Alexis and Simon would be leaving on a camping trip with family and friends later in the day. Simon did not know what to expect because he had never pitched a tent or stayed in one overnight. Alexis, however, had been camping many times and loved waking up with the sun and breathing the fresh morning air. She showed Simon pictures of roasting marshmallows and hot dogs over a large campfire. Alexis and Simon woke before dawn to help pack the camping supplies – a tent, hot dogs, graham crackers, chocolate, marshmallows, and sleeping bags.

Alexis, Simon, and their family and friends departed for the camping grounds at a nearby park. When they arrived, they searched for the perfect place to pitch the tent. Simon enjoyed the beautiful scenery. He was positive that he was going to have a great time at this getaway.

Choose the **best** sentence to add descriptive detail to paragraph two.

- a. Alexis and Simon gathered dry wood for the campfire.
- b. Simon and Alexis pitched their tents in an area shaded by trees.
- c. Alexis enjoyed playing at the park and building a campfire to roast marshmallows.
- d. Simon felt the soft earth beneath his feet and noticed the glassy lake near the campfire.

17. A student is writing a report for her English teacher about beneficial relationships between people and animals. Read the draft of the introduction to the report and the directions that follow.

The bond between people and animals has remained strong throughout history. In the past, tamed animals have helped humans with work such as hunting, farming, and transportation. More recently, animals have served people who are blind or have other disabilities. Today, people depend upon animals more for companionship than for work. One important benefit of such companionship for humans with pets is improved health.

The student took these notes from reliable sources:

Taking dog to dog park = chance to be with others

Engaging with others = healthy mind

Researchers studied people, pets more than 25 years

Strong relationship with pet = less stress

Lowering stress = lower blood pressure

Children with pets = fewer allergies to furry animals

Dog owners who walk dogs healthier = walking is good exercise

Taking care of a pet – walking, grooming, playing – helps a person think of others.

Using the information from the student's notes, write **one** paragraph developing the idea in the last sentence of the introduction.

18. A student is writing an argumentative letter to the principal about a plan to have students attend school during the summer months. Read the paragraphs from the draft of the student's letter and complete the task that follows.

I am writing in opposition to your proposal to extend the school year. I also urge you to consider carefully recommendations from everyone who would be affected – staff, parents, the community, and especially students – before making your decision. With so many changes occurring in education, a hasty decision would do more harm than good.

One reason I oppose your plan to extend the school year is that both students and parents are likely to oppose it. The students are the ones affected by this decision, and a survey by our school newspaper found that 76 percent of them like our schedule as it is. I am a member of the newspaper staff, and I helped conduct the survey. These students are likely to influence their parents' views. If that happens, you will be bombarded with hundreds of emails and phone calls, insisting that kids are perfectly capable of learning without an extension of the school year. Your email inbox would fill up in a hurry. Even if parents agree with you, there's still the fact that when students are unhappy, their academic success rate goes down. That could undermine any additional learning achieved during the added time in class.

Underline or **highlight** the two sentences that should be removed from the second paragraph because they do not support the underlined sentence.

19. A student is writing a story for the school's online literary magazine. Read the draft of the story and complete the task that follows.

Time Spent at the Lake

Martin visited his grandparents every summer near Round Lake. Typically, Martin refused to go fishing with his grandfather at the lake as he preferred to spend hours relaxing and reading books in the cool shade. The thought of sitting under the very bright sun on a boat in the middle of the lake sounded like a boring waste of time. After years of coaxing from his grandfather, however, Martin decided to attempt fishing. He listened intently to his grandfather's directions on how to cast the line of his fishing pole into the lake. Just seconds after his first cast, Martin felt a sharp tug on his fishing line.

Choose **two** words that **best** replace the underlined words.

- a. colossal
- b. concealed
- c. dazzling
- d. dramatic
- e. enormous
- f. radiant

20. A student is writing a report for science class. This paragraph from the draft of the report contains language that is not appropriate for the audience or the task. Read the paragraph and complete the task that follows.

There are loads of reasons to eat organic food. The term “organic” indicates that the food has been grown without pesticides or other chemicals. A consumer who chooses to eat organic food does not consume any of this junk. Crops that are grown organically are great for the land because farmers do not have to add chemicals to the soil. Growing organic food also improves the lives of farm workers because they can avoid working with poisons. In sum, everyone benefits from the farming of organic food.

Click on **three** words or groups of words that are too vague or informal for a science report.

21. A student has written a paper for her English class about living in a rural area. Read the student’s draft and complete the task that follows.

Of the many advantages of country life over city life, my favorite is the opportunity to observe farm animals – especially pigs. Rolling in the mud, I like to watch them play. Myths about pigs abound, including the belief that they aren’t very smart. My own observations confirm what scientific research has shown, namely, that pigs are highly intelligent and have very good memories. They can remember where food is hidden, recognize as many as 30 other pigs, and learned their names within a week of birth. Another myth is that pigs are dirty and love to wallow in mud. They actually prefer water to mud. When people joke about “pigging-out”, they can’t be talking about the animal because pigs eat slowly and savor their food. City folks could learn a lot by spending some time in the country.

Underline or highlight **two** sentences that contain errors in grammar usage.

Note: Items 22-27 are Listening Items administered separately.**

28. A student is writing a report about the history of computers. Read both sources and the directions that follow.

Source 1: “The Speed of Computers” by Jonathan Anders

The first computers were designed to solve math problems more quickly than a person could. Essentially, computers were invented to help people be faster with their work. For example, the United States takes a census of people living in the country to find out information about the population. The Census of 1880 took about eight years to complete; however, the 1890 census took only two years. This was because a machine was used to count the results of the 1890 census. During the next 77 years, devices like counting machines slowly changed to today’s computers, which can do several jobs.

Source 2: “How Computers Became Common in the Business World” by Hanna James

Before computers appeared in most offices, there were three machines that helped businesses conduct work at a faster pace: the typewriter, the filing system, and the adding machine. Since the first computers were big machines that could only solve difficult math problems, it took time for them to be used in most offices. It took many inventors adding different capabilities to make computers what they are today. This eventually made it possible for offices to replace three machines with one. Nowadays people can solve math problems, type, copy, email, and save all from one device.

The student took notes about information in the sources. Which note correctly paraphrases, or restates, information from **both** sources?

- a. Only companies with a lot of money could use the first computers.
- b. In modern times computers are commonly found in business, schools, and homes.
- c. Throughout the years computers have advanced to be able to do more tasks than they could before.
- d. The first computers were big machines designed to solve math problems more quickly than people can.

29. A student has made a plan for research. Read the plan and the directions that follow.

Research Report Plan
Topic: The Colony: The Most Organized of All Animal Social Groups
Audience: science students
Purpose: to inform
Research Question: How do colonies help animals adapt and survive?

The student needs to find a credible, or trustworthy, source with relevant information. Which source would **most likely** have credible and relevant information?

- a. www.biomebasics.net

Tour the world's biomes without leaving your chair! Explore deserts where termite colonies rise like pillars of sand. Swim oceans where coral reefs teem with life. Survey the vegetation and animal populations of grasslands, forests, and tundra. Can you identify the biomes closest to where you live? Which biomes do you think are the most...

- b. www.krazycolonies.com

Remember those ant farms you had when you were a kid? Well, THEY'RE BACK! Surprise your son or daughter with a colony of creepy-cute ants. From behind a crack-resistant wall of plastic, they'll see drones, soldiers, and that all-important queen, bustling about their buggy business. Only \$15.99 and the shipping is free...

- c. www.animalinfozone.com

Why some animals live in colonies, and how this form of social organization is a key to their survival. In a paper by Dr. Stephen T. Cora, the author shares the work of biologists who have examined the social groups of ants, termites, bees, mole rats, and more...

- d. www.talkingaboutanimals.net

What is an animal colony? Jane Fuller answers questions about insects that live in highly organized social groupings. Her answers may fascinate you, especially her discussion of the term "eusocial" and...

30. A student is writing a research report about early sea navigation. She found a trustworthy source. Read **Source 1** and the directions that follow.

Source 1: "Harrison's Marvelous Clock," from *The Store of Longitude* by H. O. Bellevue, history professor

Before the use of planes and trains became popular forms of transportation, many people relied upon boats to travel from one destination to the next. Sailors were a group of individuals who helped to guide and navigate boats. Before the mid-1700s, there was not a dependable or practical way to determine a boat's east-west position, or longitude. Knowing a bot's longitude was essential to its safely reaching its destination. The key was being able to keep accurate time at sea.

Although clocks kept the correct time n land, they did not work well on a rolling ship's deck. After years of effort, John Harrison of England invented the marine chronometer. The marine chronometer is a clock that allows a ship to determine its longitude at sea. Solving the longitude problem meant that ships could navigate more safely and accurate maps could be made. It is hardly an understatement to say that Harrison's success saved lives and continues to allow people to find their way around the world.

The student found another source. Read **Source 2** and underline or **highlight two** facts that support the author's point of view about Harrison's clock in **Source 1**.

Source 2: from the diary of J. R. Smythe, sailor aboard the *Resolution*, 1775

Tomorrow we shall arrive home from our voyage. Like previous sailors, we could not figure our longitude accurately. We navigated with charts of the moon and stars and big, bulky telescopes that were hard to use. Twice we ran into islands that our maps did not show. Fortunately, injury to the ship was fixable. We carried a clock, but it stopped working during a storm. Finally, we were able to secure Mr. Harrison's newest invention. Because it kept nearly perfect time, we plotted ur position most accurately and thus kept from running aground or worse. This has made everyone on the ship very happy. Now, our captain can draw updated maps that should be useful for sailors far into the future.

7th Grade English Language Arts

Audio Presentation (CAT Items 22 - 24)

Archaeologists

Listen to the presentation. Then answer the questions.



Photo 1



Photo 2



Photo 3



Photo 4

[Show Photo 1]

In the following presentation, you will learn about archaeologists. Listen to the presentation and then answer the questions that follow.

Archaeologists are scientists who study the objects, called artifacts, that people have left behind, the sites where these are found, and the landscapes in which the site existed.

[Show Photo 2] These artifacts give us clues about how people lived their lives at earlier times. The artifacts may be scattered, discovered one at a time, or they may be together in a place where a village or settlement once stood.

[Show Photo 3] All of the information archeologists discover can be compared to the written history and the oral history we know about. Sometimes archeology confirms the historical record. But sometimes, what archeologists find, raises new questions about the things we think we know about people from the past. Regardless of what they find, archeologists keep very careful records of the site when a discovery is made, drawing or photographing artifacts in place before removing them for further study.

Just how do archeologists decide where to look for evidence of the past? Sometimes, studying written and oral history points them in the right direction. [Show Photo 4] Other times, they study landforms in a certain region looking for caves or hills where artifacts may be hidden or buried. And sometimes, the discovery of a ruin or tomb, is a happy accident; the result of digging a well or building a shopping center

Excerpt from *National Geographic Investigates: Ancient China* by Jacqueline Ball and Richard H Levey. Copyright © 2006 by National Geographic Books. Reused by permission of National Geographic Books.

Photograph of Balsamarium in the form of a deity with Winged Helmet, Walters Art Museum.

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[Balsamarium in the Form of a Deity with Winged Helmet - Walters 543004.jpg](https://commons.wikimedia.org/wiki/File:Etruscan_Balsamarium_in_the_Form_of_a_Deity_with_Winged_Helmet_-_Walters_543004.jpg). Used under authorization of Creative Commons License CC-BY-SA 3.0 Unported.

7th Grade English Language Arts

Audio Presentation (CAT Items 25-27)

Firefly of the Sea

Listen to the presentation. Then answer the questions.

The following presentation is from "Faces" magazine. In this piece, the author discusses the migration of a glow-in-the-dark fish.

The lantern fish is a minnow-shaped fish about one to twelve inches long. They can be brown, grey or silver. They have very big eyes, which help them see in the deep, dark ocean. They have light producing internal organs called photophores found on their heads, undersides and tails that glow blue, yellow or green and they are very long distance travelers.

You might think they move from one spot in the deep ocean to another but that is not the case. They migrate vertically from the surface of the ocean to its depths, sometimes almost a mile deep! The daily 2-mile journey consists of the fish coming to the surface of the water at night and then back into the depths of the sea during the day.

The migration to the surface is a hunt for food. Specifically plankton, a staple of its diet. While at the surface, they may also eat such animals as sea butterflies or jelly fish or be eaten by animals such as a tuna or dolphin. In Alaska, lantern fish are an important part of the sea lion's diet. In southern oceans, they are food for squid and penguins.

Excerpt from "Firefly of the Sea" by Peg Lopata, from *Faces*, Vol. 27, No. 1, 2010. Copyright © 2010 by Carus Publishing Company. Reused by permission of Carus Publishing Company.

7th Grade English Language Arts

Audio Presentation – Archaeologists

22. The following question has two parts. First, answer part A. Then, answer part B.

Part A

Which statement **best** describes how an archaeologist chooses a site to study?

- a. Archaeologists look at maps for good places to dig.
- b. Archaeologists study history for clues to determine where to dig.
- c. Archaeologists keep notes of everything they find to choose a dig site.
- d. Archaeologists compare photographs with written records to find a location.

Part B

Which detail from the presentation **best** supports your answer to part A?

- a. "Or they may be together, in a place where a village or settlement once stood."
- b. "Sometimes archaeology confirms the historical record."
- c. "Regardless of what they find, archaeologists keep very careful records of the site when a discovery is made, drawing or photographing artifacts in place before removing them for further study."
- d. "Sometimes studying written and oral history points them in the right direction."

23. Which conclusions are **best** supported by evidence from the presentation? Select **two** options.

- a. Most artifacts from ancient cultures are found by accident.
- b. Locating artifacts from ancient cultures sometimes involves luck.
- c. Artifacts that are found together provide more information than those found alone.
- d. The exact place an artifact is found can reveal important information to archaeologists.
- e. Archaeologists rely on written records to provide more accurate information about the past.

24. Which idea is supported by the presentation?

- a. Archaeologists have to be curious people.
- b. Archaeologists have to be expert photographers.
- c. Archaeologists must know how to build structures.
- d. Archaeologists need to understand modern technology.

7th Grade English Language Arts

Audio Presentation – Firefly of the Sea

25. Which of the following **best** describe the purposes of the presentation? Select **two** options.

- a. to suggest that the lantern fish is a great hunter
- b. to describe the unique qualities of the lantern fish
- c. to explain why lantern fish are difficult to find in the ocean
- d. to establish that lantern fish can be found in multiple oceans
- e. to show how the lantern fish is able to survive in its environment

26. Some lantern fish characteristics help the fish survive or put the fish in danger. Check the boxes next to the characteristics to show which apply to each category. Some characteristics may apply to both categories.

	Survival	Danger
Has big eyes	<input type="checkbox"/>	<input type="checkbox"/>
Stays deep in the ocean during the day	<input type="checkbox"/>	<input type="checkbox"/>
Hunts at the ocean surface	<input type="checkbox"/>	<input type="checkbox"/>

27. Which idea from the presentation is **not** fully supported?

- a. The lantern fish migrates for food.
- b. The lantern fish travels long distances.
- c. The lantern fish is equipped for life in deep waters.
- d. The lantern fish is an important part of the sea lion's diet.



Smarter Balanced Assessment Consortium:

ELA Practice Test Scoring Guide Grade 7

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Item #	Grade	Claim	Target	DOK	Item: Standards	Evidence Statement
1	7	1	8	2	RI-2	1. The student will identify text evidence (explicit details and/or implicit information) to support a GIVEN inference or conclusion based on the text.

2624


Select the sentences that support the inference that the area is in danger of losing its moose population. Select **all** that apply.

A similar boom-and-bust cycle occurs between predator and prey. Ten times the size of a wolf, a moose has long, strong legs and a dangerous kick. So wolves prey mainly on old and weak animals. Good hunting means food for the whole pack. Wolves then raise lots of pups, and their numbers increase. More wolves mean more mouths to feed and more moose get eaten. However, when the moose population decreases, wolves starve.

Key: Wolves then raise lots of pups, and their numbers increase.; More wolves mean more mouths to feed and more moose get eaten. (All text is selectable.)

Rubric: (1 point) Student selects both correct sentences.

Item #	Grade	Claim	Target	DOK	Item: Standards	Evidence Statement
2	7	1	8	2	RI-2	The student will identify text evidence (explicit details and/or implicit information) to support a GIVEN inference or conclusion based on the text.

2607


Which of the following sentences from the passage **best** support the conclusion that all living organisms are part of the food chain?

- (A) "The energy you use to live every day travels from one living thing to another, in a chain that starts with the sun."
- (B) "This energy then helps plants change water from the soil and carbon dioxide from the air into oxygen and carbohydrates that power their cells."
- (C) "Food chains everywhere—in grasslands and deserts, oceans and tropical rainforests—begin with the producers."
- (D) "Scientists have been studying this isolated food chain for 50 years to understand how changes in one link can cause changes in another."

Key: A

Rubric: (1 point) Student selects the correct response.

Item #	Grade	Claim	Target	DOK	Item: Standards	Evidence Statement
3	7	1	9	3	RI-2	The student will summarize the central idea of a subtopic in the text using supporting evidence.

2615


Summarize the central idea in the section "Ups and Downs." Use key evidence from the text to support your summary.

Score	Rationale	Exemplar
2	<p>A response:</p> <ul style="list-style-type: none"> Gives sufficient evidence of the ability to determine/summarize the author's message/claim/point/central idea, or to explain the support for a central idea Includes specific examples/details that make clear reference to the text Adequately explains the author's message/claim/point/central idea, or explanation with clearly relevant information based on the text <p>Responses may include (but are not limited to):</p> <ul style="list-style-type: none"> (central idea) The species on the island are all interconnected. (support) The moose affect the growth of the pine when the moose population increases they eat more trees. (support) The population of the wolves affects the population of the moose. (support) The pine trees and the wolves are ultimately connected. (support) The island eventually replenishes itself. 	<p>The section "Ups and Downs" explains how the food chain operates on the island. When the moose increase, they eat more pines. When the pines die, the moose have nothing to eat, so they die. When there are plenty of moose, the wolves eat well. When the wolves eat well, they multiply. They require more moose to eat. The connections between the species control the population on the island as years go by.</p>
1	<p>A response:</p> <ul style="list-style-type: none"> Gives limited evidence of the ability to determine/summarize the author's 	<p>It focuses on how the life on the island is connected. Wolves and moose and pines all affect each other's populations.</p>

	<p>message/claim/point/central idea, or to explain the support for a central idea</p> <ul style="list-style-type: none"> • Includes vague/limited examples/details that make reference to the text • Explains the author's message/claim/point/central idea or explanation with vague/limited information based on the text <p>Responses may include those listed in the 2-point response.</p>	
0	<p>A response:</p> <ul style="list-style-type: none"> • Gives no evidence of the ability to determine/summarize the author's message/claim/point/central idea, or to explain the support for a central idea <p>OR</p> <ul style="list-style-type: none"> • Gives the author's message/claim/point/central idea, or explanation, but includes no examples or no examples/details that make reference to the text <p>OR</p> <ul style="list-style-type: none"> • Gives the author's message/claim/point/central idea, or explanation, but includes no explanation or no relevant information from the text 	<p>Life is connected in a chain on the island.</p>

Item #	Grade	Claim	Target	DOK	Item: Standards	Evidence Statement
4	7	1	10	2	RI-4, L-4.d	The student will determine the meaning of a word with multiple definitions using context clues from the text.

2628


Read the sentence from the text.

On Isle Royale—a small, remote island in Lake Superior—wolves, moose, and balsam fir trees are bound together in a three-link food chain.

The word remote has multiple meanings. What does the word remote **most likely** suggest about human contact with the island?

- (A) The island can only be reached by radio signals.
- (B) The island is an uncomfortable environment for humans.
- (C) The animals and plants on the island are rarely disturbed by humans because the island is isolated.
- (D) The animals and plants on the island bear little resemblance to the animals and plants humans usually encounter.

Key: C

Rubric: (1 point) Student selects the correct response.

Item #	Grade	Claim	Target	DOK	Item: Standards	Evidence Statement
5	7	1	11	3	RI-6	The student will make an inference about the author's purpose for writing the article and support it with evidence from the text.

