Montana Comprehensive Assessment System *(MontCAS, Phase 2)*

Criterion-Referenced Test (CRT)

COMMON ITEM RELEASE
GRADE 8

OPI

OFFICE OF PUBLIC INSTRUCTION

General Directions

This test contains six sessions: three in reading and three in mathematics. The sessions are made up of multiple-choice questions and questions for which you must show your work or write out your answers. Write your answers to all of the questions in your Student Response Booklet. For the reading parts of the test, read each selection before answering the questions.

For each multiple-choice question, choose the best answer. Fill in the bubble in your Student Response Booklet that corresponds to your answer choice for that question.

Some questions ask you to show your work or to write out your answers. Write your answers to these questions in the spaces provided in your Student Response Booklet. Your answers must fit in the spaces provided. Any part of an answer outside the box might not be scored.

Be sure to answer all parts of each question, and to answer completely. For example, if a question asks you to explain your reasoning or show your work, be sure to do so. You can receive points for a partially correct answer, so try to answer every question.

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Reading
Session 1

This test session includes reading selections, multiple-choice questions, and a question for which you must write out your answer. After you read each selection, answer the questions about it in the spaces provided in your Student Response Booklet. You may not use a dictionary or any other reference tool during this session.

Read this passage about hibernation and then answer the questions that follow.

What Is Hibernation?

Larry Dane Brimner

What do animals do when it's winter and the weather turns cold? Some travel to warmer climates. Others undergo physical changes that help them survive cold temperatures. Another group of animals hibernates, or sleeps, during winter's most bitter weather. Animals have various ways of protecting themselves from harsh weather.

North of the equator, many animals travel, or migrate, to warmer places during the winter. Birds like robins and swallows are the migrating animals most familiar to us.

If you live near a flyway, you can see entire flocks of birds zigzagging across the sky at the end of summer and during the autumn, heading south for the winter. They may travel thousands of miles to reach their wintering places. But when warm weather returns, so do the birds. This is an instinctive cycle repeated year after year during each migrator's life.

Some animals can be seen in the same general area all year long. They grow thicker coats of fur that protect them from the cold. The thick fur traps a thin layer of air next to the skin, which helps to insulate the animals. These animals also are protected through an extra layer of fat. This helps to prevent heat escaping from the animal's body and doesn't allow the cold to penetrate. The moose, for example, is an animal that dons thicker layers of fur and fat during the winter.

Some animals do not migrate during the winter. They are not active, either. These are the animals that hibernate during the coldest part of the year. Some hibernate for weeks at a time, while others wake after a few days. What they have in common is that sleep is their protection against winter's chill.

When an animal goes into hibernation, its body temperature drops, its heartbeat slows down, and its breathing becomes barely detectable. In this way it conserves energy. A hibernating animal enters such a deep state of sleep that it appears more dead than alive. But alive it is.

Most hibernating mammals prepare for their long winter naps by eating great amounts of food in the fall. Much of the food is stored in their bodies as fat. Later, the fat is broken down into energy. This keeps the animals alive while they are asleep and not taking in food.

In addition to regular fat, patches of a special brown fat form across the back and shoulders of hibernating animals near their brain, heart, and lungs. These are the organs that must warm up and wake up first when it's time to come out of hibernation. Brown fat sends a quick burst of energy to them. Once the brain, heart, and lungs have awakened and speeded up, the animal can send a "wake-up call" to the rest of its body.

Scientists are learning more about hibernation all the time. They know that hibernating mammals have a substance in their blood they call Hibernation Inducement Trigger (HIT). HIT goes into action when days are shorter, when there is a change in temperature, or when there is a shortage of food. They have learned that when blood is taken from a hibernating squirrel in the winter it can trigger hibernation when injected in another squirrel in the spring. But scientists do not know exactly what HIT is or exactly how it works.

Much about hibernation remains a mystery. Perhaps someday scientists will unlock all the secrets of animals that hibernate.

Mark your answers to questions 1 through 5 in the section marked "Reading—Session 1" in your Student Response Booklet.

1. According to the passage, how do animals that do not migrate or hibernate survive cold winters?
   A. They grow thick coats of fur and layers of fat.
   B. They develop patches of brown fat.
   C. They can find the same amount of food all year.
   D. They stay warm in burrows or dens.

2. What will **most likely** happen if animals use their stored fat during hibernation?
   A. They will feel much better when they awaken.
   B. They will sleep very lightly during hibernation.
   C. They will be very hungry when they awaken.
   D. They will form more brown fat during hibernation.

3. In paragraph 9, what does <u>trigger</u> mean?
   A. aid
   B. prevent
   C. begin
   D. confuse

4. Which statement from the passage is an opinion?
   A. "North of the equator, many animals travel, or migrate, to warmer places during the winter."
   B. "This is an instinctive cycle repeated year after year during each migrator's life."
   C. "Once the brain, heart, and lungs have awakened and speeded up, the animal can send a 'wake-up call' to the rest of its body."
   D. "Perhaps someday scientists will unlock all the secrets of animals that hibernate."

5. What is the **main** purpose of this passage?
   A. to explain what is known about hibernation
   B. to tell why some animals do not hibernate
   C. to compare hibernation to migration
   D. to identify animals that hibernate

Please go on to the next page.

This is a story from the Lenapé people. Read the story and then answer the questions that follow.

The Seven Wise Men

Jane Louise Curry

Long ago—very long ago—seven wise men lived among the Lenapé. They were wise in all things of the Old Time and of this Second World, of the World Below, and of the World Above. Because of their wisdom, the people pestered them from dawn until nightfall with questions. They brought them their fears, their dreams, and their worries. The wise men were weary, and old, but they could not eat a meal alone in peace. They could not fish on the riverbank, or talk together over an evening fire. The people gave them no rest.

At last, tired of having no time to themselves, the seven wise men met in secret one night, on a hillside not far from the village. "What must we do," they asked each other, "to have ourselves to ourselves?" After much talk, one offered a plan, and the others agreed.

So they turned themselves into seven great stones.

The people missed them greatly.

Then, early one evening, a clever and curious young man from the village came walking across the hillside. He saw the seven oddly shaped rocks and was puzzled. He did not remember seeing them on the hill before. "Hoh!" he said. "I do not remember you." And he touched the first rock as he leaned close for a better look.

"Haa!" The rock woke up. "Who touched me?"

"O-hoh! A stone that talks?" The quick-witted young man counted the other rocks. "Five, six—seven!" he crowed. "Surely I have found our seven lost wise men."

The seven great stones groaned. "Oh, not so loud, young man! The people will hear you."

So the young man sat himself down at the center of the circle of rocks, and in low voices he and the seven wise men talked for a long while of many things—of why deer have short tails, why the Northern Lights dance and shimmer, and of many other questions great and small. When the shadows grew deep, and it was time for the young man to be gone, he promised the wise men that he would tell no one that he had found them. "For," they said, "it is many years since we have had such pleasant, restful days as these, drowsing on this hillside."

The young man kept his word and held his tongue, but the wise men's peace did not last for long. After a few days, the people began to wonder where the young man went each evening. They saw that he went always in the same direction. "I will follow him and see," said one man, and he did. He could not creep close enough to hear what was said, but he returned to the village and told how the young man sat talking to seven large stones.

"He has found the seven great wise men!" the people cried. "Tomorrow let us rise at dawn and go to the hillside to hear their wisdom."

The seven wise men sighed when they saw them coming.

The next evening they held council once again among themselves. If they were to have peace and contentment, they decided, they must leave the village and its valley behind. They must find a new home. So they journeyed far into the forest. There, they turned themselves into seven beautiful cedar trees. For a long while, the only visitors they had were the birds who perched on their boughs. In time, though, some hunters passed by. They saw the seven cedars. They had never seen trees so tall or so beautiful in that part of the forest, and they returned to the village with the news. "Surely we have found our seven wise men," they said.

Please go on to the next page.