2616


This question has two parts. First, answer part A. Then, answer part B.

Part A

Which of these inferences about the author's point of view is **best** supported by the text?

- (A) The author believes that all living things are connected.
- (B) The author believes that wolves are weaker animals than moose.
- (C) The author believes that all of the animals on the island will eventually disappear.
- (D) The author believes that the moose population will cause the extinction of the balsam fir.

Part B

Which sentence from the text supports your answer in part A?

- "Scientists have been studying this isolated food chain for 50 years to understand how changes in one link can cause changes in another."
- "As more moose are born on the island, they eat more balsam fir."
- "Ten times the size of a wolf, a moose has long, strong legs and a dangerous kick."
- "However, when the moose population decreases, wolves starve."

Key:

Part A: A

Part B: "Scientists have been studying this isolated food chain for 50 years to understand how changes in one link can cause changes in another."

Rubric: (1 point) Student selects the correct response for Part A and the correct response for Part B.

Item #	Grade	Claim	Target	DOK	Item: Standards	Evidence Statement
6	7	1	13	3	RI-5	The student will analyze or interpret why the author structured elements within the text in a certain manner and the impact of that structure on meaning.

2610


What is the author's **most likely** reason for including the "Isle Royale" section in the text?

- (A) to explain why wolves are the island's only big predator
- (B) to provide a related example of the information in the introduction
- (C) to prove that plants in a food-chain are not an ideal source of food
- (D) to demonstrate how much vegetation a moose can consume in a day

Key: B

Rubric: (1 point) Student selects the correct response.

Item #	Grade	Claim	Target	DOK	Item: Standards	Evidence Statement
7	7	1	13	3	RI-5	The student will analyze or interpret why the author structured elements within the text in a certain manner and the impact of that structure on meaning

2627


What are the **most likely** reasons the author included the section "Living Links" before the sections "Isle Royale: Predators, Prey, and Producers" and "Ups and Downs"? Select **two** options.

- The section "Living Links" introduces carnivores, and carnivores are mentioned in the last two sections.
- The section "Living Links" identifies humans as consumers, and humans are addressed in the sections that follow.
- The section "Living Links" defines a food chain before the other sections give an example of a specific food chain.
- The section "Living Links" explains how the sun provides energy for all living things, and the sections that follow prove that this is the case.
- The section "Living Links" gives examples of food chains that are recognizable before the other sections introduce a possibly unfamiliar food chain.

Key: The section "Living Links" defines a food chain before the other sections give an example of a specific food chain.; The section "Living Links" gives examples of food chains that are recognizable before the other sections introduce a possibly unfamiliar food chain.

Rubric: (1 point) Student selects the two correct responses.

Item #	Grade	Claim	Target	DOK	Item: Standards	Evidence Statement
8	7	1	1	2	RL-1	The student will identify text evidence to support a given conclusion based on the text.

2622


Which sentences from the text **best** support the conclusion that, despite their sportsmanship, the boys were highly competitive? Select **all** that apply.

- "The two didn't become close friends because they were always on opposite sides."
- "During meets, as they pounded out mile after mile across the empty fields, Scott and Brad formed an unspoken bond."
- "In past races, Brad usually grabbed the lead, but Scott, with his strong finish, often caught Brad on the final stretch."
- "But coming around the final turn, Scott cut to the inside to pass Brad and get in position for a sprint down the stretch."
- "Brad, whose knees and hands were scraped and bleeding from falling on the cinders, was struggling to regain his feet."
- "With Brad limping the final 50 yards, and Scott helping him every step of the way, the two competitors crossed the finish line arm in arm."

Key: "In past races, Brad usually grabbed the lead, but Scott, with his strong finish, often caught Brad on the final stretch."; "But coming around the final turn, Scott cut to the inside to pass Brad and get in position for a sprint down the stretch."

Rubric: (1 point) Student selects the two correct responses.

Item #	Grade	Claim	Target	DOK	Item: Standards	Evidence Statement
9	7	1	2	3	RL-2	The student will determine or summarize a theme or central idea of a text using supporting evidence.

2630



Determine the central idea of the text. Analyze the development of the central idea by using key events in the text.

Score	Rationale	Exemplar
2	<p>A response:</p> <ul style="list-style-type: none"> Gives sufficient evidence of the ability to determine/summarize the theme/central idea/message, or to analyze the development of the central idea Includes specific examples/details that make clear reference to the text Adequately explains the theme/central idea/message or analysis with clearly relevant information based on the text <p>Responses may include (but are not limited to):</p> <ul style="list-style-type: none"> (central idea) Good sportsmanship is more important than competition. (support) "...the boys grew up admiring each other's athletic skills." (support) "Who won the race no longer mattered." (support) Scott helped Brad across the finish line. 	<p>The central idea of the story "When Winning Took a Back Seat," is that good sportsmanship is more important than competition. The authors develop the idea of this central idea by first introducing two likable characters, Brad and Scott. No matter whose team won, the boys always complimented each other on the way they played. Brad and Scott play a number of sports and their teams frequently compete. The authors point out how the boys, "admire each other's' athletic skills." This helps to exemplify the beginnings of good sportsmanship between the young men. As the story progresses, the authors mention the mutual respect the athletes have for each other. When Brad is injured, Scott helps him to the finish line. Both boys win first place, exemplifying the central idea.</p>

1	<p>A response:</p> <ul style="list-style-type: none"> • Gives limited evidence of the ability to determine/summarize the theme/central idea/message, or to analyze the development of the central idea • Includes vague/limited examples/details that make reference to the text • Explains the theme/central idea/message or analysis with vague/limited information based on the text <p>Responses may include those listed in the 2-point response.</p>	<p>The central idea of the story is good sportsmanship. Both boys always treat each other with respect and admiration. In the end, when one boy is hurt, the other chooses his friend over winning.</p>
0	<p>A response:</p> <ul style="list-style-type: none"> • Gives no evidence of the ability to determine/summarize the theme/central idea/message, or to analyze the development of the central idea <p>OR</p> <ul style="list-style-type: none"> • Gives the theme/central idea/message or analysis, but includes no examples or no examples/details that make reference to the text <p>OR</p> <ul style="list-style-type: none"> • Gives the theme/central idea/message or analysis, but includes no explanation or relevant information from the text 	<p>The author shows that good sportsmanship is important.</p>

Item #	Grade	Claim	Target	DOK	Item: Standards	Evidence Statement
10	7	1	3	2	RL-4, L-4.a	The student will determine the definition of a word by using context clues.

2623


Read the sentences from the text. Then, answer the question.

"One of the runners has to win, but that doesn't mean the other one has to lose," said Scott's coach, Sam Moore. "I know Scott wouldn't want to have his victory tainted. I say we give both kids first place."

Moore's suggestion won unanimous approval from Brad's coach and the judges. The race was declared a dead heat.

Which word means the opposite of unanimous?

- (A) accepted
- (B) cheerful
- (C) divided
- (D) expected

Key: C

Rubric: (1 point) Student selects the correct response.

Item #	Grade	Claim	Target	DOK	Item: Standards	Evidence Statement
11	7	1	4	3	RL-3	The student will determine the author's purpose for including specific elements in the text and support those findings with evidence from the text.

2629


This question has two parts. First, answer part A. Then, answer part B.

Part A

What is **most likely** the authors' intent by recounting the techniques Scott and Brad use to run the race?

- (A) to show that the boys are good athletes
- (B) to build suspense about who will win the race
- (C) to create doubt that the boys are following the rules of racing
- (D) to show that the race is the most important element in the story

Part B

Which sentence from the text **best** supports your answer in part A?

- "Their most memorable race—the one track and field coaches still talk about—occurred during the 1970 cross-country regional meet, with the winner going to the state finals."
- "In past races, Brad usually grabbed the lead, but Scott, with his strong finish, often caught Brad on the final stretch."
- "When the pair dashed through the stadium tunnel and onto the track for the final lap, the capacity crowd rose to its feet to cheer the runners who were now racing stride for stride."
- "But coming around the final turn, Scott cut to the inside to pass Brad and get in position for a sprint down the stretch."

Key:

Part A: B

Part B: "In past races, Brad usually grabbed the lead, but Scott, with his strong finish, often caught Brad on the final stretch."

Rubric: (1 point) Student selects the correct response for Part A and the correct response for Part B.

Item #	Grade	Claim	Target	DOK	Item: Standards	Evidence Statement
12	7	1	4	3	RL-6	The student will form a conclusion about a literary text and identify details within the text that support that conclusion.

2626


This question has two parts. First, answer part A. Then, answer part B.

Part A

Click on the statement that **best** provides an inference about Brad that is supported by the text.

- A. Brad is angry at his bad luck.
- B. Brad is grateful for Scott's help.
- C. Brad is upset that he injured himself.
- D. Brad is embarrassed by Scott's gesture.

Part B

Click on the sentence from the text that **best** supports your answer in part A. Choose **one** option.

Who won or lost the race no longer mattered to Scott. His friend and competitor was hurt. Scott knew what he had to do—he went back to help. "Give me your hand, Brad," said Scott. "Let me help you."

Brad looked up at Scott, smiled, and said, "Man, you're something else." Scott pulled his injured rival to his feet but Brad was hurting so badly that he couldn't run very well. So Scott put his arm around Brad and the two began trotting down the final stretch. The thousands of fans in the stands gasped when they saw Scott's gallant gesture and then erupted into thunderous applause.

Key:

Part A: B

Part B: Brad looked up at Scott, smiled, and said, "Man, you're something else." (selectable distractors are: "Give me your hand, Brad," said Scott.; Scott pulled his injured rival to his feet but Brad was hurting so badly that he couldn't run very well.; The thousands of fans in the stands gasped when they saw Scott's gallant gesture and then erupted into thunderous applause.)

Rubric: (1 point) Student selects the correct response for Part A and the correct sentence for Part B.

Item #	Grade	Claim	Target	DOK	Item: Standards	Evidence Statement
13	7	1	5	3	RL-3	The student will analyze the relationships among the characters' interactions within the text.

2591


This question has two parts. First, answer part A. Then, answer part B.

Part A

Click on the statement that **best** explains how the characters' interactions develop over the course of the text.

- A. The boys begin as athletic rivals and become friends.
- B. The boys are not friendly, but they respect each other.
- C. The boys never become friends since they are from different areas.
- D. The boys grow to dislike each other as the competitions between them grow more intense.

Part B

Click on **all** of the sentences from the text that **best** support your answer in part A.

Scott Bennett and Brad Howes grew up south of Salt Lake City in the fertile valley between the Jordan River and the towering Wasatch Mountains of Utah. The boys lived just far enough apart not to attend the same schools, but close enough to compete in the same leagues in baseball, football, and basketball.

No matter whose team won, Scott and Brad always shook hands and complimented each other on the way they played. The two didn't become close friends because they were always on opposite sides. But the boys grew up admiring each other's athletic skills.

Key:

Part A: A

Part B: No matter whose team won, Scott and Brad always shook hands and complimented each other on the way they played.; But the boys grew up admiring each other's athletic skills. (All text is selectable.)

Rubric: (1 point) Student selects the correct response for Part A and the two correct sentences for Part B.

Item #	Grade	Claim	Target	DOK	Item: Standards	Evidence Statement
14	7	1	6	3	RL-5	The student will determine how the setting of the text adds to the characterization.

2590


How do the **first two** paragraphs add to the development of the characters in the text?

- Ⓐ The paragraphs indicate that the boys are from two very different environments.
- Ⓑ The paragraphs help the reader to understand how athletic both of the boys are.
- Ⓒ The paragraphs help set the story among mountains and rivers which shape how the boys grow.
- Ⓓ The paragraphs help the reader to understand how unlikely it is that a friendship would develop between the boys.

Key: D

Rubric: (1 point) Student selects the correct response.

Item #	Grade	Claim	Target	DOK	Item: Standards	Evidence Statement
15	7	1	7	3	L-5	The student will interpret the meaning of figurative words and phrases used in context and analyze its impact on meaning or tone.

2608


Read the sentences from the text.

Brad liked to set a blistering pace early in the race, which wore down most other runners who tried to keep up with him. Scott, meanwhile, had a strong finishing kick, which had him breathing down the leader's neck on the final stretch.

Select the statement that **best** describes what the use of the underlined phrases "blistering pace" and "breathing down the leader's neck" adds to the reader's understanding of the text.

- (A) The phrases show the competitive nature of both runners.
- (B) The phrases share the character's experience with the reader.
- (C) The phrases establish a serious tone to use throughout the story.
- (D) The phrases create a picture of the heat experienced by the runners.

Key: A

Rubric: (1 point) Student selects the correct response.

Item #	Grade	Claim	Target	DOK	Item: Standards	Evidence Statement
16	7	2	1b	2	W-3.d	The student will use information provided in a stimulus to write well-developed narratives that apply narrative techniques such as including descriptive details and sensory language that convey events/experiences

2529


A student is writing a story for class about camping. Read the draft of the story and complete the task that follows.

Wilderness Getaway

Alexis and Simon would be leaving on a camping trip with family and friends later in the day. Simon did not know what to expect because he had never pitched a tent or stayed in one overnight. Alexis, however, had been camping many times and loved waking up with the sun and breathing the fresh morning air. She showed Simon pictures of roasting marshmallows and hot dogs over a large campfire. Alexis and Simon woke before dawn to help pack the camping supplies—a tent, hot dogs, graham crackers, chocolate, marshmallows, and sleeping bags.

Alexis, Simon, and their family and friends departed for the camping grounds at a nearby park. When they arrived, they searched for the perfect place to pitch the tent. Simon enjoyed the beautiful scenery. He was positive that he was going to have a great time at this getaway.

Choose the **best** sentence to add descriptive detail to paragraph two.

- (A) Alexis and Simon gathered dry wood for the campfire.
- (B) Simon and Alexis pitched their tents in an area shaded by trees.
- (C) Alexis enjoyed playing at the park and building a campfire to roast marshmallows.
- (D) Simon felt the soft earth beneath his feet and noticed the glassy lake near the campsite.

Key: D

Rubric: (1 point) Student selects the correct response.

Item #	Grade	Claim	Target	DOK	Item: Standards	Evidence Statement
17	7	2	3a	3	W-2.b	(Elaboration) The student will use information provided in a stimulus to write well-developed complex informational/explanatory text by applying elaboration techniques such as a. referencing and/or integrating relevant supporting evidence (e.g., facts, definitions, concrete details, quotations, examples from notes provided) appropriate for the required form (essay, report, etc.)

2556


A student is writing a report for her English teacher about beneficial relationships between people and animals. Read the draft of the introduction to the report and the directions that follow.

The bond between people and animals has remained strong throughout history. In the past, tamed animals have helped humans with work such as hunting, farming, and transportation. More recently, animals have served people who are blind or have other disabilities. Today, people depend upon animals more for companionship than for work. One important benefit of such companionship for humans with pets is improved health.

The student took these notes from reliable sources:

Taking dog to dog park = chance to be with others

Engaging with others = healthy mind

Researchers studied people, pets more than 25 years

Strong relationship with pet = less stress

Lowering stress = lower blood pressure

Children with pets = fewer allergies to furry animals

Dog owners who walk dogs healthier = walking is good exercise

Taking care of a pet—walking, grooming, playing—helps a person think of others.

Using information from the student's notes, write **one** paragraph developing the idea in the last sentence of the introduction.

Score	Rationale	Exemplar
2	<p>The response:</p> <ul style="list-style-type: none"> • provides adequate relevant points/reasons/ details and/or evidence from the student notes supporting the thesis/controlling idea to enhance the content • adequately elaborates ideas using precise words/language 	<p>More than twenty-five years of research show the health benefits of animal companionship. A strong relationship between a pet and its owner reduces stress, which can lower blood pressure. In addition, children who have pets are less likely to develop allergies to furry animals, and dog owners who walk their dogs get regular exercise too. Taking a dog to the dog park also gives dog owners a chance to be with other people, which probably benefits emotional health.</p> <p>Annotation: There is adequate supporting information from student notes. For elaboration, there are some logical extensions that are well-integrated ("probably benefits in emotional health"). Note: other "kinds of 2" responses may choose different details from student notes and still reflect the "2" criteria.</p>
1	<p>The response:</p> <ul style="list-style-type: none"> • provides or lists mostly general and/or limited points/reasons/details or evidence from the student notes supporting thesis/controlling idea. Some points/reasons/ details may be extraneous or loosely related to the main idea. • partially elaborates ideas using general words/language 	<p>Research show that pets can make their owners feel better. It can also make their kids less likely to become allergic to fur. However, that is kind of weird because dogs and cats have fur.</p> <p>Annotation: The support for the thesis is limited based on available information from the student notes, and the attempted elaboration is irrelevant ("dogs and cats have fur"). The language is general ("this is kind of weird")</p>
0	<p>The response:</p> <ul style="list-style-type: none"> • provides minimal or no supporting points/reasons/details or evidence from the student notes supporting thesis/controlling idea. Those points/reasons/ details that are included may be unclear, repetitive, incorrect, contradictory, or interfere with the meaning of the text. • provides no appropriate elaboration and/or may use poor word choice for audience and purpose 	<p>It's fun to take your dog to the park. Dogs are fun.</p> <p>The response has minimal support from student notes (reference to "dog park"). The attempted elaboration ("dogs are fun") is irrelevant, and the general word "fun" is repetitive.</p>

Item #	Grade	Claim	Target	DOK	Item: Standards	Evidence Statement
18	7	2	6b	2	W-1.b	(Elaboration) The student will revise arguments by identifying best use of elaboration techniques such as e. deleting details that do not support the claim

2572


A student is writing an argumentative letter to the principal about a plan to have students attend school during the summer months. Read the paragraphs from the draft of the student's letter and complete the task that follows.

I am writing in opposition to your proposal to extend the school year. I also urge you to consider carefully recommendations from everyone who would be affected—staff, parents, the community, and especially students—before making your decision. With so many changes occurring in education, a hasty decision would do more harm than good.

One reason I oppose your plan to extend the school year is that both students and parents are likely to oppose it. The students are the ones affected by this decision, and a survey by our school newspaper found that 76 percent of them like our schedule as it is. I am a member of the newspaper staff, and I helped conduct the survey. These students are likely to influence their parents' views. If that happens, you will be bombarded with hundreds of emails and phone calls, insisting that kids are perfectly capable of learning without an extension of the school year. Your email inbox would fill up in a hurry. Even if parents agree with you, there's still the fact that when students are unhappy, their academic success rate goes down. That could undermine any additional learning achieved during the added time in class.

Click on the **two** sentences that should be removed from the second paragraph because they do not support the underlined sentence.

Key: I am a member of the newspaper staff, and I helped conduct the survey.; Your email inbox would fill up in a hurry. (All text other than the first underlined sentence is selectable.)

Rubric: (1 point) Student selects the two correct sentences.

Item #	Grade	Claim	Target	DOK	Item: Standards	Evidence Statement
19	7	2	8	1	W-3.d	The student will identify and use the best concrete or sensory word or words to convey experiences or events in a text precisely in narrative writing.

2598


A student is writing a story for the school's online literary magazine. Read the draft of the story and complete the task that follows.

Time Spent at the Lake

Martin visited his grandparents every summer near Round Lake. Typically, Martin refused to go fishing with his grandfather at the lake as he preferred to spend hours relaxing and reading books in the cool shade. The thought of sitting under the very bright sun on a boat in the middle of the lake sounded like a boring waste of time. After years of coaxing from his grandfather, however, Martin decided to attempt fishing. He listened intently to his grandfather's directions on how to cast the line of his fishing pole into the lake. Just seconds after his first cast, Martin felt a sharp tug on his fishing line.

Choose **two** words that **best** replace the underlined words.

- colossal
- concealed
- dazzling
- dramatic
- enormous
- radiant

Key: dazzling; radiant

Rubric: (1 point) Student selects the two correct responses.

Item #	Grade	Claim	Target	DOK	Item: Standards	Evidence Statement
20	7	2	8	2	W-2d, W-3d, L-3a, L-6	The student will identify and use the best academic or grade-level or below domain-specific (but not scientific or social studies) construct-relevant word(s)/phrase to convey the precise or intended meaning of a text especially with informational/explanatory writing.

856


A student is writing a report for science class. This paragraph from the draft of the report contains language that is not appropriate for the audience or the task. Read the paragraph and complete the task that follows.

There are loads of reasons to eat organic food. The term "organic" indicates that the food has been grown without pesticides or other chemicals. A consumer who chooses to eat organic food does not consume any of this junk. Crops that are grown organically are great for the land because farmers do not have to add chemicals to the soil. Growing organic food also improves the lives of farm workers because they can avoid working with poisons. In sum, everyone benefits from the farming of organic food.

Click on **three** words or groups of words that are too vague or informal for a science report.

Key: Loads of, junk, great (selectable distractors are: reasons, eat, organic food, indicates, has been grown, pesticides, chemicals, consumer, chooses, organic food, consume, Crops, grown, land, farmers, add chemicals, soil, Growing, organic food, improves, lives, farm workers, avoid, working with poisons, In sum, benefits, farming of, organic food)

Rubric: (1 point) Student selects the three correct groups of words.

Item #	Grade	Claim	Target	DOK	Item: Standards	Evidence Statement
21	7	2	9	1	L-1.a	The student will identify or edit to correct misplaced modifiers. The student will identify and/or edit for correct shifts in verb tense

2570


A student has written a paper for her English class about living in a rural area. Read the student's draft and complete the task that follows.

Of the many advantages of country life over city life, my favorite is the opportunity to observe farm animals—especially pigs. Rolling in the mud, I like to watch them play. Myths about pigs abound, including the belief that they aren't very smart. My own observations confirm what scientific research has shown, namely, that pigs are highly intelligent and have very good memories. They can remember where food is hidden, recognize as many as 30 other pigs, and learned their names within a week of birth. Another myth is that pigs are dirty and love to wallow in mud. They actually prefer water to mud. When people joke about "pigging-out," they can't be talking about the animal because pigs eat slowly and savor their food. City folks could learn a lot by spending some time in the country.

Click on **two** sentences that contain errors in grammar usage.

Key: Rolling in the mud, I like to watch them play.; They can remember where food is hidden, recognize as many as 30 other pigs, and learned their names within a week of birth. (All text is selectable.)

Rubric: (1 point) Student selects the two correct sentences.

Item #	Grade	Claim	Target	DOK	Item: Standards	Evidence Statement
22	7	3	4	3	SL-2, SL-3	1. The student will identify, interpret, or analyze the point of view, purpose, central idea, or key points of a presentation.

2129


The following question has two parts. First, answer part A. Then, answer part B.

Part A

Which statement **best** describes how an archaeologist chooses a site to study?

- (A) Archaeologists look at maps for good places to dig.
- (B) Archaeologists study history for clues to determine where to dig.
- (C) Archaeologists keep notes of everything they find to choose a dig site.
- (D) Archaeologists compare photographs with written records to find a location.

Part B

Which detail from the presentation **best** supports your answer in part A?

- "Or they may be together, in a place where a village or settlement once stood."
- "Sometimes archaeology confirms the historical record."
- "Regardless of what they find, archaeologists keep very careful records of the site when a discovery is made, drawing or photographing artifacts in place before removing them for further study."
- "Sometimes studying written and oral history points them in the right direction."

Key:

Part A: B

Part B: "Sometimes studying written and oral history points them in the right direction."

Rubric: (1 point) Student selects the correct response in Part A and the correct response in Part B.

Item #	Grade	Claim	Target	DOK	Item: Standards	Evidence Statement
23	7	3	4	3	SL-3, SL-2	4. The student will draw and/or support a conclusion based on content in a presentation.

2118


Which conclusions are **best** supported by evidence from the presentation? Select **two** options.

- Most artifacts from ancient cultures are found by accident.
- Locating artifacts from ancient cultures sometimes involves luck.
- Artifacts that are found together provide more information than those found alone.
- The exact place an artifact is found can reveal important information to archaeologists.
- Archaeologists rely on written records to provide more accurate information about the past.

Key: Locating artifacts from ancient cultures sometimes involves luck.; The exact place an artifact is found can reveal important information to archaeologists.

Rubric: (1 point) Student selects the two correct responses.

Item #	Grade	Claim	Target	DOK	Item: Standards	Evidence Statement
24	7	3	4	2	SL-2, SL-3	4. The student will draw and/or support a conclusion based on content in a presentation.

2131


Which idea is supported by the presentation?

- (A) Archaeologists have to be curious people.
- (B) Archaeologists have to be expert photographers.
- (C) Archaeologists must know how to build structures.
- (D) Archaeologists need to understand modern technology.

Key: A

Rubric: (1 point) Student selects the correct response.

Item #	Grade	Claim	Target	DOK	Item: Standards	Evidence Statement
25	7	3	4	2	SL-3	1. The student will identify, interpret, or analyze the point of view, purpose, central idea, or key points of a presentation.

2528


Which of the following **best** describe the purposes of the presentation? Select **two** options.

- to suggest that the lantern fish is a great hunter
- to describe the unique qualities of the lantern fish
- to explain why lantern fish are difficult to find in the ocean
- to establish that lantern fish can be found in multiple oceans
- to show how the lantern fish is able to survive in its environment

Key: to describe the unique qualities of the lantern fish; to show how the lantern fish is able to survive in its environment

Rubric: (1 point) Student selects the two correct responses.

Item #	Grade	Claim	Target	DOK	Item: Standards	Evidence Statement
26	7	3	4	2	SL-2, SL-3	1. The student will identify, interpret, or analyze the point of view, purpose, central idea, or key points of a presentation.

2455


Some lantern fish characteristics help the fish survive or put the fish in danger. Click in the boxes next to the characteristics to show which apply to each category. Some characteristics may apply to both categories.

	Survival	Danger
Has big eyes	<input type="checkbox"/>	<input type="checkbox"/>
Stays deep in the ocean during the day	<input type="checkbox"/>	<input type="checkbox"/>
Hunts at the ocean surface	<input type="checkbox"/>	<input type="checkbox"/>

Key:

Survival = Has big eyes; Stays deep in the ocean during the day; Hunts at the ocean surface

Danger = Hunts at the ocean surface

Rubric: Student makes all four correct matches.

Item #	Grade	Claim	Target	DOK	Item: Standards	Evidence Statement
27	7	3	4	3	SL-2, SL-3	3. The student will analyze a quality (soundness of reasoning, relevance or sufficiency of evidence) of a presentation.

2473


Which idea from the presentation is **not** fully supported?

- (A) The lantern fish migrates for food.
- (B) The lantern fish travels long distances.
- (C) The lantern fish is equipped for life in deep waters.
- (D) The lantern fish is an important part of the sea lion's diet.

Key: D

Rubric: (1 point) Student selects the correct response.

Item #	Grade	Claim	Target	DOK	Item: Standards	Evidence Statement
28	7	4	2	2	WLiteracy-8, W-9	The student will analyze information within and among sources of information in order to integrate the information that is paraphrased while avoiding plagiarism.

2462


A student is writing a report about the history of computers. Read both sources and the directions that follow.

Source 1: "The Speed of Computers" by Jonathan Anders

The first computers were designed to solve math problems more quickly than a person could. Essentially, computers were invented to help people be faster with their work. For example, the United States takes a census of people living in the country to find out information about the population. The Census of 1880 took about eight years to complete; however, the 1890 census took only two years. This was because a machine was used to count the results of the 1890 census. During the next 77 years, devices like counting machines slowly changed to today's computers, which can do several jobs.

Source 2: "How Computers Became Common in the Business World" by Hanna James

Before computers appeared in most offices, there were three machines that helped businesses conduct work at a faster pace: the typewriter, the filing system, and the adding machine. Since the first computers were big machines that could only solve difficult math problems, it took time for them to be used in most offices. It took many inventors adding different capabilities to make computers what they are today. This eventually made it possible for offices to replace three machines with one. Nowadays people can solve math problems, type, copy, email, and save all from one device.

The student took notes about information in the sources. Which note correctly paraphrases, or restates, information from **both** sources?

- (A) Only companies with a lot of money could use the first computers.
- (B) In modern times computers are commonly found in businesses, schools, and homes.
- (C) Throughout the years computers have advanced to be able to do more tasks than they could before.
- (D) The first computers were big machines designed to solve math problems more quickly than people can.

Key: D

Rubric: (1 point) Student selects the correct response.

Item #	Grade	Claim	Target	DOK	Item: Standards	Evidence Statement
29	7	4	3	2	WLiteracy-8, W-8	The student will use reasoning, evaluation, and evidence to assess the credibility of each source in order to select relevant information to support research.

2451


A student has made a plan for research. Read the plan and the directions that follow.

Research Report Plan

Topic: The Colony: The Most Organized of All Animal Social Groups

Audience: science students

Purpose: to inform

Research Question: How do colonies help animals adapt and survive?

The student needs to find a credible, or trustworthy, source with relevant information. Which source would **most likely** have credible and relevant information?

- (A) www.biomebasics.net

Tour the world's biomes without leaving your chair! Explore deserts where termite colonies rise like pillars of sand. Swim oceans where coral reefs teem with life. Survey the vegetation and animal populations of grasslands, forests, and tundra. Can you identify the biomes closest to where you live? Which biomes do you think are the most . . .

- (B) www.krazycolonies.com

Remember those ant farms you had when you were a kid? Well, THEY'RE BACK! Surprise your son or daughter with a colony of creepy-cute ants. From behind a crack-resistant wall of plastic, they'll see drones, soldiers, and that all-important queen, bustling about their buggy business. Only \$15.99 and the shipping is free . . .

- (C) www.animalinfozone.com

Why some animals live in colonies, and how this form of social organization is a key to their survival. In a paper by Dr. Stephen T. Cora, the author shares the work of biologists who have examined the social groups of ants, termites, bees, mole rats, and more . . .

- (D) www.talkingaboutanimals.net

What is an animal colony? Jane Fuller answers questions about insects that live in highly organized social groupings. Her answers may fascinate you, especially her discussion of the term "eusocial" and . . .

Key: C

Rubric: (1 point) Student selects the correct response.

Item #	Grade	Claim	Target	DOK	Item: Standards	Evidence Statement
30	7	4	4	2	RLiteracy-1(History), W-8	The student will cite evidence to support analyses, arguments, or critiques.

2567


A student is writing a research report about early sea navigation. She found a trustworthy source. Read **Source 1** and the directions that follow.

Source 1: "Harrison's Marvelous Clock," from *The Story of Longitude* by H. O. Bellevue, history professor

Before the use of planes and trains became popular forms of transportation, many people relied upon boats to travel from one destination to the next. Sailors were a group of individuals who helped to guide and navigate boats. Before the mid-1700s, there was not a dependable or practical way to determine a boat's east-west position, or longitude. Knowing a boat's longitude was essential to its safely reaching its destination. The key was being able to keep accurate time at sea. Although clocks kept the correct time on land, they did not work well on a rolling ship's deck. After years of effort, John Harrison of England invented the marine chronometer. The marine chronometer is a clock that allows a ship to determine its longitude at sea. Solving the longitude problem meant that ships could navigate more safely and accurate maps could be made. It is hardly an understatement to say that Harrison's success saved lives and continues to allow people to find their way around the world.

The student found another source. Read **Source 2** and click on **two** facts that support the author's point of view about Harrison's clock in **Source 1**.

Source 2: from the diary of J. R. Smythe, sailor aboard the *Resolution*, 1775

Tomorrow we shall arrive home from our voyage. Like previous sailors, we could not figure our longitude accurately. We navigated with charts of the moon and stars and big, bulky telescopes that were hard to use. Twice we ran into islands that our maps did not show. Fortunately, injury to the ship was fixable. We carried a clock, but it stopped working during a storm. Finally, we were able to secure Mr. John Harrison's newest invention. Because it kept nearly perfect time, we plotted our position most accurately and thus kept from running aground or worse. This has made everyone on the ship very happy. Now, our captain can draw updated maps that should be useful for sailors far into the future.

Key:

Because it kept nearly perfect time, we plotted our position most accurately and thus kept from running aground or worse.; Now, our captain can draw updated maps that should be useful for sailors far into the future. (selectable distractors are: Like previous sailors, we could not figure our longitude accurately.; We navigated with charts of the moon and stars and big, bulky telescopes that were hard to use.; Finally, we were able to secure Mr. John Harrison's newest invention.; This has made everyone on the ship very happy.)

Rubric: (1 point) Student selects the two correct sentences.

Sleep Classroom Activity

The Classroom Activity introduces students to the context of a performance task, so they are not disadvantaged in demonstrating the skills the task intends to assess. Contextual elements include: an understanding of the setting or situation in which the task is placed, potentially unfamiliar concepts that are associated with the scenario; and **key terms** or vocabulary students will need to understand in order to meaningfully engage with and complete the performance task. The Classroom Activity is also intended to generate student interest in further exploration of the key idea(s). The Classroom Activity should be easy to implement with clear instructions.

Please read through the entire Classroom Activity before beginning the activity with students to ensure any classroom preparation can be completed in advance.

Throughout the activity it is permissible to pause and ask students if they have any questions.

Resources needed:

- Chart paper, whiteboard, or chalkboard
- Markers or chalk
- Two pieces of paper and pencil for each group of students
(Students who need an accommodation may use their preferred tool for writing.)

Learning Goal:

- Students will understand the context of the key concepts related to the topic:
 - You have an internal “biological clock” that controls when you naturally feel sleepy.
 - Sleep plays a key role in keeping you healthy and functioning at your best.

Students will understand the key terms:

- **biological clock:** a natural system, or internal tool, that can affect a person’s sleep-wake cycles
- **melatonin:** a substance the body produces that helps control the body’s sleep-wake cycles

Note: Definitions are provided here for the convenience of the facilitator. Students are expected to understand these key terms in the context of the task, not memorize the definitions.

Sleep Classroom Activity

[Purpose: The facilitator’s goal is to help students understand that sleep is one of the most important parts of a person’s daily routine and that sleep plays a key role in keeping people healthy and functioning at their best. Everyone has a “biological clock” that controls sleep-wake cycles. This activity will allow students to be active participants as they explore the concept of sleep in the context of the performance assessment and its focus on the importance of sleep.]

Note: The following section can be modified to accommodate various teacher-student interaction types such as a teacher-led discussion with the entire class, teacher-student discussion for remote locations with a single student, or small groups.

[Place the students in small groups of two to four students. Give each group a piece of paper and a pencil. Then, write the following definitions and question on the board and read aloud.

biological clock: a natural system, or internal tool, that can affect a person's sleep-wake cycles

melatonin: a substance the body produces that helps control the body's sleep-wake cycles

Why do you have to sleep?]

Facilitator says: “Today, we will get ready for the Sleep Performance Task. According to information on the National Heart, Lung, and Blood Institute’s website, sleep is such an important activity that we should devote at least one-third of our day to sleeping. Take one minute to discuss this question with the people in your group: ‘*Why do you have to sleep?*’ Write #1 at the top of your paper and list your ideas.”

[After one minute, have students meet as a class to share their ideas. This discussion should last about two minutes.]

Possible class discussion answers (unscripted):

- to get energy for the next day
- to recharge your body
- to rest your body/muscles/mind

Facilitator says: “Did you know that each of us actually has an internal clock that follows the pattern of day and night, and that affects our sleep-wake cycle? That’s right! We will refer to that as our ‘biological clock.’”

[Point out and read the definition on the board.]

“According to the National Heart, Lung, and Blood Institute, this biological clock tells our bodies to produce melatonin, a substance the body produces that makes us feel sleepy.”

[Point out and read the definition on the board.]

“Since your biological clock follows the pattern of day and night, your body is most ready to sleep when it is dark out and to be awake when it is daylight. Have another group member write #2 on your paper. Here is another question to discuss in your group.”

[Write the question on the board and read aloud: “*Think about our society that is always on the go, 24 hours a day. Who are some people that would be in conflict with their biological clock and why?*”]

Facilitator says: “Take one minute to discuss this question in your group: ‘*Think about our society, which is always on the go 24 hours a day. Who are some people that would be in conflict with their biological clock and why?*’”

[Walk around the room to make sure students understand the task and are addressing the question. After one minute, have students meet as a class to share their ideas.]

Facilitator says: “Now, one person from each group will provide one response to the question. I will write your ideas on the board. Let’s begin with this group.”

[Allow the discussion for two minutes. Write the list they provide on the board/chart paper.]

Possible class discussion answers (unscripted):

- People who work at night
- Police officers
- Emergency room workers

- Pilots
- People traveling across time zones
- Parents of babies

Note: Make sure students arrive at the common understanding that:

- People who have irregular schedules will likely be in conflict with their biological clocks.

Facilitator says: “From your ideas we can see that people who work unusual or irregular schedules will likely be in conflict with their biological clock. What about those of us who operate on a daytime schedule? Have you ever had trouble sleeping? Write #3 on your paper. Take one minute to list your answers to this question: ‘*What prevents people from sleeping?*’”

[Write the question on the board and read aloud: “*What prevents people from sleeping?*”]

Walk around the room to make sure students are addressing the question. After one minute, have students share their ideas. Write the list they provide on the board/chart paper. This discussion should last about two minutes.]

Possible class discussion answers (unscripted)

- Worry
- Don’t feel well
- Not tired
- Uncomfortable bed
- Uncomfortable room
- Too noisy/not enough noise
- Biological clock is out of sync

Note: Make sure students arrive at the common understanding that:

- People can be prevented from sleeping for a number of reasons such as environmental, physical or emotional conditions, or work schedules.

Facilitator says: “As you can see, there are many reasons people suffer from insomnia, or lack of sleep. According to the National Heart, Lung, and Blood Institute, sleep is not just a time for your body to completely shut down. In fact, studies show that as you sleep, your brain is very busy creating pathways that help you learn, remember, and solve problems. So, as you can see, a good night’s sleep is important for helping you be your best.”

Note: For the following section, the facilitator may choose to prepare true/false signs before the start of the classroom activity.

[Give one person in each group a blank piece of paper, or a pre-made true/false sign.]

Facilitator says: “Now, you will do a true/false activity with two statements about sleep from the National Institute of Health’s website. I handed a piece of paper to one person in each group. In large letters, on one side of the paper, write ‘True.’ In large letters, on the other side of the paper, write ‘False.’”

Note: If the facilitator has chosen to prepare the true/false signs in advance, the facilitator will use the script below.

Facilitator says: “Now, you will do a true/false activity with two statements about sleep from the National Institute of Health’s website. I gave each group a piece of paper with the words true and false written on it.”

Facilitator says: “I will write a statement on the board, read it aloud, and give you 15 seconds to process your answer. If your group thinks the statement is true, hold up the side that says ‘True.’ If your group thinks the statement is false, hold up the side that says ‘False.’ Be prepared to justify your response to each statement.”

[Write the statement on the board and read aloud: “*Sleep is a time when your body and brain shut down for rest and relaxation.*” After 15 seconds, repeat the statement and instruct groups to show their response by displaying either “True” or “False.”]

Facilitator says: “I will repeat the statement. Your group will hold up ‘True’ if you believe the statement is true and ‘False’ if you believe the statement is false. ‘*Sleep is a time when your body and brain shut down for rest and relaxation.*’”

[After every group has shown its response, ask one person who is showing “True” why he or she thinks the statement is true. Then ask one student who is showing “False” why he or she thinks the statement is false. After both students have responded, provide the class with the correct answer and explanation.]

Facilitator says: “False is correct. While it is true that during sleep your body rests and restores its energy levels, your brain is actively working at building memory and creative thinking. Here is the second statement. You will have 15 seconds to think about your answer.”

[Write the statement on the board and read aloud: “*The body has a natural ability to adjust to different sleep schedules such as working a night shift or traveling through multiple time zones quickly.*”]

[After 15 seconds, repeat the statement and instruct groups to show their response by displaying either “True” or “False.”]