The next morning, the villagers went to see the seven trees, and knew that the hunters were right. So they sat beneath the cedar branches, and begged the wise men to share their wisdom.

That night, the wise men were hoarse from talking. They held council among themselves, and decided that they must find a new country, where the villagers could not follow. But where?

While the seven old men stood in the forest and pondered, the Creator looked down on them and took pity. Sweeping them up, He carried them into the sky, where He turned them into seven bright stars. And they are still there, where we cannot pelt them with questions or disturb their peace.

You call them the Pleiades.

Mark your answers to questions 6 through 10 in the section marked "Reading—Session 1" in your Student Response Booklet.

6. The **main** purpose of the first paragraph is to explain
   A. why the wise men wanted to leave the village.
   B. how much the villagers respected the wise men.
   C. why the villagers depended on the wise men.
   D. how much the wise men knew about the world.

7. Why did the wise men leave the village?
   A. They did not care about the people.
   B. They were not able to answer questions.
   C. The people no longer believed in them.
   D. The people would not leave them alone.

8. Why do the wise men groan when the young man discovers them?
   A. They are waking from a long sleep.
   B. They do not want him to touch them.
   C. They are trying to frighten him away.
   D. They do not want to be bothered again.

9. Which word **best** describes the author's attitude toward the behavior of the seven wise men?
   A. disappointed
   B. sympathetic
   C. suspicious
   D. puzzled

10. In which section of the library would this story **most likely** be found?
   A. science
   B. biography
   C. literature
   D. history

Please go on to the next page.

You may know Jerry Spinelli as the author of books such as Wringer *and* Maniac Magee*. This passage is an excerpt from his book* Knots in My Yo-yo String*, which is an account of his own childhood and youth in the 1950s in Norristown, Pennsylvania. Read the passage and then answer the questions that follow.*

A Swooner in Sneakers

Jerry Spinelli

My bike was more than wheels for aimless wandering. It helped me answer many needs.

Did I want to cool off? I coasted through the
2 alley between Kohn Street and Haws Avenue, past the Flavorite ice cream plant.

Was I hungry? I pedaled to a mulberry tree. I knew every one in town. My favorite was in Roger Adelman's backyard. I climbed it often and snacked off the branches, staining my fingers purple.

Did I want a thrill? I rode out to the park zoo, to the top of Monkey Hill. I waited until the road was clear of cars and took off, pedaling hard all the way, down past the monkey cages. My record, according to my speedometer, was forty-five miles per hour, not bad for a single-gear, fat-tired Roadmaster.

Or another kind of thrill? Some days I must have pedaled past Dovie Wilmoth's house on Haws Avenue ten times, hoping that the beautiful platinum
5 blonde would be on the front porch. If she was, I waved and called "Hi, Dovie!" and kept circling the block. Every three minutes: "Hi, Dovie!" She always smiled and waved back.

When I was thirteen, I was old enough to leave town. My Roadmaster took me as far as Valley Forge National Historical Park, about five miles away. I crossed the Schuylkill on the singing bridge, so called for the sound of tires on the steel grate deck. You could see through the deck to the river below. For hours I rode the winding hills past cannon muzzles and monuments and replicated log cabins. Once, I parked my bike and walked into a hillside meadow to lie back and get some sun. When I opened my eyes, hawks were circling overhead. Not trusting them to know I wasn't dead, I got out of there fast.

Sometimes if my planned route for the day took
7 me across the tracks at the dead end, I had to wait for a freight train to pass. I never felt thwarted or impatient about this. In fact, the longer the train the better, and if there were three or four engines, I knew it would be a very long one. By the end of junior high the steam locomotives had given way to diesels. The diesels were neither as terrifying at night nor as exciting in daylight, nor did they leave me with a headful of coal grit.

As the train went by, I counted the cars: boxcars, tankers, flatcars, coal hoppers. By the time the caboose came clicking by, the engines were out of
8 sight and earshot, out beyond the park band shell. I loved the caboose. I was surprised that no one was ever standing at the back rail, coffee mug in hand, watching the world go by.

In those days I was many whats. A kid can be that. Grownups have gone ahead and answered the question: "*What* shall I be?" They have tossed out all the whats that don't fit and have become just one. Teacher. Truckdriver. Businessperson. But a kid is still becoming. And I, as a kid alone, was free to be just about anything.

So many careers came and went through me: salamander finder, crawfish annoyer, flat-stone creek skipper, cedar chest smeller, railroad car counter, tin can stomper, milkweed blower, mulberry picker, snowball smoother, paper bag popper, steel rail
10 walker, box turtle toucher, dark-sky watcher, best-part saver. They didn't last long, these careers of mine, but flashed into and out of existence like mayflies. But while they employed me, I gave them an honest minute's work and was paid in the satisfactions of curiosity met and a job well done.

When I went roaming by myself on foot or bike, I discovered more than water spiders and foreign
11 neighborhoods. I discovered myself. By myself, not boxed in by rules of play, I was free to think, to wonder, to swoon.*

*to swoon: to be overwhelmed by joy

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That's what I did sometimes: I swooned, just thinking about things. Like time. Like space. I tried to imagine, tried to grasp the speed of light. One hundred eighty-six thousand miles per *second*! And how about those stars up there? The ones I saw when the sky turned the color of my dungarees. I had heard that these were only the closest ones, visible from earth. I had heard that there were billions and billions more too far away to see, that they went on and on and on until the end of the universe. I tried to imagine zooming out past the last stars and looking around—at what? What does the end of the universe look like? And what about time? What about *before* time?

Thoughts like these did not come to mind as I flipped baseball cards with Spider Sukoloski or played street football with Jerry Fox. . . . They presented themselves behind closed eyes on hillside meadows and during the long lazy wait for a box turtle to cross the path. The questions were as elusive as the answers, as delicate as a dragonfly's wing. They gave me goosebumps. They made me dizzy. I swooned in my sneakers.

Mark your answers to questions 11 through 21 in the section marked "Reading—Session 1" in your Student Response Booklet.

11. What does aimless mean in the first paragraph?
    A. pointless
    B. hopeless
    C. harmless
    D. reckless

12. Which phrase **best** describes how the author organizes his ideas in paragraphs 2 through 5?
    A. in order of importance
    B. from problem to solution
    C. by comparison and contrast
    D. in the order that things happened

13. In paragraph 3, what does "snacked off the branches" mean?
    A. The author nibbled on the branches of the berry tree.
    B. The author picked and ate fresh berries from the tree.
    C. The author sat in the branches and ate his own snacks.
    D. The author gathered fruit that had fallen from the branches.

14. What does thwarted mean in paragraph 7?
    A. excited
    B. frustrated
    C. curious
    D. fearful

Please go on to the next page.

15. In paragraphs 7 and 8, what does the author's reaction to being delayed by a long train reveal about him?

A. his ability to enjoy the moment
B. his love of rest and relaxation
C. his fascination with big questions
D. his need to get away from people

16. In paragraph 10, the "careers" the author mentions were

A. activities that briefly captured his curiosity.
B. ways to avoid boredom when he was alone.
C. things he had to work hard at to understand.
D. honest efforts to discover what he wanted to be.

17. When the author calls himself a "swooner in sneakers," he means he

A. was frightened by difficult questions.
B. knew the universe was hard to understand.
C. was amazed that there were so many stars.
D. got excited thinking about all of the possibilities.

18. What important lesson does the author learn from his childhood experiences?

A. Curiosity is the best cure for boredom.
B. Every question has an answer.
C. Being alone gives people time to think and discover themselves.
D. It is usually better to be independent than to rely on other people.

19. The mood in this passage is **best** described as

A. mysterious.
B. gloomy.
C. serious.
D. happy.

Please go on to the next page.