Facilitator says: “I will repeat the statement. Show your group’s response by holding up either True or False. ‘*The body has a natural ability to adjust to different sleep schedules such as working a night shift or traveling through multiple time zones quickly.*’”

[After everyone has shown his or her response, ask one person who is showing “True” why he or she thinks the statement is true. Then ask one student who is showing “False” why he or she thinks the statement is false. After both students have responded, provide the class with the correct answer and explanation.]

Facilitator says: “False is correct. The human body’s biological clock programs each person to feel sleepy at nighttime and to be active during the day. People who work a night shift and try to sleep during the day are always fighting their biological clock. Also, people who travel across many time zones quickly, such as across an ocean or across the United States, might be extra tired or grumpy because their body can’t keep a regular sleep-wake schedule.”

“You will learn more about sleep and how it affects our lives in the performance task you will be completing. Remember that sleep plays an important role in keeping you healthy and functioning at your best. Your biological clock lets you know when you are sleepy. Pay attention to it. The work you did today should help prepare you for the research and writing you will be doing in the performance task. Please leave your recorded notes and pencils behind to be collected.”

7th Grade English Language Arts Performance Task

Student Directions

Napping Explanatory Performance Task

Task:

There has been much discussion in the news recently about the role of sleep and the role of napping. How many hours of sleep is enough? What is too much sleep? What is too little sleep? How do naps fit into sleep cycles? The journalism club advisor has asked you to research the roles of sleep and napping. As part of your research, you have found three sources about sleep and napping.

After you have reviewed these sources, you will answer some questions about them. Briefly scan the sources and the three questions that follow. Then, go back and read the sources carefully so you will have the information you will need to answer the questions and complete your research. You may take notes on the information you find in the sources as you read.

In Part 2, you will write an explanatory article on a topic related to the sources.

Directions for Beginning:

You will now examine several sources. You can re-examine any of the sources as often as you like.

Research Questions:

After looking at the sources, use the rest of the time in Part 1 to answer three questions about them. Your answers to these questions will be scored. Also, your answers will help you think about the research sources you have read and viewed, which should help you write your explanatory article.

You may refer back to your scratch paper to look at your notes when you think it would be helpful. Answer the questions in the spaces below the items.

Part 1

Source #1

Here is an article based on scientific research about sleep.

How Much Sleep is Enough?

The amount of sleep you need each day will change over the course of your life. Although sleep needs vary from person to person, the chart below shows general recommendations for different age groups.

Age	Recommended Amount of Sleep
Newborns	16–18 hours a day
Preschool-aged children	11–12 hours a day
School-aged children	At least 10 hours a day
Teens	9–10 hours a day
Adults (including the elderly)	7–8 hours a day

If you routinely lose sleep or choose to sleep less than needed, the sleep loss adds up. The total sleep lost is called your sleep debt. For example, if you lose 2 hours of sleep each night, you'll have a sleep debt of 14 hours after a week.

Some people nap as a way to deal with sleepiness. Naps may provide a short-term boost in alertness and performance. However, napping doesn't provide all of the other benefits of night-time sleep. Thus, you can't really make up for lost sleep.

Some people sleep more on their days off than on work days. They also may go to bed later and get up later on days off.

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Bad sleep habits and long-term sleep loss will affect your health. If you're worried about whether you're getting enough sleep, try using a sleep diary for a couple of weeks.

Write down how much you sleep each night, how alert and rested you feel in the morning, and how sleepy you feel during the day.

Sleeping when your body is ready to sleep is also very important. Sleep deficiency can affect people even when they sleep the total number of hours recommended for their age group.

For example, people whose sleep is out of sync with their body clocks (such as shift workers) or [is] routinely interrupted (such as caregivers or emergency responders) might need to pay special attention to their sleep needs.

"How much sleep is enough?" by the National Heart, Blood, and Lung Institute. In the public domain.

Source #2

This article appeared in a consumer health magazine and uses historical accounts, career-specific research, and current attitudes to discuss napping.

The Secret Truth about Napping By Maria Allegra

Napping: Only for Kids?

In general, Americans regard napping as an unproductive habit. They think that only little children should take naps. However, there is evidence that napping can benefit people of all ages.

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Many famous historical figures have been nappers. American presidents John F. Kennedy, Ronald Reagan, and Bill Clinton all took frequent naps to help them deal with the pressures of leading a powerful nation. Napoleon Bonaparte, a French emperor, often gave rousing speeches at a moment's notice. Perhaps this was due to his habit of taking frequent naps. Winston Churchill, who helped lead the Allied Powers to victory during World War II, slept for at least an hour every afternoon. He stated that a nap could renew a person's energy.

Other famous historical nappers include the brilliant scientist Albert Einstein and the world-changing inventor Thomas Edison. The amazing artist Leonardo Da Vinci also took naps. They all had unusual sleep patterns that allowed them to work in a focused and creative way. Maybe if Edison had skipped his naps, he would never have invented the light bulb. Maybe Leonardo would have been too sleepy to paint the Mona Lisa.

Naps for Certain Careers

Scientific studies show the benefits that naps can provide for individuals with unusual work schedules. Examples include astronauts and certain medical personnel. The human body operates according to an internal clock. This clock operates in relation to the Earth's pattern of darkness at night and bright light during the day. When a person's internal clock is in sync with her or his habits, the person can most likely sleep well at night and remain awake and alert all day. But if the person's job makes for interrupted sleep—or sleep at odd hours—the internal clock can become confused. Then the person has trouble getting enough sleep.

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letting subjects nap for as little as 24 minutes improved their mental performance. So even short naps can reduce the number of mistakes a tired person makes.

The main take away seems to be that a deep sleep, whether it is nighttime sleep or a day-time nap, primes the brain to function at a higher level, allowing us to come up with better ideas, find solutions to puzzles more quickly, identify patterns faster and recall information more accurately.

Siesta Tradition

There is a word in the Spanish language to describe the habit of taking a nap in the mid-afternoon: siesta. However, taking a midday nap is not only common in Spain. In Greece, for example, people have traditionally taken a break in the middle of the day. They have eaten a large meal and then taken a nap.

It is not the big noontime meal that makes Greeks sleepy. Evidence suggests that most people become drowsy between 2:00 p.m. and 4:00 p.m. In fast-paced America, workers and students usually fight to stay awake during this so-called "nap zone."

After a nap, people tend to be happier and more alert. They do better work and avoid mistakes. Nappers may even have better long-term health than non-nappers. In a 2007 study by the Harvard School of Public Health discovered that people who took 30 minute naps at least three times a week were 37% less likely to die of heart disease. Furthermore, the study found that even people who napped for less than 30 minutes or napped only one or two times per week were 12% less likely to die from heart disease. In a 2001 study, researchers at Allegheny College found that napping was a factor in lowering blood pressure after mental stress. The people in the study who took a daily 45 minute nap on average had lower blood pressure after taking a mental stress test than those who didn't have a nap.

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The Power Napping Club co-president emphasizes the boost that naps provide. "Obviously, it's no substitute for sleep, but I definitely feel more relaxed afterward," she says.

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Source #3

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Ask the Sleep Doctor

Dear Dr. Vesslor,

I'm a 12-year-old middle school student who usually gets about eight hours of sleep a night. I often feel tired when I get home from school at 3:30, and I want to be alert and energetic in the evening so I can focus on all of my homework. However, when I tried taking a nap, I slept for two or three hours. Then I woke up groggy. What can I do so I will have more energy in the evening?

Sincerely, Too Sleepy

Dear Too Sleepy,

Good for you for thinking of ways to increase your productivity for schoolwork. The first thing I would like to point out is that you are not getting enough sleep at night for someone your age. I recommend that you go to bed earlier. The most important thing you can do is to sleep more at night.

On nights when you don't get enough sleep, napping can help to recharge your body and increase your mental alertness. Did you know that 85% of animals sleep in short periods throughout the day? Humans are one of the few species that do most of their sleeping at night. Introducing a catnap into your day may be very helpful. In fact, studies show that

taking a short nap after learning new information may help you remember that information better!

I do not recommend a two- or three-hour nap, however. Napping for several hours during the day can make it hard for you to fall asleep at night. It can also be difficult to wake up after a long nap. According to research by David F. Dinges, napping for as little as 24 minutes improved mental performance. Short naps also don't cause the post-nap groggy feeling that accompanies longer naps.

Another important issue to consider is when to take your nap. You don't want to nap too late in the day. Why? Doing so can make it harder for you to fall asleep at night.

I recommend that if you decide to take a nap, you should do so right after you get home from school. Set a timer for about 24 minutes so that you don't oversleep. You will most likely wake up refreshed and have more energy to focus on your homework in the evening.

Sleep well!

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1. Explain how the table in Source #1 supports information provided in the two other sources. Cite evidence and identify the source of each piece of information by title or number.

2. People whose sleep is routinely interrupted might need to pay special attention to their sleep needs. Provide two pieces of evidence from different sources that support this claim and explain how each example supports the claim. Cite evidence for each piece of information and identify the source by title or number.

3. Mark an X on the boxes to show the claim(s) that each source supports. Some sources will have more than one box selected.

	Source #1: How Much Sleep is Enough?	Source #2: The Secret Truth about Napping	Source #3: Ask the Sleep Doctor
If you take too long of a nap, you might feel sleepy.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If your sleep patterns interrupt your body's internal clock, you might have trouble getting enough sleep.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A deep sleep helps the brain to operate at a higher level.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Part 2

You will now review your notes and sources, and plan, draft, revise, and edit your writing. You may use your notes and refer to the sources. Now read your assignment and the information about how your writing will be scored; then begin your work.

Your Assignment:

Now that you have completed research on the topic of sleep, the journalism club advisor has asked you to write an explanatory article about sleep and naps for the next issue of the school newspaper. The audience for your article will be other students, teachers, and parents.

Using more than one source, develop a thesis/controlling idea to explain about sleep and naps. Once you have a thesis/controlling idea, select the most relevant information from more than one source to support your thesis/controlling idea. Then, write a multi-paragraph explanatory article explaining your thesis/controlling idea. Clearly organize your article and elaborate your ideas. Unless quoting directly from the sources, use your own words. Be sure to reference the source title or number when quoting or paraphrasing details or facts from the sources.

Explanatory Article Scoring:

Your explanatory article will be scored using the following:

- 1. Organization/purpose** – How well did you state your thesis/controlling idea, and maintain your thesis/controlling idea with a logical progression of ideas from beginning to end? How well did you narrow your thesis/controlling idea so you can develop and elaborate the conclusion? How well did you consistently use a variety of transitions? How effective was your introduction and your conclusion?
- 2. Evidence/elaboration:** How well did you integrate relevant and specific information from the sources? How well did you elaborate your ideas? How well did you clearly state ideas using precise language that is appropriate for your audience and purpose?
- 3. Conventions:** How well did you follow the rules of grammar usage, punctuation, capitalization and spelling?

Now begin work on your explanatory article. Manage your time carefully so that you can:

- plan your multi-paragraph explanatory article
- write your multi-paragraph explanatory article
- revise and edit the final draft of your multi-paragraph explanatory article

For Part 2, you are being asked to write a multi-paragraph explanatory article, so please be as thorough as possible.

Remember to check your notes and your prewriting/planning as you write and then revise and edit your explanatory article.



Smarter Balanced Assessment Consortium:

English/Language Arts Practice Test Scoring Guide Grade 7 Performance Task

5/16/2014



Student Directions

Napping Explanatory Performance Task

Task:

There has been much discussion in the news recently about the role of sleep and the role of napping. How many hours of sleep is enough? What is too much sleep? What is too little sleep? How do naps fit into sleep cycles? The journalism club advisor has asked you to research the roles of sleep and napping. As part of your research, you have found three sources about sleep and napping.

After you have reviewed these sources, you will answer some questions about them. Briefly scan the sources and the three questions that follow. Then, go back and read the sources carefully so you will have the information you will need to answer the questions and complete your research. You may click on the Global Notes button to take notes on the information you find in the sources as you read. You may also use scratch paper to take notes.

In Part 2, you will write an explanatory article on a topic related to the sources.

Directions for Beginning:

You will now examine several sources. You can re-examine any of the sources as often as you like.

Research Questions:

After examining the research sources, use the remaining time in Part 1 to answer three questions about them. Your answers to these questions will be scored. Also, your answers will help you think about

the research sources you have read and viewed, which should help you write your explanatory article.

You may click on the Global Notes button or refer back to your scratch paper to look at your notes when you think it would be helpful. Answer the questions in the spaces below the items.

Both the Global Notes on the computer and your written notes on scratch paper will be available to you in Part 1 and Part 2 of the performance task.

Part 1

Sources for Performance Task:

Source #1

Here is an article based on scientific research about sleep.

How Much Sleep Is Enough?

The amount of sleep you need each day will change over the course of your life. Although sleep needs vary from person to person, the chart below shows general recommendations for different age groups.

Age	Recommended Amount of Sleep
Newborns	16–18 hours a day
Preschool-aged children	11–12 hours a day
School-aged children	At least 10 hours a day
Teens	9–10 hours a day
Adults (including the elderly)	7–8 hours a day

If you routinely lose sleep or choose to sleep less than needed, the sleep loss adds up. The total sleep lost is called your sleep debt. For example, if you lose 2 hours of sleep each night, you'll have a sleep debt of 14 hours after a week.

Some people nap as a way to deal with sleepiness. Naps may provide a short-term boost in alertness and performance. However, napping doesn't provide all of the other benefits of night-time sleep. Thus, you can't really make up for lost sleep.

Some people sleep more on their days off than on work days. They also may go to bed later and get up later on days off.

Sleeping more on days off might be a sign that you aren't getting enough sleep. Although extra sleep on days off might help you feel better, it can upset your body's sleep-wake rhythm.

Bad sleep habits and long-term sleep loss will affect your health. If you're worried about whether you're getting enough sleep, try using a sleep diary for a couple of weeks.

Write down how much you sleep each night, how alert and rested you feel in the morning, and how sleepy you feel during the day.

Sleeping when your body is ready to sleep is also very important. Sleep deficiency can affect people even when they sleep the total number of hours recommended for their age group.

For example, people whose sleep is out of sync with their body clocks (such as shift workers) or [is]

routinely interrupted (such as caregivers or emergency responders) might need to pay special attention to their sleep needs.

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Siesta Tradition

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It is not the big noontime meal that makes Greeks sleepy. Evidence suggests that people, in general, become drowsy between 2:00 p.m. and 4:00 p.m. In fast-paced America, workers and students usually fight to stay awake during this so-called "nap zone."

After a nap, people tend to be happier and more alert.

They do better work and avoid mistakes. Nappers may even have better long-term health than non-nappers. In 2007, a study by the Harvard School of Public Health discovered that people who took 30 minute naps at least three times a week were 37% less likely to die of heart disease. Furthermore, the study found that even people who napped for less than 30 minutes or napped only one or two times per week were 12% less likely to die from heart disease. In a 2011 study, researchers at Allegheny College found that napping was a factor in lowering blood pressure after mental stress. The people in the study who took a daily 45 minute nap on average had lower blood pressure after taking a mental stress test than those who didn't have a nap.

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But finding time to sleep—or to nap—can be challenging. Students involved in sports or other extracurricular activities after school aren't often able to find time to nap before evening sleep time. And finding places to nap during the day at school is challenging. However, Anton Anderson, an English teacher at Greenwich (Connecticut) High School, decided to do something to help the waves of weary teens he was seeing every day. In 1998, he founded the Power Napping Club, which allows students to nap for about 20 minutes at the end of the day before going on to extracurricular activities. Its motto: *Veni, Vidi, Dormici* (Latin for "I came, I saw, I slept").

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Ask the Sleep Doctor

Dear Dr. Vesslor,

I'm a 12-year-old middle school student who usually gets about eight hours of sleep a night. I often feel tired when I get home from school at 3:30, and I want to be alert and energetic in the evening so I can focus on all of my homework. However, when I tried taking a nap, I slept for two or three hours. Then I woke up groggy. What can I do so I will have more energy in the evening?

Sincerely, Too Sleepy

Dear Too Sleepy,

Good for you for thinking of ways to increase your productivity for schoolwork. The first thing I would like to point out is that you are not getting enough sleep at night for someone your age. I recommend that you go to bed earlier. Remember, the most important thing you can do is to sleep more at night.

On nights when you don't get enough sleep, napping can help to recharge your body and increase your

mental alertness. Did you know that 85% of animals sleep in short periods throughout the day? Humans are one of the few species that do most of their sleeping at night. Introducing a catnap into your day may be very helpful. In fact, studies show that taking a short nap after learning new information may help you remember that information better!

I do not, however, recommend a two-or three-hour nap because napping for several hours during the day can make it hard for you to fall asleep at night. It can also be difficult to wake up after a long nap. According to research by David F. Dinges, napping for as little as 24 minutes improved mental performance. Short naps also don't cause the post-nap groggy feeling that accompanies longer naps.

Another important issue to consider is when to take your nap. You don't want to nap too late in the day. Why? Doing so can make it harder for you to fall asleep at night.

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Sleep well!

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Item #	Grade	Claim	Target	DOK	Item Standard	Evidence Statement
1	7	4	2	4	RH-9	The student will select evidence to support opinions based on evidence collected.

2635


Explain how the table in Source #1 supports information provided in the **two** other sources. Cite evidence and identify the source of each piece of information by title or number.

Key Elements:

Source #2 (The Secret Truth about Napping)

- The human body has an internal clock that operates according to Earth's patterns of day and night.
- When your internal clock is not in sync with your habits, you don't get the amount of good night's sleep you need.
- A deep sleep, whether it is nighttime sleep or a daytime nap, primes the brain to function at a higher level, allowing us to come up with better ideas, find solutions to puzzles more quickly, identify patterns faster, and recall information more accurately.

Source #3 (Ask the Sleep Doctor)

- "I'm a 12-year-old middle school student who usually gets about eight hours of sleep a night. I often feel tired when I get home from school at 3:30..."
- The doctor says:
 - The author of the letter is not getting enough sleep at night for someone his or her age.
 - The most important thing the letter writer can do is sleep more at night.
 - On nights when the letter writer doesn't get enough sleep, napping can help recharge the letter writer's body and increase his or her mental alertness.

Rubric:

(2 points) Response is an evidence-based explanation of how the table supports two other sources with two pieces of evidence from different sources and that explains how each example supports the idea. Student cites the source for each example.

(1 point) Response is an evidence-based explanation of how the table supports two other sources with two pieces of evidence from different sources but doesn't explain how each example supports the idea. Student cites the sources.

Continued on next page

OR

Response is an evidence-based explanation of how the table supports only one of the sources with two pieces of evidence from a single source and that explains how that example supports the idea. Student cites the source.

OR

Response is an evidence-based explanation of how the table supports only one of the sources with only one piece of evidence from a single source and that explains how that example supports the idea. Student cites the source.

OR

Response is an evidence-based explanation of how the table supports two other sources with two pieces of evidence from different sources and that explains how each example supports the idea. Student does not cite sources.

(0 points) Response is an explanation that is incorrect, irrelevant, insufficient, or blank.

Exemplar:

(2 point) The table in Source #1 shows the amount of sleep that people of different age groups need every day to function well. This supports the claim in Source #2 that says everyone has an internal clock that follows day and night patterns. If your internal clock gets out of sync because of your habits, your sleep patterns will get messed up and you don't get the good night's sleep your body needs. In Source #3 a 12-year-old middle school student says she gets 8 hours of sleep a night and feels tired after school. Long naps just make her groggy. She writes to a doctor for advice about how to get more energy. The doctor tells her that a short nap might help, but she really needs to get more sleep at night. The table in Source #1 supports the doctor's advice. According to the table, a school-aged person should get 9-10 hours of sleep a day.

(1 point) The table in Source #1 shows how much sleep people of different ages need every day. In Source #3, a 12-year-old girl writes that she only gets 8 hours of sleep a day and is tired. She wants to know what to do to get more energy. The doctor replies that she should get more sleep at night. The table in Source #1 supports the doctor's advice because, according to the table, a school age person should have 9-10 hours of sleep each night.

(0 points) The table in Source #1 shows that people need to sleep, or they will get tired.

Scoring Note: Students may reference either "he" or "she"; examples from the sources are not always gender-specific.

Item #	Grade	Claim	Target	DOK	Item Standard	Evidence Statement
2	7	4	4	4	W-9	The student will cite evidence to support analyses, arguments, or critiques.

2636


People whose sleep is routinely interrupted might need to pay special attention to their sleep needs. Provide **two** pieces of evidence from different sources that support this claim and explain how each example supports the claim. Cite evidence for each piece of information and identify the source by title or number.

Key Elements:
Source #1 (How Much Sleep is Enough)

- If you routinely lose sleep or choose to sleep less than needed, the sleep loss adds up. The total sleep lost is called your “sleep debt.” You can’t make up your sleep deficiency.
- Some people sleep more on their days off than on work days. This might upset their body’s sleep-wake rhythm.
- Sleeping when your body is ready to sleep is important. Even if you sleep the number of hours recommended for your age group but you have interruptions to your sleep, your body can be affected.

Source #2 (The Secret Truth about Napping)

- If a person’s job causes their sleep to be interrupted, the internal clock can become confused. Then the person has trouble getting enough sleep.
- Astronauts who averaged two hours less sleep than usual when in space became grumpy and had trouble concentrating.
- Doctors in training and emergency-room doctors who work long hours have trouble sleeping enough. Studies showed that even having a short nap improved their mental performance. They made fewer mistakes when they weren’t so tired.

Source #3 (Ask the Sleep Doctor)

- On nights when you don’t get enough sleep, a short nap can recharge your body and increase mental alertness.

Rubric:

(2 points) Response is an evidence-based explanation that provides two pieces of evidence from different sources that support this claim and that explains how each example supports the claim. Student cites the source for each example.

(1 point) Response is an evidence-based explanation that provides two pieces of evidence from different sources that support this claim but doesn’t explain how each example supports the claim. Student cites the sources.

Continued on next page

OR

Response is an evidence-based explanation that provides two pieces of evidence from a single source that supports this claim and that explains how that example supports the claim. Student cites the source.

OR

Response is an evidence-based explanation that provides only one piece of evidence from a single source that support this claim and that explains how that example supports the claim. Student cites the source.

OR

Response is an evidence-based explanation that provides two pieces of evidence from different sources that support this claim and that explains how each example supports the claim. Student does not cite sources.

(0 points) Response is an explanation that is incorrect, irrelevant, insufficient, or blank.

Exemplar:

(2 point) People whose sleep is routinely interrupted might need to pay special attention to their sleep needs. According to Source #1, everyone needs a certain amount of sleep and that you need to sleep when your body is ready to sleep. If you don't get your required amount of sleep each night, you will experience "sleep debt" which can't be made up. Source #2 describes problems people might have when they don't get regular amounts of sleep. They discovered that astronauts in space who lost sleep got more grumpy and concentrated less. Doctors in training and people who work in emergency rooms often don't get regular sleep. They found that when they took naps to help catch up on sleep, they made fewer mistakes. So, it is important to get regular sleep, but if your sleep is interrupted, you might need to take a nap to help your body catch up.

(1 point) People whose sleep is interrupted on a regular basis might become more grumpy, be unable to concentrate, and make more mistakes because they are tired. A nap might help.

(0 points) Everyone needs to sleep on a regular basis.

Item #	Grade	Claim	Target	DOK	Item Standard	Evidence Statement
3	7	4	4	3	RH-1	The student will cite evidence to support analyses, arguments, or critiques.

2637


Click on the boxes to show the claim(s) that each source supports. Some sources will have more than one box selected.

	Source #1: How Much Sleep Is Enough?	Source #2: The Secret Truth about Napping	Source #3: Ask the Sleep Doctor
If you take too long of a nap, you might feel sleepy.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If your sleep patterns interrupt your body's internal clock, you might have trouble getting enough sleep.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A deep sleep helps the brain to operate at a higher level.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Key Elements:

Post-nap sleepiness can happen if you have too long of a nap.

1. Source #3

If your sleep patterns interrupt your body's internal clock, you might have trouble getting enough sleep.

1. Source #1
2. Source #2

A deep sleep helps the brain to operate at a higher level.

1. Source #2

Continued on next page

Rubric:

- (1 point) 4 cells completed correctly
(0 points) Fewer than 4 cells completed correctly, any cell incorrect, or blank.

Item #	Grade	Claim	Target	DOK	Item Standard	Evidence Statement
4	7	2	4	4	W-2b	The students will apply a variety of strategies when writing one or more paragraphs of informational/explanatory text: organizing ideas by stating and maintaining a focus (thesis)/tone, providing appropriate transitional strategies for coherence, developing a topic including relevant supporting evidence/vocabulary and elaboration, or providing a conclusion that is appropriate to purpose and audience and follows from and supports the information or explanation presented.

2638


Student Directions

Napping Explanatory Performance Task

Part 2

You will now review your notes and sources, and plan, draft, revise, and edit your writing. You may use your notes and refer to the sources. Now read your assignment and the information about how your writing will be scored; then begin your work.

Your Assignment:

Now that you have completed research on the topic of sleep, the journalism club advisor has asked you to write an explanatory article about sleep and naps for the next issue of the school newspaper. The audience for your article will be other students, teachers, and parents.

Using more than one source, develop a thesis/controlling idea to explain about sleep and naps. Once you have a thesis/controlling idea, select the most relevant information from more than one source to support your thesis/controlling idea. Then, write a multi-paragraph explanatory article explaining your thesis/controlling idea. Clearly organize your article and elaborate your ideas. Unless quoting directly from the sources, use your own words. Be sure to reference the source title or number when quoting or paraphrasing details or facts from the sources.

Explanatory Article Scoring:

Your explanatory article will be scored using the following:

- 1. Organization/purpose:** How well did you state your thesis/controlling idea, and maintain your thesis/controlling idea with a logical progression of ideas from beginning to end? How well did you narrow your thesis/controlling idea so you can develop and elaborate the conclusion? How well did you consistently use a variety of transitions? How effective was your introduction and your conclusion?
- 2. Evidence/elaboration:** How well did you integrate relevant and specific information from the sources? How well did you elaborate your ideas? How well did

you clearly state ideas using precise language that is appropriate for your audience and purpose?

3. Conventions: How well did you follow the rules of grammar usage, punctuation, capitalization and spelling?

Now begin work on your explanatory article. Manage your time carefully so that you can

- plan your multi-paragraph explanatory article.
- write your multi-paragraph explanatory article.
- revise and edit the final draft of your multi-paragraph explanatory article.

Word-processing tools and spell check are available to you.

For Part 2, you are being asked to write a multi-paragraph explanatory article, so please be as thorough as possible. Type your response in the space provided. The box will expand as you type.

Remember to check your notes and your prewriting/planning as you write and then revise and edit your explanatory article.

4-Point Explanatory Performance Task Writing Rubric (Grades 6–11)					
Score	4	3	2	1	NS
Organization/Purpose	<p>The response has a clear and effective organizational structure, creating a sense of unity and completeness. The organization is fully sustained between and within paragraphs. The response is consistently and purposefully focused:</p> <ul style="list-style-type: none"> thesis/controlling idea of a topic is clearly communicated, and the focus is strongly maintained for the purpose and audience consistent use of a variety of transitional strategies to clarify the relationships between and among ideas effective introduction and conclusion logical progression of ideas from beginning to end; strong connections between and among ideas with some syntactic variety 	<p>The response has an evident organizational structure and a sense of completeness. Though there may be minor flaws, they do not interfere with the overall coherence. The organization is adequately sustained between and within paragraphs. The response is generally focused:</p> <ul style="list-style-type: none"> thesis/controlling idea of a topic is clear, and the focus is mostly maintained for the purpose and audience adequate use of transitional strategies with some variety to clarify the relationships between and among ideas adequate introduction and conclusion adequate progression of ideas from beginning to end; adequate connections between and among ideas 	<p>The response has an inconsistent organizational structure. Some flaws are evident, and some ideas may be loosely connected. The organization is somewhat sustained between and within paragraphs. The response may have a minor drift in focus:</p> <ul style="list-style-type: none"> thesis/controlling idea of a topic may be somewhat unclear, or the focus may be insufficiently sustained for the purpose and/or audience inconsistent use of transitional strategies and/or little variety introduction or conclusion, if present, may be weak uneven progression of ideas from beginning to end; and/or formulaic; inconsistent or unclear connections between and among ideas 	<p>The response has little or no discernible organizational structure. The response may be related to the topic but may provide little or no focus:</p> <ul style="list-style-type: none"> thesis/controlling idea may be confusing or ambiguous; response may be too brief or the focus may drift from the purpose and/or audience few or no transitional strategies are evident introduction and/or conclusion may be missing frequent extraneous ideas may be evident; ideas may be randomly ordered or have an unclear progression 	<ul style="list-style-type: none"> Insufficient (includes copied text) In a language other than English Off-topic Off-purpose

4-Point Explanatory Performance Task Writing Rubric (Grades 6–11)					
Score	4	3	2	1	NS
Evidence/Elaboration	<p>The response provides thorough elaboration of the support/evidence for the thesis/controlling idea that includes the effective use of source material. The response clearly and effectively develops ideas, using precise language:</p> <ul style="list-style-type: none"> comprehensive evidence (facts and details) from the source material is integrated, relevant, and specific clear citations or attribution to source material effective use of a variety of elaborative techniques* vocabulary is clearly appropriate for the audience and purpose effective, appropriate style enhances content 	<p>The response provides adequate elaboration of the support/evidence for the thesis/controlling idea that includes the use of source material. The response adequately develops ideas, employing a mix of precise and more general language:</p> <ul style="list-style-type: none"> adequate evidence (facts and details) from the source material is integrated and relevant, yet may be general adequate use of citations or attribution to source material adequate use of some elaborative techniques* vocabulary is generally appropriate for the audience and purpose generally appropriate style is evident 	<p>The response provides uneven, cursory elaboration of the support/evidence for the thesis/controlling idea that includes uneven or limited use of source material. The response develops ideas unevenly, using simplistic language:</p> <ul style="list-style-type: none"> some evidence (facts and details) from the source material may be weakly integrated, imprecise, repetitive, vague, and/or copied weak use of citations or attribution to source material weak or uneven use of elaborative techniques*; development may consist primarily of source summary vocabulary use is uneven or somewhat ineffective for the audience and purpose inconsistent or weak attempt to create appropriate style 	<p>The response provides minimal elaboration of the support/evidence for the thesis/controlling idea that includes little or no use of source material. The response is vague, lacks clarity, or is confusing:</p> <ul style="list-style-type: none"> evidence (facts and details) from the source material is minimal, irrelevant, absent, incorrectly used, or predominantly copied insufficient use of citations or attribution to source material minimal, if any, use of elaborative techniques* vocabulary is limited or ineffective for the audience and purpose little or no evidence of appropriate style 	<ul style="list-style-type: none"> Insufficient (includes copied text) In a language other than English Off-topic Off-purpose

*Elaborative techniques may include the use of personal experiences that support the controlling idea.

2-Point Explanatory Performance Task Writing Rubric (Grades 6-11)				
Score	2	1	0	NS
Conventions	<p>The response demonstrates an adequate command of conventions:</p> <ul style="list-style-type: none"> adequate use of correct sentence formation, punctuation, capitalization, grammar usage, and spelling 	<p>The response demonstrates a partial command of conventions:</p> <ul style="list-style-type: none"> limited use of correct sentence formation, punctuation, capitalization, grammar usage, and spelling 	<p>The response demonstrates little or no command of conventions:</p> <ul style="list-style-type: none"> infrequent use of correct sentence formation, punctuation, capitalization, grammar usage, and spelling 	<ul style="list-style-type: none"> Insufficient (includes copied text) In a language other than English Off-topic Off-purpose

Holistic Scoring:

- Variety:** A range of errors includes sentence formation, punctuation, capitalization, grammar usage, and spelling
- Severity:** Basic errors are more heavily weighted than higher-level errors.
- Density:** The proportion of errors to the amount of writing done well. This includes the ratio of errors to the length of the piece.

1.

Enter the value of $\frac{3}{4} + \frac{7}{12} - (-4)$.

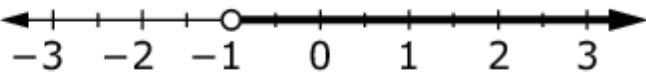
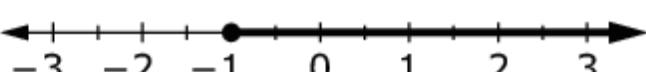
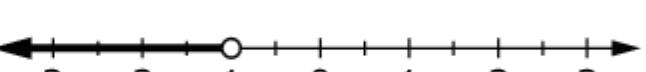
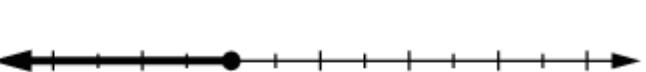
2.

Mark buys a wooden board that is $7\frac{1}{2}$ feet long. The cost of the wooden board is \$0.50 per foot, including tax.

Enter the total cost, in dollars, of the wooden board.

3.

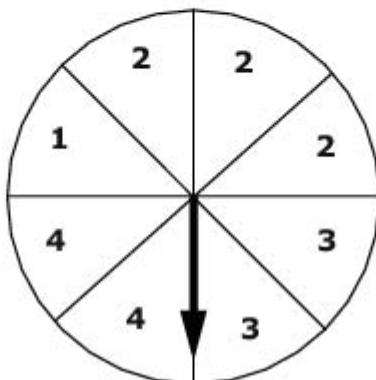
Which number line shows the solution to the inequality $-3x - 5 < -2$?

- (A) 
- (B) 
- (C) 
- (D) 

4.

The spinner has 8 equal-sized sections, each labeled 1, 2, 3, or 4.

The arrow on the spinner is spun.



What is the probability of the arrow stopping on a section labeled with a 2?

- (A) $\frac{1}{4}$
- (B) $\frac{1}{8}$
- (C) $\frac{3}{8}$
- (D) $\frac{3}{4}$

5.

Enter the value of the expression.

$$2.3 \bullet (4 + 12)$$

6.

Enter the value of p so the expression $\frac{5}{6} - \frac{1}{3}n$ is equivalent to $p(5 - 2n)$.

7.

A representative sample of 50 students from a high school is surveyed. Each student is asked what science class he or she is taking.

This table shows the responses.

Science Class	Number of Students
Physics	6
Chemistry	10
Biology	18
Earth Science	4
Health Science	12

Select **all** of the statements that are valid based on the survey results.

- About 20% of students at the high school are taking Chemistry.
- About twice as many students are taking Health Science than are taking Physics.
- For every 150 students we could predict that at least 18 of the students are taking Physics.
- For every 25 students we could predict that at least 4 of the students are taking Earth Science.

8.

In the given equation, a , b , and c are nonzero rational numbers.

$$a \cdot b = c$$

Given this equation, enter one number from the choices below into each box to complete four true equations.

- a
- b
- c
- a
- b
- c

$$-a \cdot \boxed{} = c$$

$$\boxed{} \cdot \boxed{} = -c$$

$$\frac{\boxed{}}{-b} = a$$

$$\frac{\boxed{}}{\boxed{}} = -a$$

9.

George earns \$455 per week. George receives a 20% raise.

How can George calculate his new weekly pay rate?

Select **all** calculations that will result in George's new weekly pay rate.

- divide \$455 by 0.20
- divide \$455 by 1.20
- multiply \$455 by 0.20
- multiply \$455 by 1.20
- solve for x : $\frac{x}{455} = \frac{120}{100}$
- solve for x : $\frac{455}{x} = \frac{20}{100}$

10.

Alex claims that when $\frac{1}{4}$ is divided by a fraction, the result will be greater than $\frac{1}{4}$.

To convince Alex that this statement is only sometimes true:

Part A: Enter one digit into each box to create an expression that is greater than $\frac{1}{4}$.

Part B: Enter one digit into each box to create an expression that is **not** greater than $\frac{1}{4}$.

Part A: Expression greater than $\frac{1}{4}$

$$\frac{1}{4} \div \frac{\square}{\square}$$

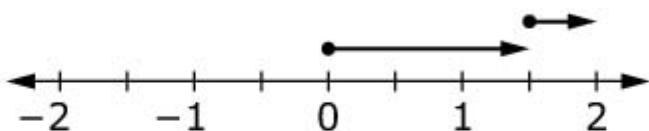
Part B: Expression not greater than $\frac{1}{4}$

$$\frac{1}{4} \div \frac{\square}{\square}$$

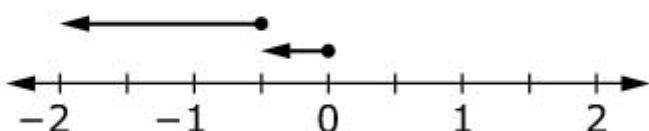
11.

Which number line model represents the sum of $1\frac{1}{2} + (-\frac{1}{2})$?

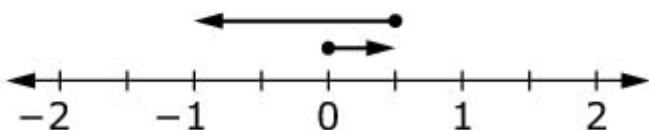
(A)



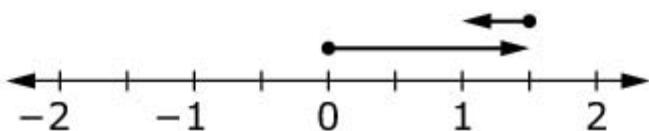
(B)



(C)



(D)



12.

Which expression is equivalent to $-8(10x - 3)$?

- (A) $-80x + 24$
- (B) $-80x - 24$
- (C) $-80x - 3$
- (D) $-80x + 3$

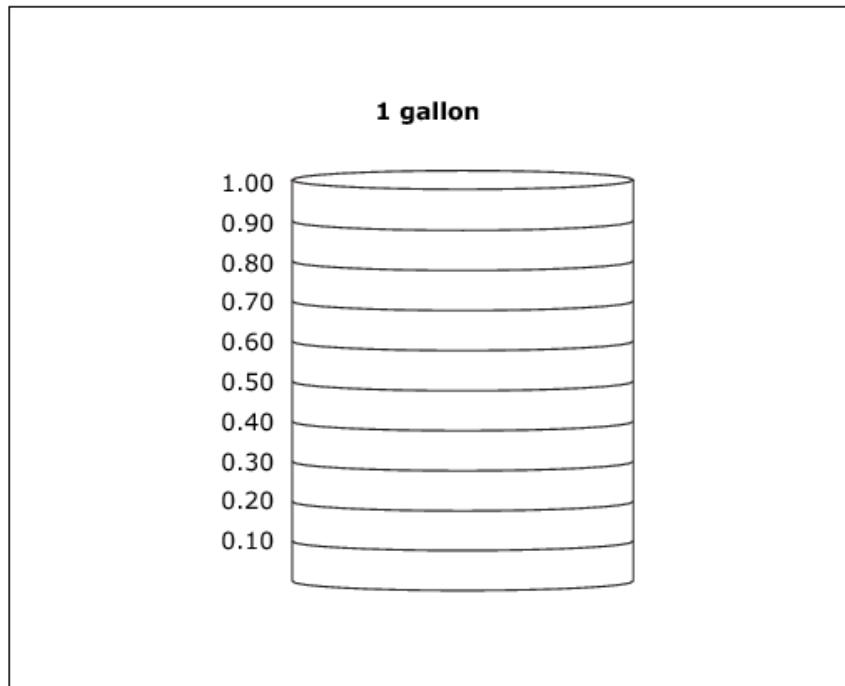
13.

Tim makes 80 gallons of paint by mixing 48 gallons of gray paint with 32 gallons of white paint.

What part of every gallon is gray paint?

The model represents 1 gallon of mixed paint.

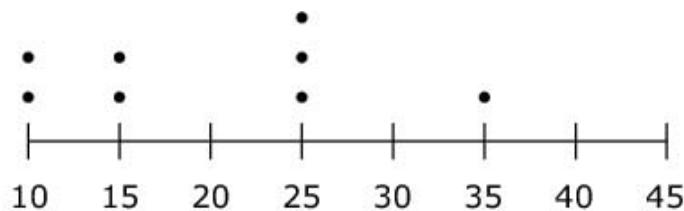
Select the bars to show how much of the gallon is gray paint.