20. What type of passage is "A Swooner in Sneakers"?

    A. realistic fiction
    B. historical fiction
    C. autobiography
    D. biography

21. What would be the **best** way to find a list of books written by Jerry Spinelli?

    A. scan a current copy of *Read* magazine
    B. search a library catalogue
    C. read the list of best-selling books in the newspaper
    D. check back issues of *Biography* magazine

Write your answer to question 22 in the space provided for it in your Student Response Booklet.

22. The author organizes his ideas into three sections: paragraphs 1 through 8, paragraphs 9 through 10, and paragraphs 11 through 13. Identify and explain the main idea of each section. Use details from each section to support your answer.

Please STOP. Do not go on to the next page.

Reading
Session 2

This test session includes reading selections, multiple-choice questions, and a question for which you must write out your answer. After you read each selection, answer the questions about it in the spaces provided in your Student Response Booklet. You may not use a dictionary or any other reference tool during this session.

Meriwether Lewis and William Clark blazed a new trail to the Pacific Ocean. Read this excerpt from an account of their expedition and then answer the questions that follow.

Lewis and Clark Expedition

Janis Herbert

June 2, 1805
The Corps reaches the junction of the Missouri and Maria's Rivers

One day the explorers were surprised to find themselves at the junction of two great rivers. The captains had misunderstood the distances described by the Hidatsa chiefs. They thought they had already passed a river the Hidatsa called "The River Which Scolds All Others" and now did not know that one of these was the "scolding" river. They were confused and didn't know which way to go. Which river was the Missouri?

The captains faced a big decision and couldn't afford to make a mistake. If they chose the wrong river, they might not discover their mistake for some time. They could lose valuable weeks and months. A wrong turn could mean losing the whole season, could require a forced winter camp, and could perhaps even end their expedition! They camped at the fork and set out to discover which river was the Missouri.

The explorers looked carefully at each of the rivers. The south branch was wider, faster, and more shallow. Its waters were clear and it had a rocky bottom. The north branch had a muddy bottom. It ran deep, and its waters were brown like those of the Missouri River, on which they'd traveled for so long. All of the privates were positive that the north branch was the Missouri, but the captains disagreed. They should be close to the source of the Missouri River by now, they thought. That source should be in the mountains ahead, which meant the river should be running clearer and faster, like the south branch. Because the north branch was muddy, the captains thought its source must be far away and that it was muddy because of all of the soil it had collected while running over miles of open plain. However, the captains agreed it was best to investigate. Clark would explore the south branch while Lewis explored the north.

Captain Clark's explorations took him 40 miles upstream. This river was running so swiftly that even the buffalo he saw couldn't cross it. He and his men camped, killed three grizzly bears that broke in on their campsite, and returned three days later to wait for Lewis's report.

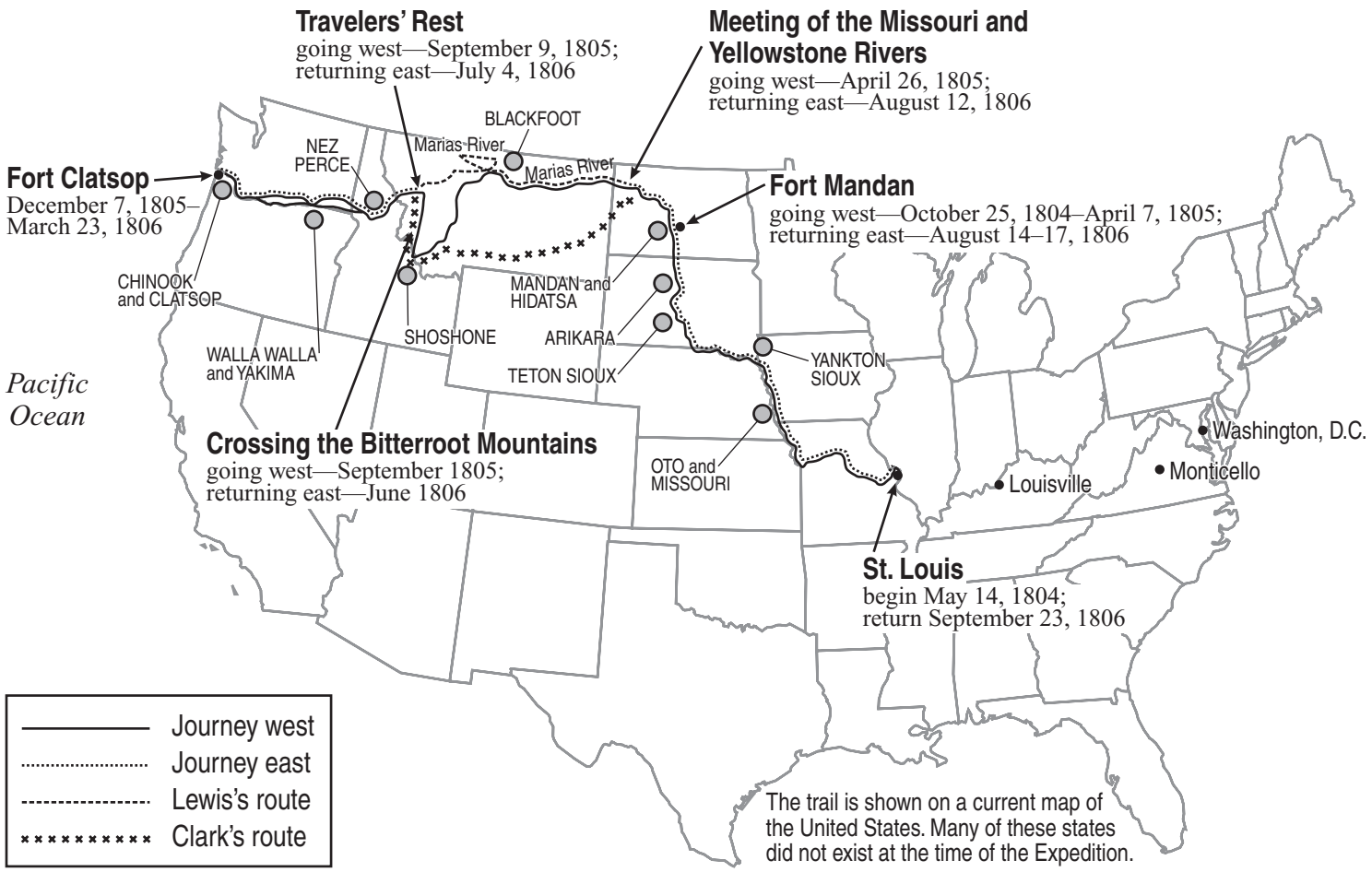
Lewis was gone five days. He traveled 60 miles up the river before he came to the conclusion that its direction was taking him too far to the north. He and his men turned around. Lewis and Private Richard Windsor made their way back on the side of a cliff, picking their way carefully along a narrow ledge. Lewis slipped and nearly fell down the face of the 90-foot cliff. Quick use of his espontoon saved him. As he was catching his breath, he heard his companion calling out for help. Windsor had slipped and fallen, too! His right arm and leg were hanging off the cliff and he was barely holding onto the ledge with his left hand and foot. He was terrified. Lewis was

Please go on to the next page.

frightened, too, and unable to reach Windsor. He managed to tell him very calmly that he was in no danger. All he would have to do, Lewis instructed, was take his knife out of its holder with his right hand and dig a hole in the face of the cliff for his foot. Windsor did as the captain suggested and soon was able to make the foothold and push himself back onto the ledge.

When the captains reunited, they agreed that the south branch was the real Missouri River. Lewis named the north branch for a beloved cousin. Even though the river was muddy and his cousin was "lovely and fair," Lewis said it was a noble river and he named it "Maria's River." The captains discussed their decision to follow the south branch with the Corps. All of the men still believed the north branch was the Missouri, but every one of them cheerfully agreed to follow the leaders. Because their men were so convinced that the north branch was the Missouri River, Lewis and Clark decided that a small party should walk ahead. The Hidatsa had told them that they would come upon a great waterfall along the Missouri River. Once they found the falls, they could be certain they'd made the right choice. Lewis would hike ahead; Clark would follow with the party in the boats.