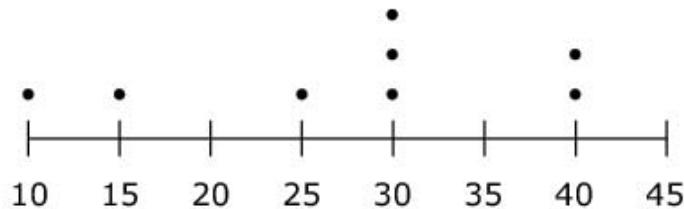
14.

Mr. Anthony wants to know how some student athletes are improving in the number of push-ups they can do.

These dot plots show the number of push-ups each student was able to do last month and this month.



Number of Push-ups Last Month



Number of Push-ups This Month

What is the increase in the mean number of push-ups from last month to this month?

15.

Enter the value of n so the expression $(-y + 5.3) + (7.2y - 9)$ is equivalent to $6.2y + n$.

16.

This table shows a proportional relationship between x and y .

x	y
4	48
5	60
8	96

Find the constant of proportionality (r).

Using the value for r , enter an equation in the form of $y = rx$.

17.

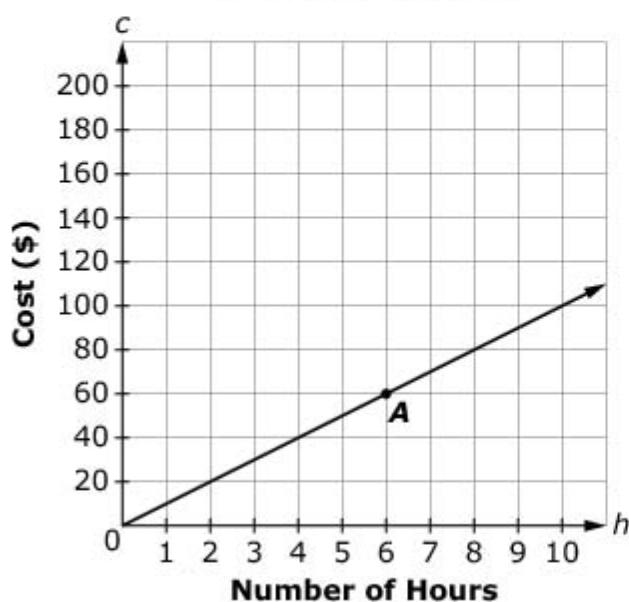
Dave buys a baseball for \$15 plus an 8% tax. Mel buys a football for \$20 plus an 8% tax.

Enter the difference, in dollars, of the amounts Dave and Mel pay, including tax. Round your answer to the nearest cent.

18.

This graph shows a proportional relationship between the number of hours (h) a business operates and the total cost (c) of electricity.

Cost of Electricity



Select True or False for each statement about the graph.

	True	False
Point A represents the total cost of electricity when operating the business for 6 hours.	<input type="checkbox"/>	<input type="checkbox"/>
The total cost of electricity is \$8 when operating the business for 80 hours.	<input type="checkbox"/>	<input type="checkbox"/>
The total cost of electricity is \$10 when operating the business for 1 hour.	<input type="checkbox"/>	<input type="checkbox"/>

19.

Determine whether each statement is true for all cases, true for some cases, or not true for any case.

	True for all cases	True for some cases	Not true for any cases
Two vertical angles form a linear pair.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If two angles are supplementary and congruent, then they are right angles.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The sum of two adjacent angles is 90° .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The measure of an exterior angle of a triangle is greater than every interior angle of the triangle.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

20.

The entry fee to the fair is \$4.00. Each ride requires a ticket that costs \$0.50. Heidi spent a total of \$12.00.

How many tickets did Heidi purchase?

- (A) 6
- (B) 16
- (C) 24
- (D) 32

21.

Shelly incorrectly solves the equation $\frac{1}{2}(c + 6) = 7$. Her work is shown.

Part A:

Circle **all** the steps that show an error based on the equation in the previous step.

Part B:

Add a point to show the correct solution of the given equation.

Part A:

$$\frac{1}{2}(c + 6) = 7$$

Step 1: $\frac{1}{2}c + 6 = 7$

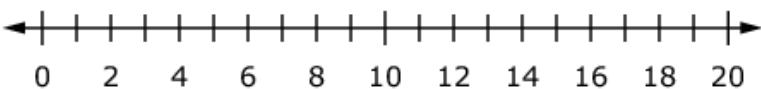
Step 2: $\frac{1}{2}c = 7 + 6$

Step 3: $\frac{1}{2}c = 13$

Step 4: $c = 13 \div 2$

Step 5: $c = 6\frac{1}{2}$

Part B: Correct solution



22.

David uses $\frac{1}{2}$ cup of apple juice for every $\frac{1}{4}$ cup of cranberry juice to make a fruit drink.

Enter the number of cups of apple juice David uses for 1 cup of cranberry juice.

23.

A store is having a sale. Each customer receives either a 15% discount on purchases under \$100 or a 20% discount on purchases of \$100 or more. Kelly is purchasing some clothes for \$96.60 before the discount. She decides to buy the fewest packs of gum that will increase her purchase to over \$100. The price of each pack of gum is \$0.79.

After the discount, how much less will Kelly pay by purchasing the clothes and the gum instead of purchasing only the clothes? (Assume there is no sales tax to consider.)

- (A) \$1.05
- (B) \$1.67
- (C) \$3.69
- (D) \$3.87

24.

Aimee has \$10.00 to spend on school supplies. The following table shows the price of each item in the school store. No sales tax is charged on these items.

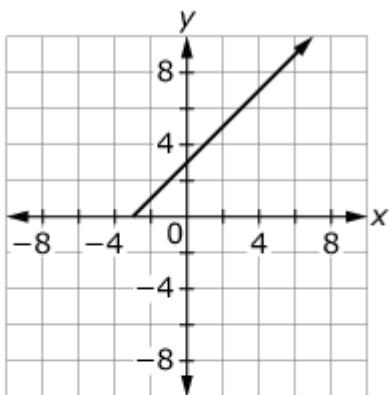
Item	Price
Eraser	\$0.89
Folder	\$1.29
Notebook	\$2.35
Pen	\$0.70

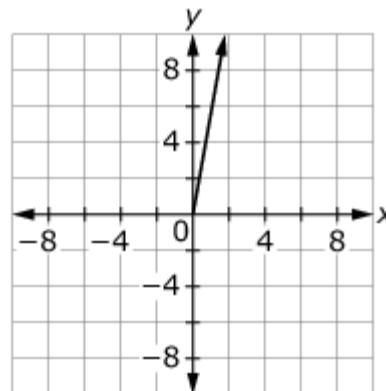
Determine if Aimee can buy the combination of items with her \$10.00. Select Yes or No for each combination of items.

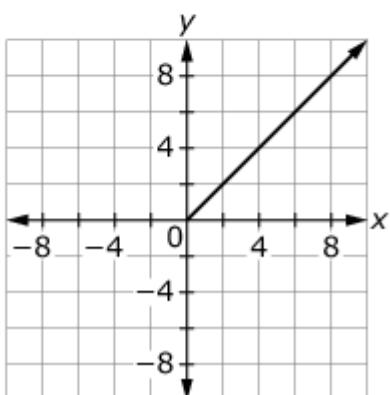
	Yes	No
5 folders and 5 pens	<input type="checkbox"/>	<input type="checkbox"/>
6 pens and 6 erasers	<input type="checkbox"/>	<input type="checkbox"/>
1 pen and 4 notebooks	<input type="checkbox"/>	<input type="checkbox"/>
3 folders and 7 erasers	<input type="checkbox"/>	<input type="checkbox"/>
4 folders and 2 notebooks	<input type="checkbox"/>	<input type="checkbox"/>

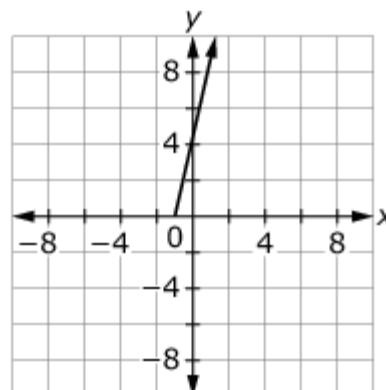
25.

Select **all** the graphs that show a proportional relationship between x and y .









26.

A scale factor of 3.5 maps Figure A onto Figure B.

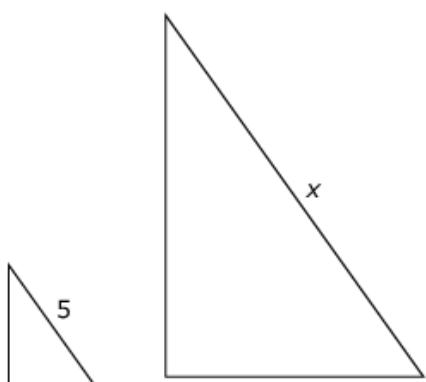


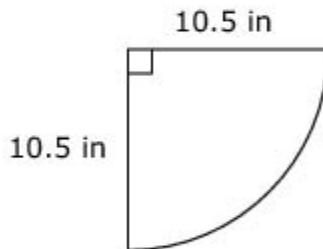
Figure A

Figure B

Enter the value of x .

27.

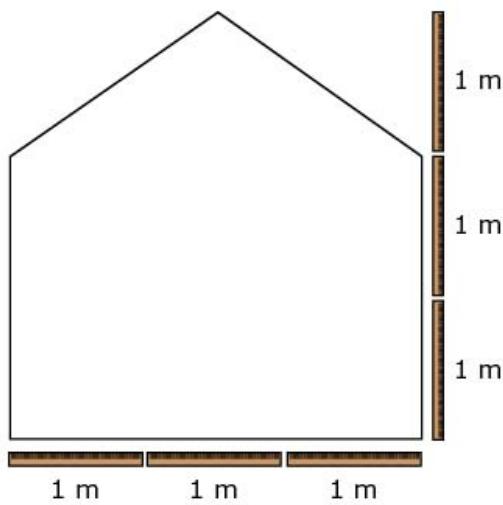
A corner shelf is $\frac{1}{4}$ of a circle and has a radius of 10.5 inches.



Enter the area of the shelf, in square inches. Round your answer to the nearest hundredth.

28.

John needs to paint one wall in his school. He knows that 1 can of paint covers an area of 24 square feet. John uses a meter stick to measure the dimensions of the wall as shown.



[1 meter = approximately 39 inches]

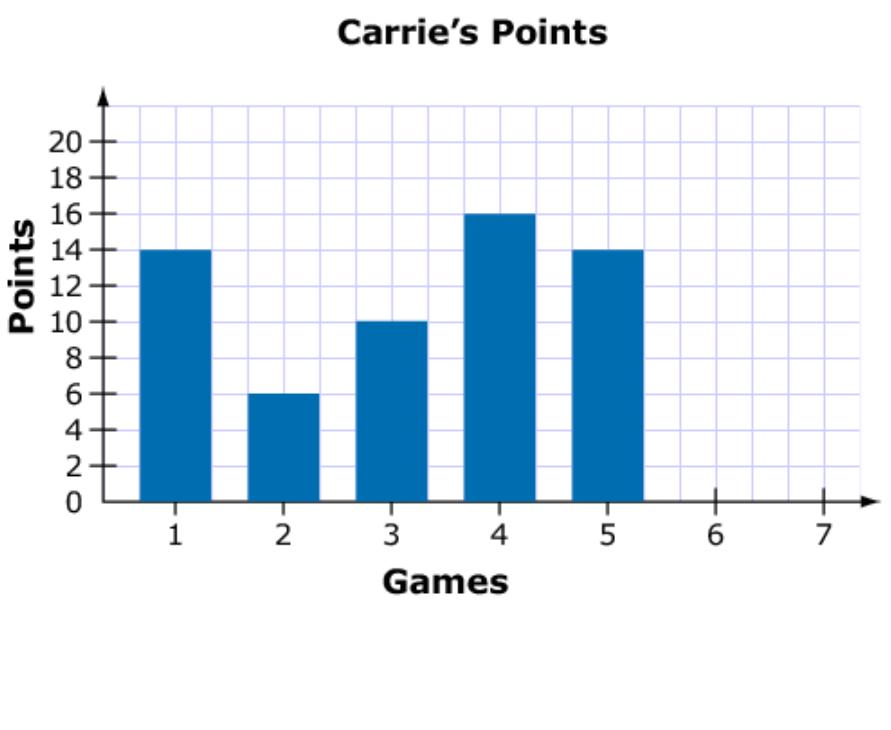
What is the **fewest** number of cans of paint John can use to paint the wall?

29.

Carrie's basketball team has played 5 games. The number of points Carrie scored in each game is shown in the bar graph.

Determine possible point totals for games 6 and 7 so that the range of the data set increases, but the mean and median stay the same.

Enter point totals above the labels 6 and 7 to complete the bar graph.





Smarter Balanced Assessment Consortium:

Practice Test Scoring Guide
Grade 7 Mathematics

05/14/2014

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About the Practice Test Scoring Guides

The Smarter Balanced Mathematics Practice Test Scoring Guides provide details about the items, student response types, correct responses, and related scoring considerations for the Smarter Balanced Practice Test items. The items selected for the Practice Test are designed to reflect

- a broad coverage of claims and targets that closely mirror the summative blueprint.
- a range of student response types.
- a breadth of difficulty levels across the items, ranging from easier to more difficult items.
- a sample of performance tasks with open-ended response types that allow students to demonstrate knowledge related to critical thinking and application.

It is important to note that all student response types are not fully represented on every practice test, but a distribution can be observed across all the practice tests. The items presented are reflective of refinements and adjustments to language based on pilot test results and expert recommendations from both content and accessibility perspectives.

Within this guide, each item is presented with the following information¹:

- Claim
- Domain
- Target²
- Depth of Knowledge (DOK)
- Common Core State Standards for Mathematical Content (CONTENT)
- Common Core State Standards for Mathematical Practice (MP)
- Answer key or exemplar
- Static presentation of the item
- Static presentation of student response field(s)
- Rubric and applicable score points for each item

The following items are representative of the kinds of items that students can expect to experience when taking the Computer Adaptive Test (CAT) portion of the summative assessment for Grade 7. A separate document is available that provides a Grade 7 sample performance task and scoring guide.

¹ Most of these terms (Claim, Domain, Target, DOK, etc.) are defined in various other Smarter Balanced documents, as well as the Common Core State Standards for Mathematics. Refer to the *Content Specifications for the Summative Assessment of the Common Core State Standards for Mathematics* for more information.

² When more than one target is presented, the first one listed is considered the primary target for the item.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#1	1	NS	B	1	7.NS.A.1d	N/A	$5\frac{1}{3}$

1832


Enter the value of $\frac{3}{4} + \frac{7}{12} - (-4)$.

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➡
⟲
⟳
✖

1	2	3	+	-	*	÷	
4	5	6	<	≤	=	≥	>
7	8	9	÷	□ [□]	()		π
0	.	-					

Key: $5\frac{1}{3}$

Rubric: (1 point) Student enters a correct value.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#2	1	NS	B	1	7.NS.A.3	N/A	3.75

1833


Mark buys a wooden board that is $7\frac{1}{2}$ feet long. The cost of the wooden board is \$0.50 per foot, including tax.

Enter the total cost, in dollars, of the wooden board.

1	2	3
4	5	6
7	8	9
0	.	-

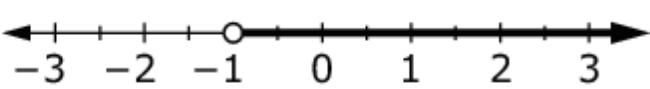
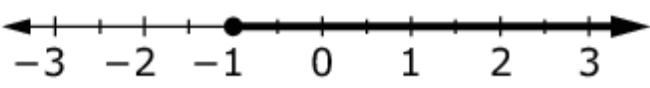
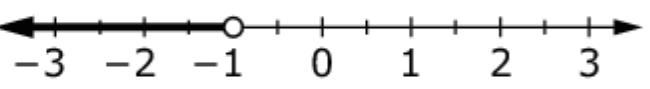
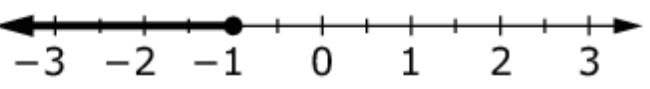
Key: 3.75

Rubric: (1 point) Student enters the correct cost of the wooden board.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#3	1	EE	D	1	7.EE.B.4b	N/A	A

1838


Which number line shows the solution to the inequality $-3x - 5 < -2$?

- (A) 
- (B) 
- (C) 
- (D) 

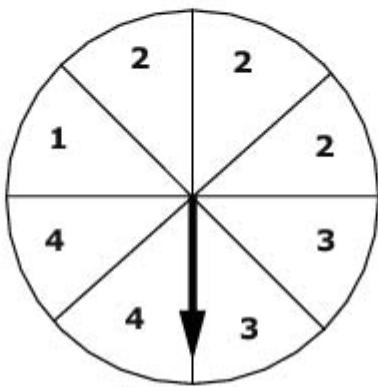
Key: A

Rubric: (1 point) Student selects the correct number line.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#4	1	SP	I	1	7.SP.C.5	N/A	C

1881


The spinner has 8 equal-sized sections, each labeled 1, 2, 3, or 4.
 The arrow on the spinner is spun.



What is the probability of the arrow stopping on a section labeled with a 2?

- (A) $\frac{1}{4}$
- (B) $\frac{1}{8}$
- (C) $\frac{3}{8}$
- (D) $\frac{3}{4}$

Key: C

Rubric: (1 point) Student selects the correct probability.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#5	1	EE	D	1	7.EE.B.3	N/A	36.8

1983


Enter the value of the expression.

$$2.3 \bullet (4 + 12)$$

← → ↶ ↷ ✖

1	2	3
4	5	6
7	8	9
0	.	-

Key: 36.8 or its equivalent

Rubric: (1 point) Student enters a correct value.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#6	1	EE	C	1	7.EE.A.1	7	$\frac{1}{6}$

1837


Enter the value of p so the expression $\frac{5}{6} - \frac{1}{3}n$ is equivalent to $p(5 - 2n)$.

← → ↶ ↷ ✖

1	2	3	+	-	*	÷	
4	5	6	<	≤	=	≥	>
7	8	9	$\frac{\Box}{\Box}$	\Box^{\Box}	()		π
0	.	-					

Key: $\frac{1}{6}$
Rubric: (1 point) Student enters a correct value.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#7	1	SP	G	2	7.SP.A.1	N/A	See exemplar

1879


A representative sample of 50 students from a high school is surveyed. Each student is asked what science class he or she is taking.

This table shows the responses.

Science Class	Number of Students
Physics	6
Chemistry	10
Biology	18
Earth Science	4
Health Science	12

Select **all** of the statements that are valid based on the survey results.

- About 20% of students at the high school are taking Chemistry.
- About twice as many students are taking Health Science than are taking Physics.
- For every 150 students we could predict that at least 18 of the students are taking Physics.
- For every 25 students we could predict that at least 4 of the students are taking Earth Science.

Exemplar:
(shown at right)

- About 20% of students at the high school are taking Chemistry.
- About twice as many students are taking Health Science than are taking Physics.
- For every 150 students we could predict that at least 18 of the students are taking Physics.
- For every 25 students we could predict that at least 4 of the students are taking Earth Science.

Rubric: (1 point) Student selects the first, second, and third statements.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#8	3	NS	C	3	7.NS.A.2	2, 7	See exemplar

1889


In the given equation, a , b , and c are nonzero rational numbers.

$$a \cdot b = c$$

Given this equation, drag one number into each box to complete four true equations.

Delete

a
 b
 c
 $-a$
 $-b$
 $-c$

$$-a \cdot \boxed{} = c$$

$$\boxed{} \cdot \boxed{} = -c$$

$$\frac{\boxed{}}{-b} = a$$

$$\frac{\boxed{}}{\boxed{}} = -a$$

Exemplar: (shown at right)

$$-a \cdot \boxed{-b} = c$$

Rubric: (2 points) Student creates four true equations. Other correct responses for second and fourth equations include:

$$\boxed{a} \cdot \boxed{-b} = -c$$

$$-a \cdot b = -c$$

OR

$$\frac{c}{-b} = -a$$

(1 point) Student creates two or three true equations.

$$\frac{\boxed{-c}}{-b} = a$$

$$\frac{\boxed{-c}}{\boxed{b}} = -a$$

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#9	3	RP	D	2	7.RP.A.2, 6.RP.A.3c	1, 2	See exemplar

1883


George earns \$455 per week. George receives a 20% raise.

How can George calculate his new weekly pay rate?

Select **all** calculations that will result in George's new weekly pay rate.

- divide \$455 by 0.20
- divide \$455 by 1.20
- multiply \$455 by 0.20
- multiply \$455 by 1.20
- solve for x : $\frac{x}{455} = \frac{120}{100}$
- solve for x : $\frac{455}{x} = \frac{20}{100}$

Exemplar: (shown at right)

- divide \$455 by 0.20
- divide \$455 by 1.20
- multiply \$455 by 0.20
- multiply \$455 by 1.20
- solve for x : $\frac{x}{455} = \frac{120}{100}$
- solve for x : $\frac{455}{x} = \frac{20}{100}$

Rubric: (1 point) Student selects the fourth and fifth options.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#10	3	NS	A	2	7.NS.A.2c, 6.NS.A.1	2, 3, 7	See exemplar

1877


Alex claims that when $\frac{1}{4}$ is divided by a fraction, the result will be greater than $\frac{1}{4}$.

To convince Alex that this statement is only sometimes true:

Part A: Drag one digit into each box to create an expression that is greater than $\frac{1}{4}$.

Part B: Drag one digit into each box to create an expression that is **not** greater than $\frac{1}{4}$.

- 1
2
3
4
5
6
7
8
9

Delete
Part A: Expression greater than $\frac{1}{4}$

$$\frac{1}{4} \div \frac{\square}{\square}$$

Part B: Expression not greater than $\frac{1}{4}$

$$\frac{1}{4} \div \frac{\square}{\square}$$

Exemplar: (shown at right)

Rubric: (2 points)

Part A: Student creates a fraction where the denominator is greater than the numerator. **AND**

Part B: Student creates a fraction where the numerator is greater than or equal to the denominator.

(1 point)

Part A: Student creates a fraction where the denominator is greater than the numerator. **OR**

Part B: Student creates a fraction where the numerator is greater than or equal to the denominator.

- 1
2
3
4
5
6
7
8
9

Delete
Part A: Expression greater than $\frac{1}{4}$

$$\frac{1}{4} \div \frac{1}{7}$$

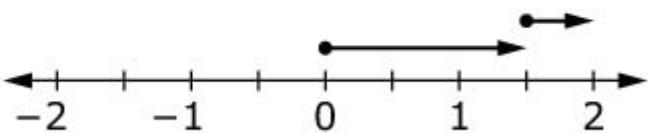
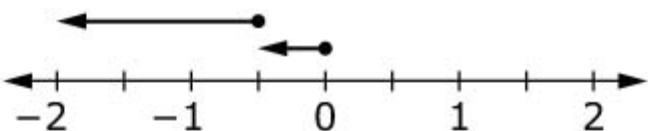
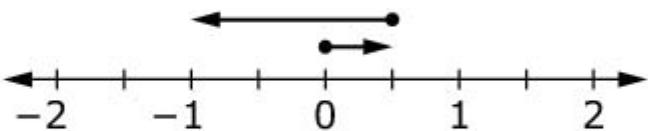
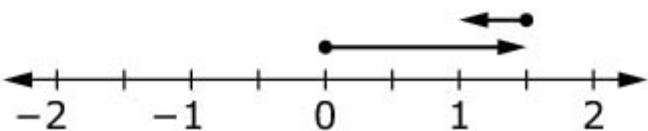
Part B: Expression not greater than $\frac{1}{4}$

$$\frac{1}{4} \div \frac{7}{1}$$

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#11	1	NS	B	1	7.NS.A.1b, 7.NS.A.1c	N/A	D

1831


Which number line model represents the sum of $1\frac{1}{2} + (-\frac{1}{2})$?

(A)

(B)

(C)

(D)

Key: D

Rubric: (1 point) Student selects the correct number line.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#12	1	EE	C	1	7.EE.A.1	N/A	A

1836


Which expression is equivalent to
 $-8(10x - 3)$?

- (A) $-80x + 24$
- (B) $-80x - 24$
- (C) $-80x - 3$
- (D) $-80x + 3$

Key: A

Rubric: (1 point) Student selects the correct expression.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#13	2	RP	A	2	7.RP.A.3	1, 2	See exemplar

1876



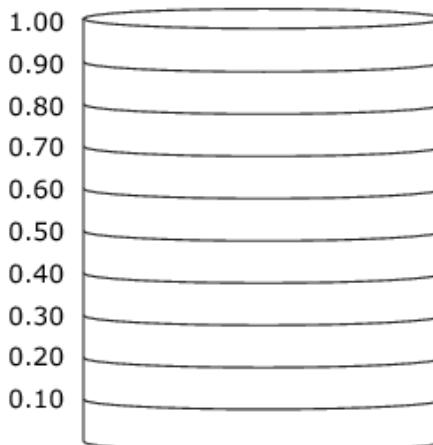
Tim makes 80 gallons of paint by mixing 48 gallons of gray paint with 32 gallons of white paint.

What part of every gallon is gray paint?

The model represents 1 gallon of mixed paint.

Select the bars to show how much of the gallon is gray paint.

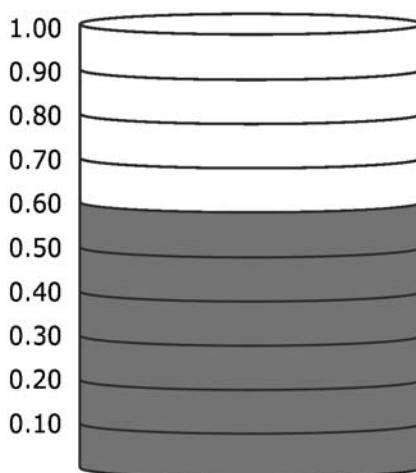
1 gallon



Exemplar: (shown at right)

Rubric: (1 point) Student selects enough bars to indicate 0.60.

1 gallon

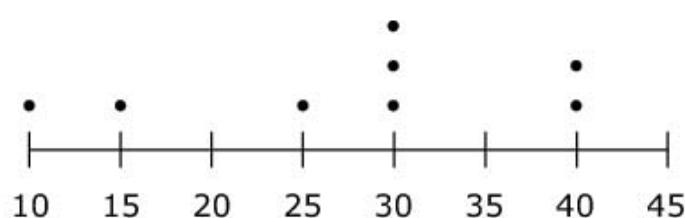
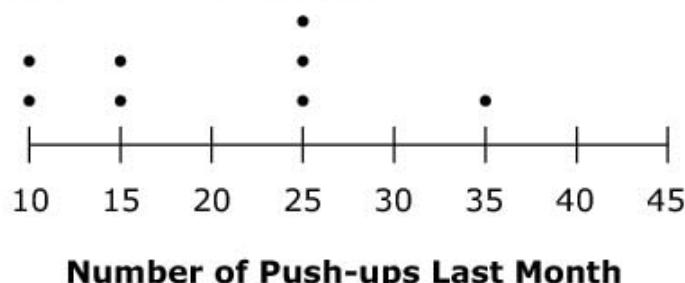


Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#14	1	SP	H	2	7.SP.B.3	N/A	7.5

1880


Mr. Anthony wants to know how some student athletes are improving in the number of push-ups they can do.

These dot plots show the number of push-ups each student was able to do last month and this month.



What is the increase in the mean number of push-ups from last month to this month?

← → ← → ✕

1	2	3
4	5	6
7	8	9
0	.	-

Key: 7.5 or its equivalent

Rubric: (1 point) Student enters a correct value for the mean number.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#15	1	EE	C	1	7.EE.A.1	7	-3.7

1835


Enter the value of n so the expression $(-y + 5.3) + (7.2y - 9)$ is equivalent to $6.2y + n$.

← → ↶ ↷ ✖

1	2	3
4	5	6
7	8	9
0	.	-

Key: -3.7 or its equivalent

Rubric: (1 point) Student enters a correct value of n .

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#16	1	RP	A	2	7.RP.A.2b, 7.RP.A.2c	N/A	See exemplar

1826


This table shows a proportional relationship between x and y .

x	y
4	48
5	60
8	96

Find the constant of proportionality (r).

Using the value for r , enter an equation in the form of $y = rx$.

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1	2	3	x	y
4	5	6	$+$	$-$
7	8	9	$*$	\div
0	.	-	$<$	\leq
			$=$	\geq
			$>$	
			$\frac{\Box}{\Box}$	\Box^{\Box}
			()	
			π	

Key: $y = 12x$ or an equivalent equation

Rubric: (1 point) Student enters a correct equation.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#17	1	RP	A	2	7.RP.A.3	N/A	5.40

1828


Dave buys a baseball for \$15 plus an 8% tax. Mel buys a football for \$20 plus an 8% tax.

Enter the difference, in dollars, of the amounts Dave and Mel pay, including tax. Round your answer to the nearest cent.

← → ← → ← ×

1	2	3
4	5	6
7	8	9
0	.	-

Key: 5.40

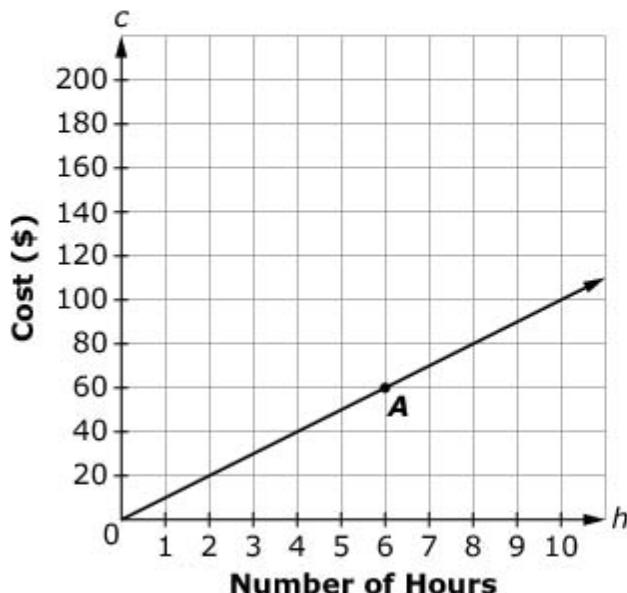
Rubric: (1 point) Student enters the correct amount.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#18	1	RP	A	2	7.RP.A.2	N/A	See exemplar

1827


This graph shows a proportional relationship between the number of hours (h) a business operates and the total cost (c) of electricity.

Cost of Electricity



Select True or False for each statement about the graph.

	True	False
Point A represents the total cost of electricity when operating the business for 6 hours.	<input type="checkbox"/>	<input type="checkbox"/>
The total cost of electricity is \$8 when operating the business for 80 hours.	<input type="checkbox"/>	<input type="checkbox"/>
The total cost of electricity is \$10 when operating the business for 1 hour.	<input type="checkbox"/>	<input type="checkbox"/>

Exemplar: (shown at right)

Rubric: (1 point) Student correctly selects true or false for each statement (TFT).

True	False
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#19	3	G	G	3	7.G.B.5	2	See exemplar

1842


Determine whether each statement is true for all cases, true for some cases, or not true for any case.

	True for all cases	True for some cases	Not true for any cases
Two vertical angles form a linear pair.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If two angles are supplementary and congruent, then they are right angles.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The sum of two adjacent angles is 90° .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The measure of an exterior angle of a triangle is greater than every interior angle of the triangle.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Exemplar: (shown below)

	True for all cases	True for some cases	Not true for any cases
Two vertical angles form a linear pair.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If two angles are supplementary and congruent, then they are right angles.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The sum of two adjacent angles is 90° .	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The measure of an exterior angle of a triangle is greater than every interior angle of the triangle.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Rubric: (1 point) Student selects the correct option for each statement.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#20	1	EE	D	1	7.EE.B.4a	1	B

1875


The entry fee to the fair is \$4.00. Each ride requires a ticket that costs \$0.50. Heidi spent a total of \$12.00.

How many tickets did Heidi purchase?

- (A) 6
- (B) 16
- (C) 24
- (D) 32

Key: B

Rubric: (1 point) Student selects the correct option.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#21	3	EE	E	2	7.EE.B.3	6	See exemplar

1878


Shelly incorrectly solves the equation $\frac{1}{2}(c + 6) = 7$. Her work is shown.

Part A:

Select **all** the steps that show an error based on the equation in the previous step.

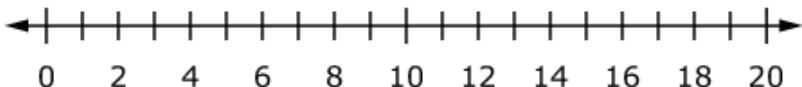
Part B:

Use the Add Point tool to show the correct solution of the given equation.


Part A:

$$\frac{1}{2}(c + 6) = 7$$

- Step 1: $\frac{1}{2}c + 6 = 7$
- Step 2: $\frac{1}{2}c = 7 + 6$
- Step 3: $\frac{1}{2}c = 13$
- Step 4: $c = 13 \div 2$
- Step 5: $c = 6\frac{1}{2}$

Part B: Correct solution

Exemplar: (shown on right)

Rubric:

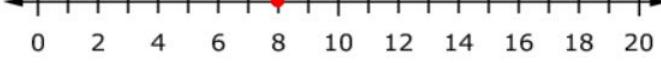
(2 points) Student selects the correct steps that show an error **and** places a point at 8.

(1 point) Student selects the correct steps that show an error **or** places a point at 8.


Part A:

$$\frac{1}{2}(c + 6) = 7$$

- Step 1: $\frac{1}{2}c + 6 = 7$
- Step 2: $\frac{1}{2}c = 7 + 6$
- Step 3: $\frac{1}{2}c = 13$
- Step 4: $c = 13 \div 2$
- Step 5: $c = 6\frac{1}{2}$

Part B: Correct solution


Select locations of points.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#22	1	RP	A	2	7.RP.A.1	N/A	2

1823


David uses $\frac{1}{2}$ cup of apple juice for every $\frac{1}{4}$ cup of cranberry juice to make a fruit drink.

Enter the number of cups of apple juice David uses for 1 cup of cranberry juice.

← → ← → ← ×

1	2	3	+	-	*	÷	
4	5	6	<	≤	=	≥	>
7	8	9	÷	□	()		π
0	.	-					

Key: 2

Rubric: (1 point) Student enters the correct number of cups.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#23	4	RP	A	2	7.RP.A.3	1, 2	B

1844


A store is having a sale. Each customer receives either a 15% discount on purchases under \$100 or a 20% discount on purchases of \$100 or more. Kelly is purchasing some clothes for \$96.60 before the discount. She decides to buy the fewest packs of gum that will increase her purchase to over \$100. The price of each pack of gum is \$0.79.

After the discount, how much less will Kelly pay by purchasing the clothes and the gum instead of purchasing only the clothes? (Assume there is no sales tax to consider.)

- (A) \$1.05
- (B) \$1.67
- (C) \$3.69
- (D) \$3.87

Key: B

Rubric: (1 point) Student selects the correct amount.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#24	1	EE	D	1	7.EE.B.3	N/A	See exemplar

1873


Aimee has \$10.00 to spend on school supplies. The following table shows the price of each item in the school store. No sales tax is charged on these items.

Item	Price
Eraser	\$0.89
Folder	\$1.29
Notebook	\$2.35
Pen	\$0.70

Determine if Aimee can buy the combination of items with her \$10.00. Select Yes or No for each combination of items.

	Yes	No
5 folders and 5 pens	<input type="checkbox"/>	<input type="checkbox"/>
6 pens and 6 erasers	<input type="checkbox"/>	<input type="checkbox"/>
1 pen and 4 notebooks	<input type="checkbox"/>	<input type="checkbox"/>
3 folders and 7 erasers	<input type="checkbox"/>	<input type="checkbox"/>
4 folders and 2 notebooks	<input type="checkbox"/>	<input type="checkbox"/>

Exemplar: (shown at right)

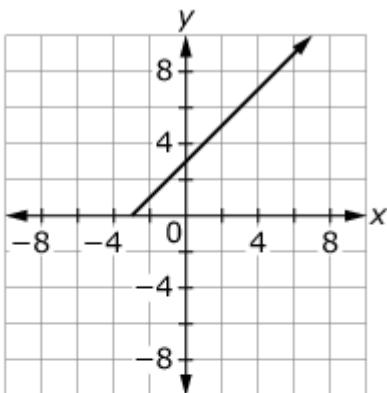
	Yes	No
5 folders and 5 pens	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 pens and 6 erasers	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1 pen and 4 notebooks	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3 folders and 7 erasers	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4 folders and 2 notebooks	<input checked="" type="checkbox"/>	<input type="checkbox"/>

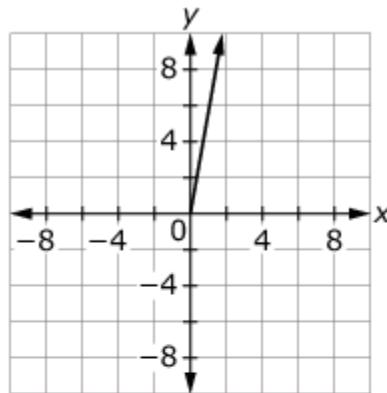
Rubric: (1 point) Student selects the correct combinations of items (YYNNY).

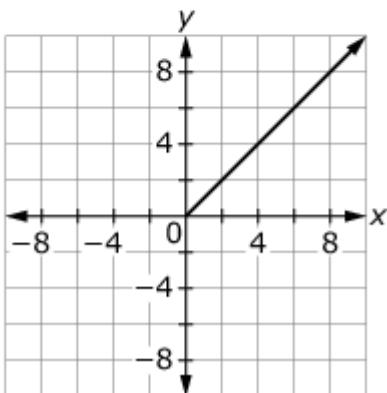
Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#25	1	RP	A	1	7.RP.A.2a	N/A	See exemplar

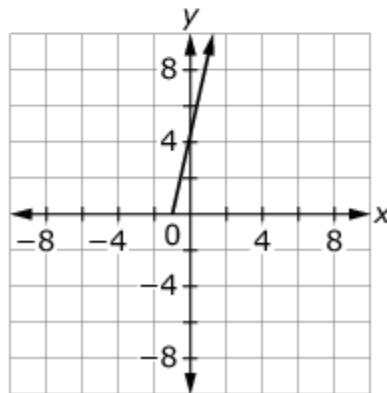
1825


Select **all** the graphs that show a proportional relationship between x and y .



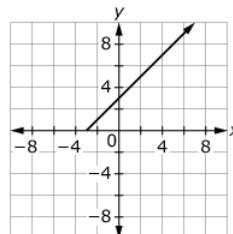


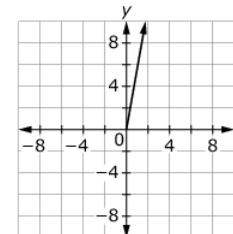


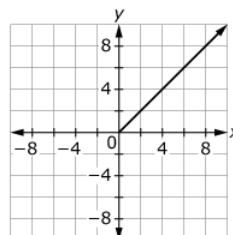


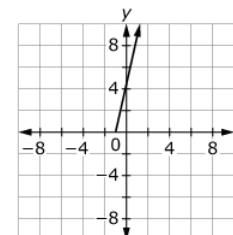
Exemplar: (shown at right)

Rubric: (1 point) Student selects the bottom left and the top right graphs.









Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#26	1	G	E	1	7.G.A.1	N/A	17.5

1839



A scale factor of 3.5 maps Figure A onto Figure B.



Figure A

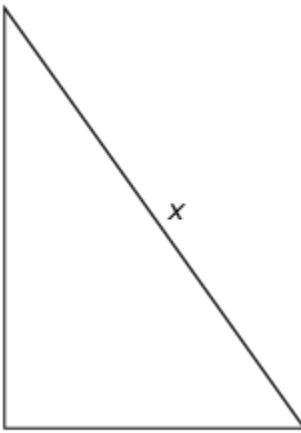


Figure B

Enter the value of x .