Map of the Lewis & Clark Expedition



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Mark your answers to questions 23 through 27 in the section marked "Reading—Session 2" in your Student Response Booklet.

23. Which feature of the river caused Lewis to choose the south branch?
    A. The water was clear in the river.
    B. There were cliffs surrounding the river.
    C. There was mud on the bottom of the river.
    D. The water was deep in the river.

24. The leaders of the expedition can **best** be described as
    A. impractical.
    B. problem solvers.
    C. careless adventurers.
    D. impatient.

Use the map to answer questions 25 through 27.

25. In which general direction was the Lewis and Clark expedition traveling on June 2, 1805?
    A. returning east
    B. returning southwest
    C. going west
    D. going southeast

26. Where did Lewis and Clark spend the winter of 1804–1805?
    A. Fort Clatsop
    B. Travelers' Rest
    C. Fort Mandan
    D. St. Louis

27. About how long did the entire Lewis and Clark expedition take?
    A. 6 months
    B. 16 months
    C. 19 months
    D. 28 months

Read this excerpt about a girl's fishing adventure and then answer the questions that follow.

Hook a Fish, Catch a Mountain

Jean Craighead George

A skinny girl in mountain boots and bulky clothes stood on the bank of the river. She looked like a glass figurine wrapped for shipment. In one hand she held a fishing rod. With the other she pushed the long black hair from her face. It swept below her waist, a gleaming, well-groomed pyramid of lights.

Suddenly the fishing rod bowed like a question mark and the girl braced as a fish took her line. The stones of the gravel bar rolled under her feet and she was pulled into the icy Snake River. The water seeped through the eyelets of her mountain boots. She glanced around desperately. The entire valley of Jackson Hole, Wyoming—its sky and saw-blade mountains, its people and wild things —were conspiring against her. She, Spinner Shafter, age thirteen, a dancer in the Roundelay Dance Company, was about to be drowned by a fish.

"Get in here!" she screamed to the creature pulling her. She dug in her heels, gained a better footing, and yanked.

"Get in here this minute so I never have to fish again . . . ever. . . . " The reel spun like a windmill in a hurricane and the line darted into the sparkling water where Ditch Creek meets the
4 thunderous Snake. Then it moved upstream. Spinner watched with amazement. She could not even stand in the water that roared down from the Yellowstone plateau like a freight train. Yet the fish on the end of her line was pulling hook, line reel, rod, and herself up the roaring flume.

Awed by the strength of the fish, she let him run out the line. Not until the reel screamed to a stop did she remember that she should be reeling in. With great effort she pulled on the line with her free hand.

"You're heavy," she said as she took a wider stance, leaned backward, and gained a meter of line. She reeled in the slack. The stones avalanched under her feet again and delivered her calf-deep into the river. In a moment she would be up to her knees and awash on the curls and tongues of
6 the demonic Snake. Desperately she glanced around for help. Her eyes focused on the mountains. They were no longer the alabaster spires she had admired during the day, but a hostile black wall of ice and granite. The sun, now behind the range, was sending rods of metallic light down the dark canyon. Terror seized her.

"Daddy!" she screamed. "Daddy. Help me!" She was shivering, and her arms, which performed so strongly in cartwheels and handstands, trembled. The fish surged away. Grudgingly she was forced to give back the line she had gained so the fish would not break it. Spinner threw herself backward on the gravel bar and reeled in.

She really wished she could be an excellent fisher for her father's sake. She knew he would like it. Years ago he had nicknamed her Spinner after a fish lure. And when he gave her a fly rod the night she executed a delicate dance solo, it was clear that he wanted a fisher, not a dancer.

"Well, FISH," she said out loud. "He hasn't got one. He hasn't got a fisher to brag about." She paused, then whispered to the river, "A dancer is splendid, dedicated to beauty and movement; it is the most exalted of the arts. A dancer does *not* have to fish!"

She clutched the rod to keep the fish from pulling her into the river. The line trembled. She pulled. It trembled again. The fish was speaking to her.

"I hear you, FISH," she whispered. "You're fighting for your life out there in that terrible water." Spinner tugged. "I said, 'Hello,'" she called aloud. The fish tugged back. "Is that 'hello' or are you frightened? I am. I've never caught a fish before." The fish tugged twice. "What are you saying?

Please go on to the next page.

You're asking me to let you go? I will, I will, if you'll come in here and let me show you to my father."

The line went limp.

"What does that mean?" she whispered. "I forget what to do when the line goes limp. Pull in? Yes, yes, Daddy said, 'Keep that line taut.'"

Spinner dropped the rod and grabbed the line. She yanked it in hand over hand, pulling faster and faster to keep the tension on the charging fish. He swirled, not four meters away. The water broke into a shower of twilit bubbles, the line zagged, zigged—and went limp.

"I've lost him!—the big fish I was supposed to catch to beat the family record." She sat down and drooped her head.

Mark your answers to questions 28 through 32 in the section marked "Reading—Session 2" in your Student Response Booklet.

28. What is the purpose of the first paragraph?
    A. to describe the setting
    B. to explain the central conflict
    C. to foreshadow the outcome
    D. to introduce the main character

29. In paragraph 4, the phrase "The reel spun like a windmill in a hurricane" is an example of
    A. a simile.
    B. a metaphor.
    C. alliteration.
    D. hyperbole.

30. In paragraph 6, the author includes a description of the mountain to show the
    A. girl was afraid of a possible avalanche of stones.
    B. girl's fear changed how she saw her surroundings.
    C. girl's fear made her think a storm was coming.
    D. girl was afraid it would soon be getting dark outside.

Please go on to the next page.

31. Which word **best** describes Spinner's feelings at the end of the excerpt?

A. proud
B. disappointed
C. optimistic
D. envious

32. What is Spinner's motivation for her actions in the excerpt?

A. She enjoys going fishing.
B. She wants a relaxing vacation.
C. She wants her father's approval.
D. She enjoys meeting a challenge.

Please go on to the next page.

Reading
Session 3

This test session includes reading selections, multiple-choice questions, and a question for which you must write out your answer. After you read each selection, answer the questions about it in the spaces provided in your Student Response Booklet. You may not use a dictionary or any other reference tool during this session.

Read the poem "Joyrider" and then answer the questions that follow.

Joyrider

Storm-started
two thousand miles away,
her wave comes curling.

A connoisseur* of crests,
5 she waits to catch it
then nips the moment

takes off, knees bent
and swaying, fast, fast
swoops in to shore.

10 No wipeout this time.
She wades and waits again
for the next ecstatic waltz on water.

—Lillian Morrison

*connoisseur: expert

Please go on to the next page.

Mark your answers to questions 46 through 50 in the section marked "Reading—Session 3" in your Student Response Booklet.

46. The first line of the poem "Joyrider" refers to the
    A. curl of a wave.
    B. size of a wave.
    C. color of a wave.
    D. origin of a wave.

47. In line 4, when the poet says the surfer is a "connoisseur of crests," she means the surfer
    A. rides the crest of the wave.
    B. enjoys every wave she rides.
    C. loves to watch the waves curl over.
    D. knows how to choose the best waves.

48. In line 12, the word <u>ecstatic</u> means
    A. slow.
    B. joyful.
    C. endless.
    D. awkward.

49. What is the surfer doing at the end of the poem?
    A. wading to the beach to rest
    B. going back out to surf again
    C. waiting for the storm to end
    D. pausing to enjoy the moment

50. The poem "Joyrider" is **mostly** about the
    A. dangers of surfing.
    B. skills needed to surf.
    C. excitement of surfing.
    D. waves needed to surf.

Please go on to the next page.

Read this passage about recycling glass and then answer the questions that follow.