← → ↶ ↷ ✖

1	2	3	+	-	*	÷	
4	5	6	<	≤	=	≥	>
7	8	9	□	□ ²	()		π
0	.	-					

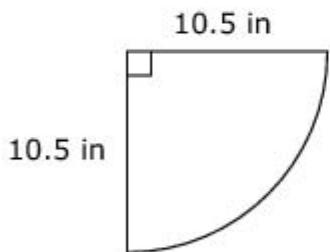
Key: 17.5 or its equivalent

Rubric: (1 point) Student enters a correct value of x .

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#27	1	G	F	2	7.G.B.4	1	86.55 – 86.68

1840


A corner shelf is $\frac{1}{4}$ of a circle and has a radius of 10.5 inches.



Enter the area of the shelf, in square inches. Round your answer to the nearest hundredth.

← → ↺ ↻ ✕

1	2	3
4	5	6
7	8	9
0	.	-

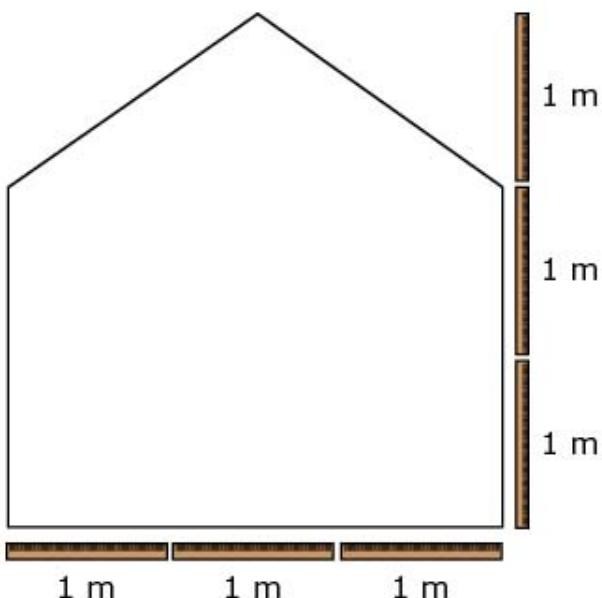
Key: 86.55 – 86.68

Rubric: (1 point) Student enters any number within the given range (inclusive) for the area of the shelf.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#28	2	G, RP	B, A	2	7.G.B.6, 6.RP.A.3d	1	4

1882


John needs to paint one wall in his school. He knows that 1 can of paint covers an area of 24 square feet. John uses a meter stick to measure the dimensions of the wall as shown.



[1 meter = approximately 39 inches]

What is the **fewest** number of cans of paint John can use to paint the wall?

← → ↘ ↙ ✖

1	2	3
4	5	6
7	8	9
0	.	-

Key: 4

Rubric: (1 point) Student enters the correct number of cans.

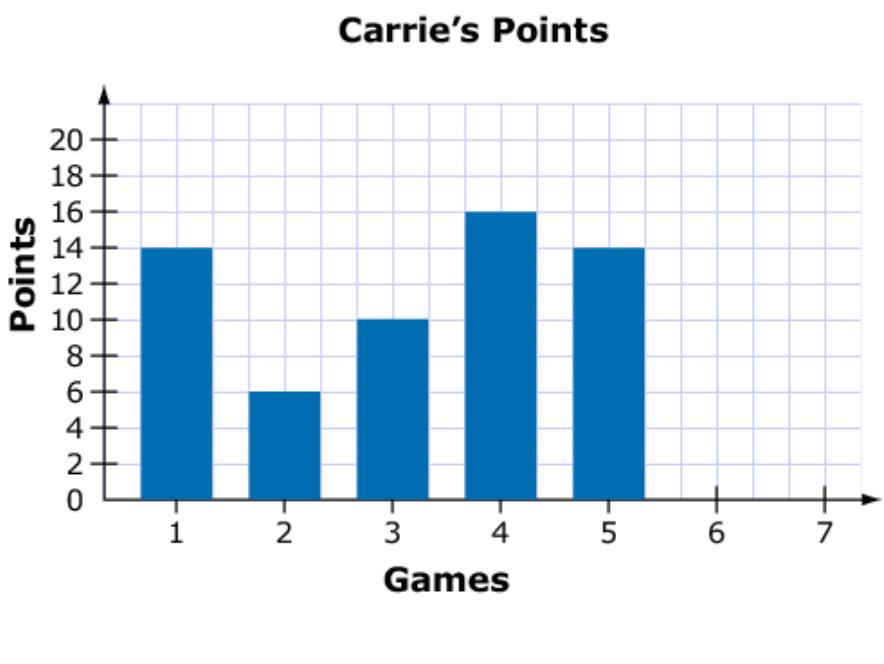
Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#29	4	SP	E, C	3	7.SP.B.4, 6.SP.B.5	1, 4	See exemplar

1982


Carrie's basketball team has played 5 games. The number of points Carrie scored in each game is shown in the bar graph.

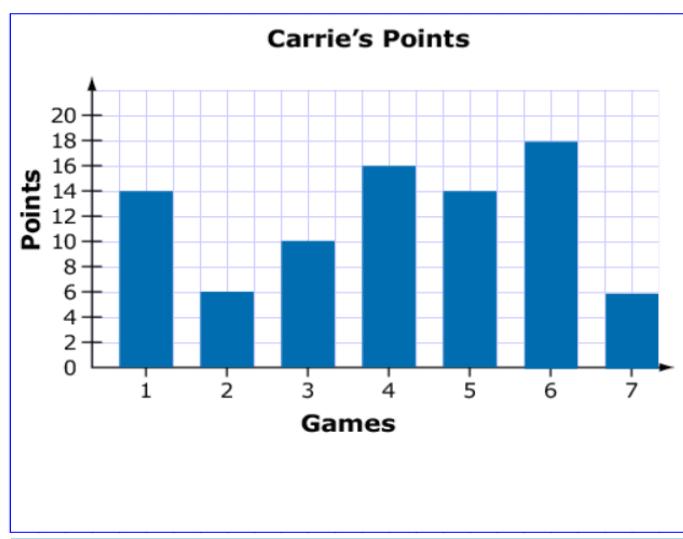
Determine possible point totals for games 6 and 7 so that the range of the data set increases, but the mean and median stay the same.

Select point totals above the labels 6 and 7 to complete the bar graph.



Exemplar: (shown at right)
Other answers are possible.

Rubric: (1 point) Student clicks on correct values so the sum of Game 6 and Game 7 point values will equal 24, and with the higher of the two scores greater than 16.



SBA Math - 7th Grade - Classroom Activity

Food Baskets Performance Task Classroom Interaction

Resources needed:

- chalkboard or some manner for recording and displaying student responses

Setting the Context

Facilitator says: "Today we are going to complete a task about planning and designing food baskets to help people who have been affected by an earthquake."

Facilitator says: "When a natural disaster such as an earthquake strikes, people in the area may not have access to food and water. There are many organizations that assist in getting food to people who were affected by the natural disaster. These organizations give each person a 'food basket' that includes all of the food a person needs for one day. These food baskets provide nourishment to the residents until they are able to once again take care of themselves. You may not realize it, but there is a lot of planning involved to ensure that the right kinds of food are included in food baskets."

Facilitator asks: "What kinds of food do you think should go into a food basket to help people who have been affected by a disaster?" [Facilitator can write responses on the chalk board.]

Facilitator says: "There are guidelines that suggest the number of Calories and the types of food we should eat everyday. These guidelines also apply to these food baskets."

Facilitator asks: "Food baskets should provide at least 2,100 Calories to every person each day. Can anyone explain what a Calorie is?" [Wait for responses.]

Facilitator confirms: "A Calorie is a unit of measure for the energy we get from our food. If we do not eat enough Calories each day or if we eat too many Calories, we are not getting proper nutrition."

Facilitator says: "Another requirement for these food baskets is that some of the Calories should come from fat and some should come from protein. What are some examples of healthy foods that contain fat?" [wait for responses and introduce examples if needed: cheese, nuts, meat, fish, vegetable oil or olive oil. Oil is an important source of fat in food baskets.]

Facilitator says: "What are some examples of healthy foods that contain protein?" [Wait for responses and introduce examples if needed: meat, eggs, yogurt, nuts]

Facilitator says: "Legumes are an important source of protein in food baskets. Does anyone know what a legume is?" [wait for responses and introduce if needed: a legume is a nut or seed from a family of plants including peas, soybeans, kidney beans, lentils, and peanuts.]

Facilitator says: "The food baskets should also contain grains. What are some examples of grains?" [Wait for responses and introduce examples if needed: rice, wheat, corn.]

Modeling a Process

Facilitator writes the following foods on the chalkboard or white board.

Corn
Soybeans
Beef
Kidney beans
Lentils
Peanuts
Rice
Eggs
Wheat
Cheese
Vegetable Oil
Cookies

Facilitator says: "We are going to pick some food for a food basket. We need to be sure that the basket contains at least one source of fat, one source of protein, and one grain."

Facilitator asks: "Which of these foods should we include in the basket to serve as a source of fat?" [Wait for responses and then circle the selection and write "fat" next to it. Possible options include: beef, nuts, cheese, cookies, vegetable oil.]

Facilitator asks: "Which of these foods should we include in the basket to serve as a source of protein?" [Wait for responses and then circle the selection and write "protein" next to it. Possible options include: beef, peanuts, kidney beans, lentils, soybeans, and eggs.]

Facilitator asks: "Why are eggs and beef not ideal choices for the food baskets?" [Wait for responses, which should include that these types of food need to be kept cold and would be difficult to ship.]

Facilitator says: "Remember that legumes are an important source of protein in food baskets. Which of these foods are legumes?" [Wait for responses and then circle the selection and write "legume" next to it. Possible options include: soybeans, kidney beans, peanuts]

Facilitator asks: "Which of these foods should we include in the basket to serve as a source of grain?" [Wait for responses and then circle the selection and write "grain" next to it. Possible options include: rice, wheat, or corn.]

Facilitator says: "In addition to ensuring that the food baskets contain the proper nutrition, there are other factors to consider when planning and designing food baskets, such as ease of shipping, expenses, and availability of resources."

Facilitator says: "Now you will work on your own to complete a task regarding the selection of contents for food baskets to help people affected by an earthquake."

Begin Performance Task

You are a volunteer at International Food Assistance. This organization delivers "food baskets" to help people around the world. The requirements for each food basket are shown below.

Here are the requirements for each food basket:

- Contains grains such as rice, wheat or oatmeal
- Contains legumes such as kidney beans, nuts, or lentils
- Contains exactly 35 grams (g) of oil for cooking
- Contains exactly 50 grams (g) of Super Cereal
- Has a minimum of 2100 total calories
- At least 8% of the total calories come from protein
- At least 10% of the total calories come from fat
- The cost of each basket cannot exceed \$0.75

Here are the contents and quantities of a **Sample Food Basket**:

Food	Quantity	Calories	Protein (1 g = 4 calories)	Fat (1 g = 9 calories)	Cost per kilogram
Rice	800 g	920	9 g	2 g	\$0.58
Lentils	240 g	812	34 g	2 g	\$0.90
Oil	35 g	315	0 g	35 g	\$1.20
Super Cereal	50 g	200	10 g	5 g	\$0.12

This assessment has four questions about planning food baskets. You will examine factors such as nutrition and food prices. The final question requires you to design a food basket using the Nutritional Value and Cost of Wheat and Oatmeal table below. Read and answer each question.

Nutritional Value and Cost of Wheat and Oatmeal Table

Grain	Quantity (g)	Calories	Protein (g) (1g = 4 calories)	Fat (g) (1g = 9 calories)	Cost per kilogram
Oatmeal	100 g	67	1	2	\$1.02
Oatmeal	200 g	133	2	4	\$1.02
Oatmeal	300 g	200	3	6	\$1.02
Oatmeal	400 g	267	4	8	\$1.02
Oatmeal	500 g	333	5	10	\$1.02
Oatmeal	600 g	400	6	12	\$1.02
Oatmeal	700 g	467	7	14	\$1.02
Oatmeal	800 g	533	8	16	\$1.02
Oatmeal	900 g	600	9	18	\$1.02
Oatmeal	1000 g	667	10	20	\$1.02
Wheat	100 g	340	14	3	\$0.75
Wheat	200 g	680	28	6	\$0.75
Wheat	300 g	1020	42	9	\$0.75
Wheat	400 g	1360	56	12	\$0.75
Wheat	500 g	1700	70	15	\$0.75
Wheat	600 g	2040	84	18	\$0.75
Wheat	700 g	2380	98	21	\$0.75
Wheat	800 g	2720	112	24	\$0.75
Wheat	900 g	3060	126	27	\$0.75
Wheat	1000 g	3400	140	30	\$0.75

1.

Create an expression to calculate the number of calories from fat in the **Sample Food Basket**.

2.

Create an expression to calculate the percent of total calories from protein in the **Sample Food Basket**.

3.

Explain how the Sample Food Basket does or does not meet all the requirements for a food basket. Write your answer in the space provided. Use specific numbers in your explanation.

4.

Bad weather is damaging rice crops, so you need to use wheat or oatmeal as the grain requirement in the food baskets. Using different quantities from the **Nutritional Value and Cost of Wheat and Oatmeal Table** (page 1), explore the changes in calories, protein, fat, and cost of replacing rice with wheat or oatmeal.

Using your information from exploring in the table Nutritional Value and Cost of Wheat and Oatmeal, you need to make a new food basket.

Part A

Determine the contents of a new basket that uses wheat or oatmeal instead of rice and meets all of the requirements. Write your information in all six blank cells in the table below.

Food	Quantity	Calories	Protein (1 g = 4 calories)	Fat (1 g = 9 calories)	Cost per kilogram
Lentils	240 g	812	34 g	2 g	\$0.90
Oil	35 g	315	0 g	35 g	\$1.20
Super Cereal	50 g	200	10 g	5 g	\$0.12

Part B

Explain how your new basket meets all the requirements for a food basket.

Type your answer in the space provided.



Smarter Balanced

Assessment Consortium:

Practice Test Scoring Guide

Grade 7 Performance Task

Published August 20, 2013

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You are a volunteer at International Food Assistance. This organization delivers "food baskets" to help people around the world. The requirements for each food basket are shown below.

Here are the requirements for each food basket:

- Contains grains such as rice, wheat or oatmeal
- Contains legumes such as kidney beans, nuts, or lentils
- Contains exactly 35 grams (g) of oil for cooking
- Contains exactly 50 grams (g) of Super Cereal
- Has a minimum of 2100 total calories
- At least 8% of the total calories come from protein
- At least 10% of the total calories come from fat
- The cost of each basket cannot exceed \$0.75

Here are the contents and quantities of a **Sample Food Basket**:

Food	Quantity	Calories	Protein (1 g = 4 calories)	Fat (1 g = 9 calories)	Cost per kilogram
Rice	800 g	920	9 g	2 g	\$0.58
Lentils	240 g	812	34 g	2 g	\$0.90
Oil	35 g	315	0 g	35 g	\$1.20
Super Cereal	50 g	200	10 g	5 g	\$0.12

This assessment has four questions about planning food baskets. You will examine factors such as nutrition and food prices. The final question requires you to design a food basket using the interactive simulation table. Read and answer each question.

Nutritional Value and Cost of Wheat and Oatmeal

Grain

Quantity (g)

Grain	Quantity (g)	Calories	Protein (g) (1 g = 4 calories)	Fat (g) (1 g = 9 calories)	Cost per kilogram

This stimulus currently displays a label of "1". We are working on how to remove the labeling.

1.

Create an expression to calculate the number of calories from fat in the **Sample Food Basket**.

The calculator interface includes a numeric keypad (1-9, 0, ., -) with a blue border, a row of arithmetic operators (+, -, ×, ÷), and a row of function keys (<, ≤, =, ≥, >). Above the numeric keypad are four navigation arrows (left, right, up, down) and a clear button (X).

For this item, a full-credit response (1 point) includes

- $(2 + 2 + 35 + 5) \times 9$ (and equivalent expressions).

For this item, a no-credit response (0 points) includes none of the features of a full-credit response.

2.

Create an expression to calculate the percent of total calories from protein in the **Sample Food Basket**.

The calculator interface includes a numeric keypad (0-9), arithmetic operators (+, -, ×, ÷), comparison operators (<, ≤, =, ≥, >), and other symbols (π, square root, fraction). Navigation icons are located at the top left.

For this item, a full-credit response (1 point) includes

- $100 \times \frac{((9 + 34 + 10) \times 4)}{(920 + 812 + 315 + 200)}$ (and equivalent expressions).

For this item, a no-credit response (0 points) includes none of the features of a full-credit response.

3.

Explain how the **Sample Food Basket** does or does not meet all of the requirements for a food basket.

Type your answer in the space provided. Use specific numbers in your explanation.

For this item, a full-credit response (1 point) includes

- confirming that there are enough quantities of each of the four requirements for the food basket
AND
- referring to the quantity (correctly or incorrectly) determined in item 1496 as well as the percentage of total calories from fat.

For example,

- The food basket meets the requirements. The percentage of protein calories is about 9%. The percentage of fat is about 18%. 9% is greater than 8% and 18% is greater than 10%. There is also enough oil and super cereal.

For this item, a no-credit response (0 points) includes none of the features of a full-credit response.

For example,

- The food basket meets the requirements. There is enough protein, fat, oil and super cereal.

This item is not graded on spelling or grammar.

This item will be evaluated at rubric validation for possible conversion to multi-point.

4.

Bad weather is damaging rice crops, so you need to use wheat **or** oatmeal as the grain requirement in the food baskets. Enter different quantities in the table **Nutritional Value and Cost of Wheat and Oatmeal** to explore the changes in calories, protein, fat, and cost of replacing rice with wheat or oatmeal.

Using your information from exploring in the table **Nutritional Value and Cost of Wheat and Oatmeal**, you need to make a new food basket.

Part A

Determine the contents of a new basket that uses wheat **or** oatmeal instead of rice and meets all of the requirements. Enter your information in all six blank cells in the table.

Food	Quantity	Calories	Protein (1 g = 4 calories)	Fat (1 g = 9 calories)	Cost per kilogram
Lentils	240 g	812	34 g	2 g	\$0.90
Oil	35 g	315	0 g	35 g	\$1.20
Super Cereal	50 g	200	10 g	5 g	\$0.12

Part B

Explain how your new basket meets all of the requirements for a food basket.

Type your answer in the space provided.

For this item, a full-credit response (2 points) includes:

Part A

- entering a correct quantity of wheat (100 g to 600 g) or oatmeal (100 g to 400 g).

For example:

Food	Quantity	Calories	Protein (1 g = 4 calories)	Fat (1 g = 9 calories)	Cost per kilogram
Wheat	400 g	1360	56 g	12 g	\$0.75
Lentils	240 g	812	34 g	2 g	\$0.90
Oil	35 g	315	0 g	35 g	\$1.20
Super Cereal	50 g	200	10 g	5 g	\$0.12

Continued on next page

Part B

- explaining that the values in the table meet the requirements for the food basket, by comparing the protein, fat, and cost values to those required.

For example,

- “My basket contains 100 grams of protein and 54 grams of fat. 100 grams of protein is equal to 400 calories. There are 2687 calories total in my basket. $400/2687 = 14.89\%$ calories from protein. 54 grams of fat is equal to 486 calories. $486/2687 = 18.09\%$ calories from fat. $14.89 > 8$ and $18.09 > 10$. The total cost of my basket should be around \$0.56, so it meets the cost requirement.”

For this item, a partial-credit response (1 point) includes

- not completing the table in Part A, but noting the correct quantities in Part B
OR
- not making ALL necessary comparisons in Part B, but completing the table in Part A (with consistent quantities)
OR
- entering an incorrect set of quantities in the table in Part A, but making consistently incorrect comparisons in Part B.

For this item, a no-credit response (0 points) includes none of the features of a full- or partial-credit response.

This item is not graded on spelling or grammar.