A Clear Choice

John Javna

Take a Guess.
How many times can you recycle a glass bottle?
***A)** Once* ***B)** 25 times* ***C)** An unlimited number of times*

You may not realize it, but there's something in your refrigerator that's so old, George Washington or Abraham Lincoln could have used it.

Is it last week's leftovers? That weird, moldy green stuff in a bowl? Nope. It's the *glass* in the bottles and jars.

Believe it or not, people have been using—and *recycling*—glass for almost 3,000 years! Now you can be part of that history by recycling *your* empty bottles and jars, too.

Recycling Facts

- Glass is usually made by mixing sand with a few other natural ingredients (soda, feldspar and limestone). The mixture is put into a very hot furnace and when it melts, it turns to glass. Heating the furnace takes a lot of energy.
- Glass can *also* be made by melting down *old* glass (such as bottles and jars). This is better for the Earth, because recycled glass melts at a lower temperature than new materials—so it takes less energy to heat the furnace.
- For example: Recycling just one bottle can save enough energy to light a 100-watt light bulb for 4 hours!
- Making glass from recycled jars and bottles creates less air pollution, too . . . and it uses fewer natural resources. For every ton (that's 2,000 pounds) of glass that gets recycled, we save a ton of the raw materials it would take to make new glass.

How to Recycle Glass

- When you finish with a bottle or jar, lightly rinse it out with water. (You don't have to wash it with soap.) Leftover food or drinks attract ants and other pests.
- Don't forget to take off caps or lids. They can't be recycled with the glass. (If they're metal, recycle them with aluminum or steel. If they're plastic, throw them out.)
- It's okay to leave on paper and plastic labels—they burn or blow off when the glass is recycled.
- "Neck rings"—the part of the bottle caps that are still on the bottlenecks—can be left on, too.
- Wash off sand and dirt from bottles you find in parks, beaches, etc. Even one little stone can ruin a whole load of recycled glass!

Recycling Tips

- Some recycling centers want you to keep different-colored glass (clear, brown, and green) in different recycling containers. Call your local center to find out *their* rules.
- Most glass bottles and jars can be recycled. *But you can't recycle windows, drinking glasses, vases, mirrors, or light bulbs.* They're made of different kinds of glass that can't be melted down with bottles and jars.
- Want to find out more about glass recycling? Write to *The Glass Packaging Institute*, 1627 K St. NW, Suite 800, Washington, DC 20006.

Answer: C. Glass can be recycled over and over and over and over . . .

Please go on to the next page.

Mark your answers to questions 51 through 55 in the section marked "Reading—Session 3" in your Student Response Booklet.

51. What is the **main** purpose of the question in the "Take a Guess" section?
    A. to convince the reader to recycle glass whenever possible
    B. to discover what the reader knows about recycling glass
    C. to emphasize that glass has been recycled throughout history
    D. to introduce the idea that the same glass can be recycled many times

52. According to the passage, what should be done with plastic caps or lids when recycling glass containers?
    A. Leave them on the glass containers.
    B. Remove them and throw them away.
    C. Recycle them with other plastic recyclables.
    D. Remove them and recycle them with metal recyclables.

53. Which glass object can be recycled?
    A. a drinking glass
    B. a windowpane
    C. a milk bottle
    D. a light bulb

54. Which sentence from the passage is **most likely** included to persuade the reader to recycle glass?
    A. "You may not realize it, but there's something in your refrigerator that's so old, George Washington or Abraham Lincoln could have used it."
    B. "Believe it or not, people have been using—and *recycling*—glass for almost 3,000 years!"
    C. "Glass is usually made by mixing sand with a few other natural ingredients (soda, feldspar and limestone)."
    D. "Recycling just one bottle can save enough energy to light a 100-watt light bulb for 4 hours!"

55. What is the **best** source of information for local rules concerning the recycling of colored glass?
    A. a recycling center in the community
    B. a Web site about recycling
    C. The Glass Packaging Institute
    D. The Environmental Protection Agency

Please go on to the next page.

This passage is from an article that appears on the Web site for the San Diego Zoo. Read the article and then answer the questions that follow.

So You Want to Be a Keeper?

It's hard to find someone who doesn't like animals, and many, many people want to work with them. So if you really want to pursue this career, how do you go about it? Here are answers to the frequently asked questions we get about becoming an animal keeper.

Q: Being a keeper looks like a lot of fun. Is it?
A: People often have the image of a keeper only holding and cuddling an adorable baby, such as a koala or cheetah. But there is much more to the job—animals are not just cute, cuddly things. They get sick, they bite, they die, they hurt each other, and they can hurt you, too. And the work can be hard, dirty, and tedious. You should have a realistic view of the job before making animal keeping your career objective.

Q: Is it easy getting a keeper position?
A: Like any other popular job, there are more applicants than open positions, especially when it comes to big zoos like the San Diego Zoo and San Diego Zoo's Wild Animal Park. Competition is stiff, and one must be persistent and patient before a position may even open up. It's not unusual for our Human Resources Department to receive dozens of applicants—often from existing Zoo or Park employees—for one animal care job opening. And those applicants still have to compete with applicants who are already keepers at other zoos around the world.

Q: How do I become an animal keeper?
A: There is no single way to become a keeper, but the more education and hands-on experience you have, the better.

Education—While you're in school, learn as much as you can in your science classes. In college, choose a degree program in animal-related fields like biology, zoology, botany, ecology, conservation science, or animal behavior. Take as many different courses in those areas as you can, and graduate with a Bachelor's degree in your chosen field. (Here's a BIG hint: the competition for jobs caring for animals is so strong that you really HAVE to have a college degree these days to be considered.)

Hands-on Experience—Find opportunities to work with animals. Some potential keepers have volunteered at the Zoological Society's Center for Reproduction of Endangered Species (CRES), assisting CRES scientists and technicians. Sometimes work-study opportunities are available for college students.

Q: What are some other ways to gain animal experience?
A: Some places to look for volunteer jobs or internships might be:

- Veterinary offices
- Animal training classes (does your dog need obedience training?)
- Local Humane Society
- Local Park Service
- Wildlife rehabilitation centers (like for wolves, bears, big cats, birds of prey, and even bats)

Please go on to the next page.

- Animal shelters
- Farms (for domestic animals, or even ostrich, llama, or butterfly farms)
- Pet breeders (those that breed specific kinds of dogs, cats, or horses)
- Horse stables and boarding facilities
- 4-H Clubs

Q: Does it help to work in another capacity at the San Diego Zoo, such as an entry-level position?
A: It certainly doesn't hurt. There are many instances of former employees of the Zoo and Park's gift shops, food service stands, or tour guide operations moving into animal care positions. Just remember, these people also had the proper educational background and may have even obtained some animal care experience through the Zoo's internal job loan program or hands-on experience working with animals.

Q: What type of person makes a good keeper?
A: Besides education and some experience, attitude and personality play big roles, as well as a good work ethic, a positive attitude about themselves and work, good communication skills with both people and animals, and the ability to be innovative enough to find solutions to keep the animals stimulated.

Q: Are there other jobs at a zoo that will allow me to work with animals?
A: There sure are! Veterinarians, animal health technicians, laboratory technicians, field researchers, research assistants, animal behaviorists, animal trainers, and zoo educators work directly with animals.

Q: I like animals and want to work at a zoo or aquarium, but not as a keeper. What other jobs are there?
A: If it's your dream to work at a zoo or aquarium, don't limit yourself to one thing. Find out what you're good at, and find a way to use those skills to help wildlife. You can get a college degree in lots of different fields and find a job at a zoo, aquarium, research station, or conservation program that needs your skills. Keep in mind that most people who work at a zoo don't work with animals, and only about 10 percent of the jobs that open up include contact with animals. Some job examples include: accountant, security officer, architect, horticulturist, secretary, mechanic, caterer, gardener, computer programmer, graphic designer, librarian, public relations or human resources staff member, merchandising buyer, or editor.

A zookeeper at the National Zoo in Washington, D.C., gives Indian elephant Shanthi a bath while her baby Kumari watches.

Please go on to the next page.

Mark your answers to questions 56 through 66 in the section marked "Reading—Session 3" in your Student Response Booklet.

56. What is the **main** purpose of the first paragraph?
    A. to explain where to find more information about jobs at the San Diego Zoo
    B. to suggest that too many people want to become animal keepers
    C. to introduce frequently asked questions about becoming an animal keeper
    D. to discourage unqualified people from applying to be animal keepers

57. How does the photograph of the zookeeper and the baby rhinoceros **most likely** give the wrong impression of animal keeping?
    A. by showing a keeper with a cute baby animal
    B. by suggesting that animal keepers work closely with animals
    C. by suggesting that animals enjoy being fed by their keepers
    D. by showing a keeper using a bottle to feed an animal

58. In paragraph 2, what does <u>cuddly</u> mean?
    A. adorable
    B. helpless
    C. huggable
    D. amusing

59. In paragraph 5, why are the words BIG and HAVE capitalized?
    A. to stress the courses applicants must take
    B. to emphasize the need for a college degree
    C. to encourage potential applicants to study hard
    D. to warn that many people want to be animal keepers

Use the dictionary entry below to answer question 60.

> **capacity** *n* **1.** maximum amount that can be contained in a space **2.** ability to receive or contain **3.** ability or power to do something **4.** specific position or function

60. In paragraph 8, which meaning of <u>capacity</u> is used?
    A. definition 1
    B. definition 2
    C. definition 3
    D. definition 4

Please go on to the next page.

61. In paragraph 9, the word innovative is used to describe a person who

A. learns fairly quickly.
B. has a positive attitude.
C. can think up new ideas.
D. has a strong work ethic.

62. Which activity would **most likely** be an acceptable way for a zookeeper to keep an animal stimulated or interested in its surroundings?

A. creating loud noises to frighten the animal
B. allowing zoo visitors to feed their snacks to the animal
C. housing a natural enemy in a nearby area
D. hiding food in different places so the animal has to find it

63. The author of this article would **most likely** agree that

A. it is foolish to make animal keeping your career objective.
B. an animal keeper's job has more negatives than positives.
C. many people have unrealistic ideas about an animal keeper's job.
D. a qualified applicant would have no trouble finding a job as an animal keeper.

64. Which word **best** describes the author's attitude in this article?

A. sarcastic
B. helpful
C. indifferent
D. sympathetic

65. How is the information organized in this article?

A. by cause and effect
B. by question and answer
C. by problem and solution
D. by comparison and contrast

66. Which resource would be **best** to use for finding additional information about becoming an animal keeper?

A. the Web site of the American Association of Zoo Keepers
B. an episode of the TV show "Animal Planet"
C. the book *The Parade of the Animal Kingdom*
D. the "A" volume of the *World Book Encyclopedia*

Please go on to the next page.

Write your answer to question 67 in the space provided for it in your Student Response Booklet.

67. Explain which qualities are **most** important to be a good animal keeper. Use information from the article to support your answer.

Please STOP. Do not go on to the next page.

NO TEST MATERIAL
ON THIS PAGE

Mathematics
Session 1 (Calculator)

This test session includes multiple-choice questions and a question for which you must show your work or write out your answer. You may use a calculator during this session.

Mark your answers to questions 1 through 24 in the section marked "Mathematics—Session 1 (Calculator)" in your Student Response Booklet.

1. Brian is comparing prices of dress shirts in 5 stores. The prices are shown below.

   $13.99 $17.49 $14.69 $18.29 $14.29

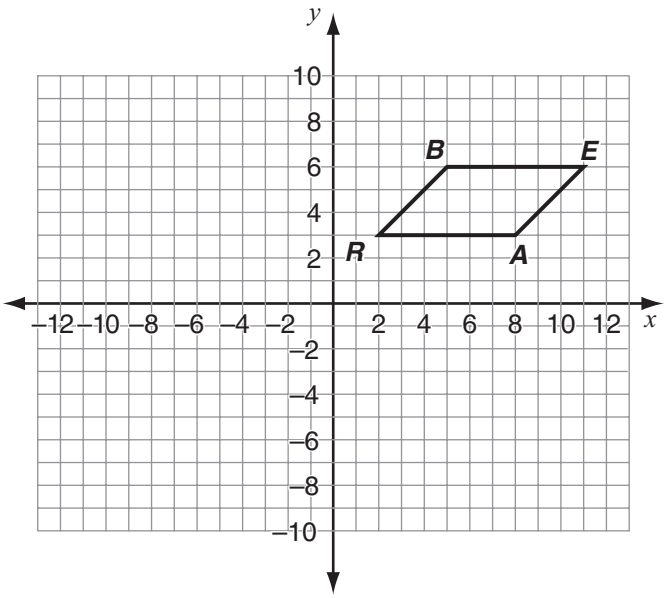
   What is the mean price of a shirt?

   A. $13.99
   B. $14.69
   C. $15.75
   D. $16.14

2. Which word can be used to describe **all** equilateral triangles?

   A. scalene
   B. right
   C. obtuse
   D. acute

Use the graph below to answer question 3.



3. Parallelogram *BEAR* is reflected across the *y*-axis. What are the coordinates of the image of vertex *E*?

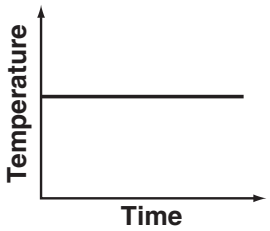
   A. (–11, 6)
   B. (11, –6)
   C. (–6, –11)
   D. (–11, –6)

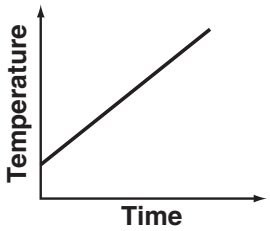
Please go on to the next page.

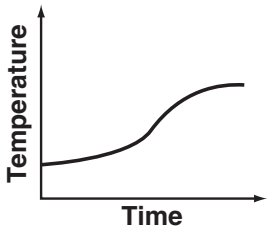
4. Sandy took the temperature of the water in a pond during the day. The chart below shows the temperature of the water every two hours.

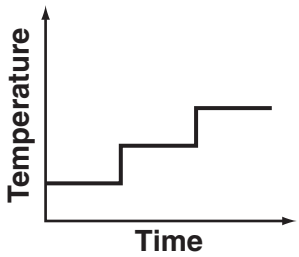
Time	Temperature (°F)
8 A.M.	50
10 A.M.	55
12	65
2 P.M.	80
4 P.M.	85

Which graph best represents the temperature of the water during that day?

A.


B.


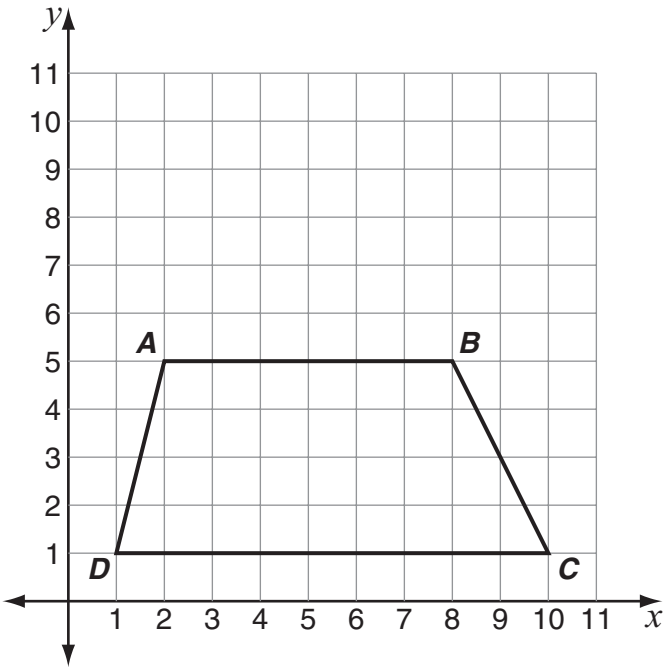
C.


D.


5. One evening, the temperature in Montreal was 5° Celsius. Which of the following is the **best** estimate of this temperature in degrees Fahrenheit?

A. 20° Fahrenheit
B. 40° Fahrenheit
C. 60° Fahrenheit
D. 80° Fahrenheit

Use the graph below to answer question 6.



6. What is the length of side $\overline{BC}$, to the nearest hundredth?

A. 2.45 units
B. 3.46 units
C. 4.12 units
D. 4.47 units

Please go on to the next page.

7. A diagonal of a square divides the square into two triangles. Which two words describe these triangles?

A. right, isosceles
B. right, equilateral
C. acute, isosceles
D. acute, equilateral

8. A cookie recipe uses 3 cups of flour to make 4 dozen cookies. Colin wants to make 7 dozen cookies. What proportion could he solve to determine how much flour he needs?

A. $\frac{3}{4} = \frac{7}{?}$

B. $\frac{3}{7} = \frac{4}{?}$

C. $\frac{3}{4} = \frac{?}{7}$

D. $\frac{4}{3} = \frac{?}{7}$

9. Loretta has a bag containing 11 marbles. Of these marbles, 2 are white, 3 are red, and 6 are blue. If she picks a marble out of the bag at random, what is the probability that the marble is **not** red?

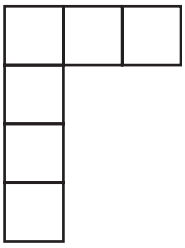
A. $\frac{3}{11}$

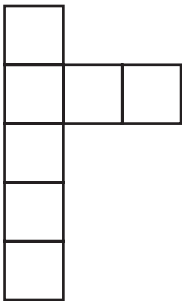
B. $\frac{8}{11}$

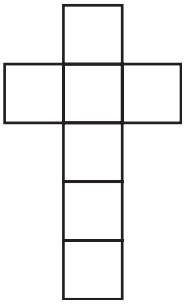
C. $\frac{8}{22}$

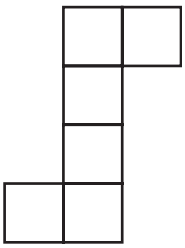
D. $\frac{3}{22}$

10. Which net could be folded into a cube?

A.


B.


C.


D.


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11. The table below shows a pattern.

n	*k*
1	1
2	4
3	7
4	10

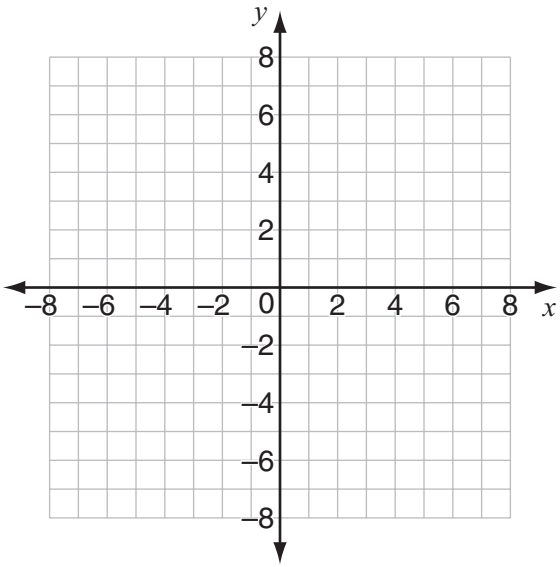
If this pattern continues, what is the value of k when $n = 10$?

A. 28
B. 29
C. 30
D. 31

12. Kylee tested 12 batteries and found that 2 were defective. What percent of the batteries were defective?

A. 2%
B. $16\frac{2}{3}\%$
C. 20%
D. $33\frac{1}{3}\%$

You may use the grid below to answer question 13.



13. Triangle *ELM* was transformed into triangle *E'L'M'*. The coordinates of the vertices of the triangles are shown below.

E (2, 4)	***E'*** (4, –1)
L (4, 5)	***L'*** (6, 0)
M (6, 3)	***M'*** (8, –2)

Which translation describes the relationship between the two triangles?

A. right 5, down 2
B. left 5, up 2
C. right 2, down 5
D. left 2, up 5

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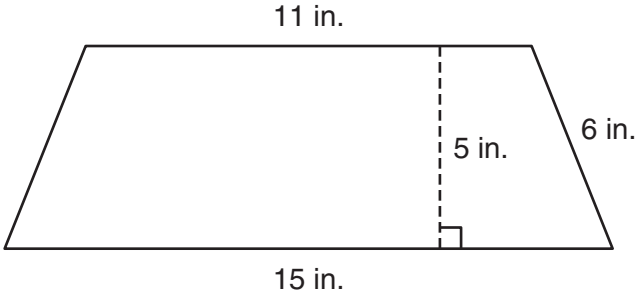
14. The lunch trays at a school cafeteria are shaped like trapezoids as shown below.



What is the area of the lunch tray?

A. 65 square inches
B. 75 square inches
C. 78 square inches
D. 90 square inches

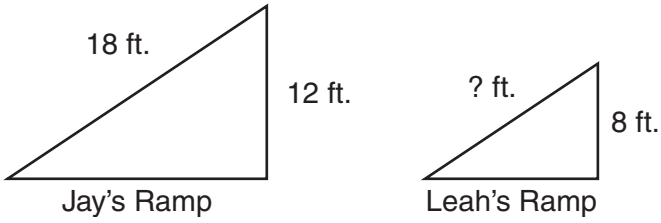
15. A restaurant owner wants to estimate the number of customers who will choose each type of side order. She took a survey of 50 customers. The results are shown in the table below.

Type of Side Order	Number of Customers
French fries	32
Baked potato	11
Coleslaw	7

Based on the results in the table, about how many of the next 300 customers will choose French fries as a side order?

A. 100
B. 150
C. 160
D. 190

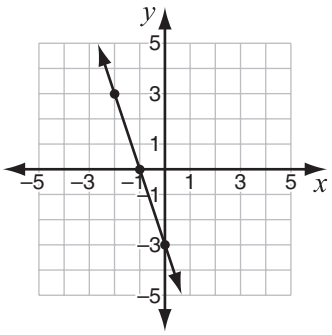
16. Leah is building a skateboard ramp that is similar to Jay's skateboard ramp, as shown below. Jay's ramp has the following dimensions: length = 18 feet and height = 12 feet.



Leah wants the height of her ramp to be 8 feet. What should the length of Leah's ramp be if it is **similar** to Jay's ramp?

A. 16
B. 14
C. 12
D. 9

Use the graph below to answer question 17.

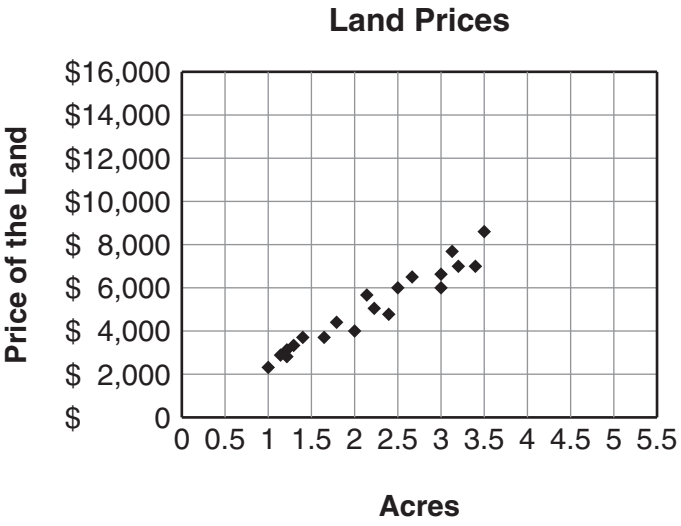


17. What is the equation of this line?

A. $y = -3x - 3$
B. $y = -3x + 3$
C. $y = 3x + 3$
D. $y = 3x - 3$

Please go on to the next page.

18. Mrs. Lee researched the prices of land for sale in her area. She found the graph shown below.



Mrs. Lee wants to sell 5.2 acres of land. Based on the information in the graph, at about what price should she sell her land?

A. $ 8,000

B. $11,000

C. $15,000

D. $16,000

19. For a science experiment, Nori drops a ball and then records the height of each of its first four bounces. Her data are shown below.

	1st bounce	2nd bounce	3rd bounce	4th bounce
Height in cm	81	27	9	3

What rule describes the change in height from one bounce to the next?

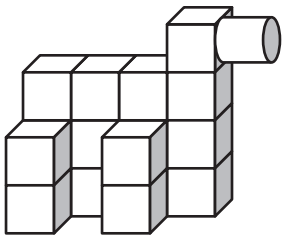
A. subtract 54

B. subtract 6

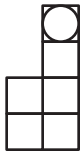
C. divide by 9

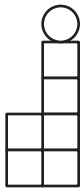
D. divide by 3

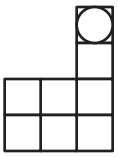
Use the figure shown below to answer question 20.

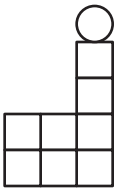


20. Which diagram shows this figure viewed from the right?

A. 

B. 

C. 

D. 

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21. Look at the expression below.

$$3(2c + 5)$$

Which expression is equivalent?

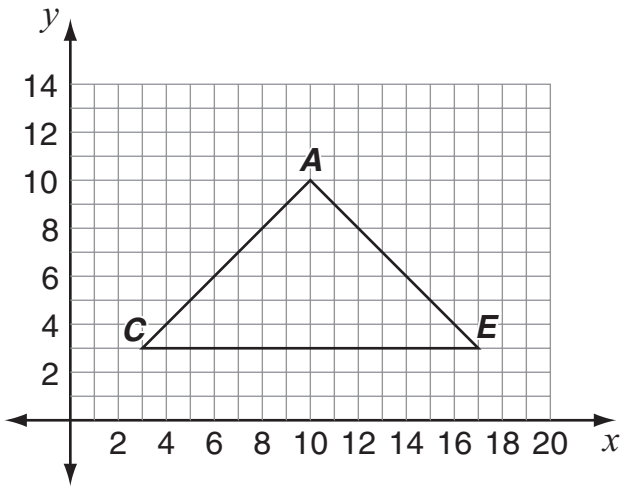
A. $5c + 8$

B. $5c + 15$

C. $6c + 5$

D. $6c + 15$

22. Look at the triangle below.



What is the area of triangle *ACE*?

A. 30 square units

B. 49 square units

C. 70 square units

D. 98 square units

23. A city tennis court can be rented for a \$5 fee plus \$2 per hour of use. Which expression can be used to find the cost of renting the tennis court for x hours?

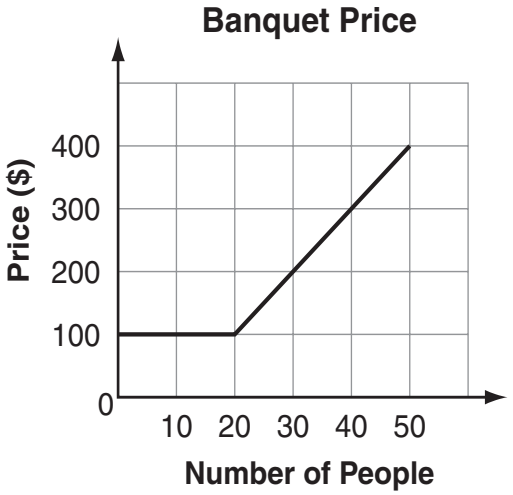
A. $5 + 2x$

B. $5x + 2$

C. $5 + \frac{x}{2}$

D. $5 + \frac{2}{x}$

24. Dena made the graph below to show the price she charges for preparing food for a banquet.



How does Dena compute the price she charges for a banquet?

A. She charges \$7.50 per person.

B. She charges \$8.00 per person.

C. She charges \$100 for the first 20 people and \$1 for each additional person.

D. She charges \$100 for the first 20 people and \$10 for each additional person.

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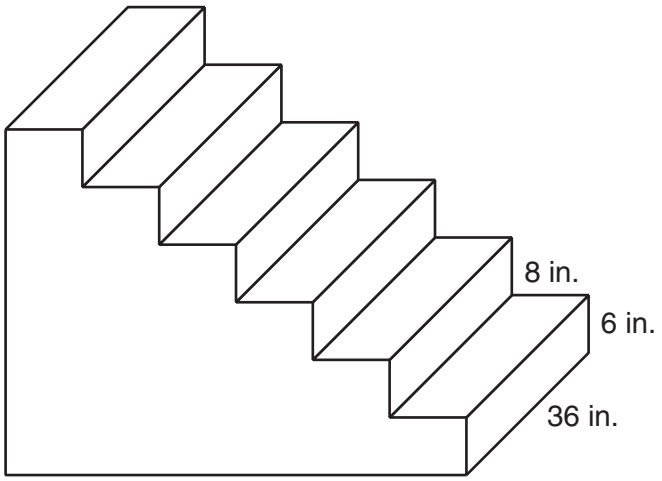
Write your answer to question 25 in the space provided for it in your Student Response Booklet. Show all of your work.

25. The staircase shown below is made entirely out of concrete.



There are 6 steps. Each step has the same dimensions.

a. What is the height, in feet, of the entire staircase?

b. What is the volume of the bottom step in cubic feet? Show or explain how you found your answer.

c. What is the volume of the entire staircase in cubic feet? Show or explain how you found your answer.

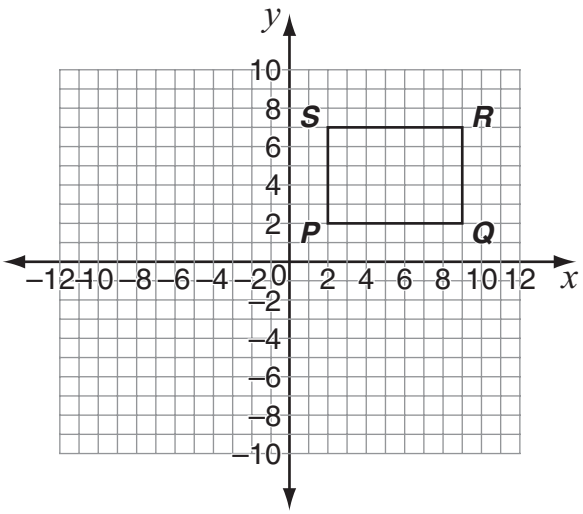
Please STOP. Do not go on to the next page.

Mathematics
Session 2A (Calculator)

This test session includes multiple-choice questions and a question for which you must show your work or write out your answer. You may use a calculator during this session.

Mark your answers to questions 26 through 33 in the section marked "Mathematics—Session 2A (Calculator)" in your Student Response Booklet.

Use the graph below to answer question 26.



26. What are the coordinates of the image of vertex *R* when rectangle *PQRS* is rotated 90° clockwise about vertex *P*?

    A. (9, –7)

    B. (–5, –3)

    C. (2, –5)

    D. (7, –5)

27. The student council president wants to ask a group of students to take a survey about school social events. Which method would give results that **best** represent the student body?

    A. Ask for 20 volunteers to take the survey.

    B. Pick 20 honor roll students to take the survey.

    C. Mix all students' names in a hat and pick 20 to take the survey.

    D. Ask 20 students who live near the president to take the survey.

28. Which container of juice has the lowest cost per unit?

    A. one gallon for $3.99

    B. one half-gallon for $1.99

    C. one quart for $1.09

    D. one pint for $0.59

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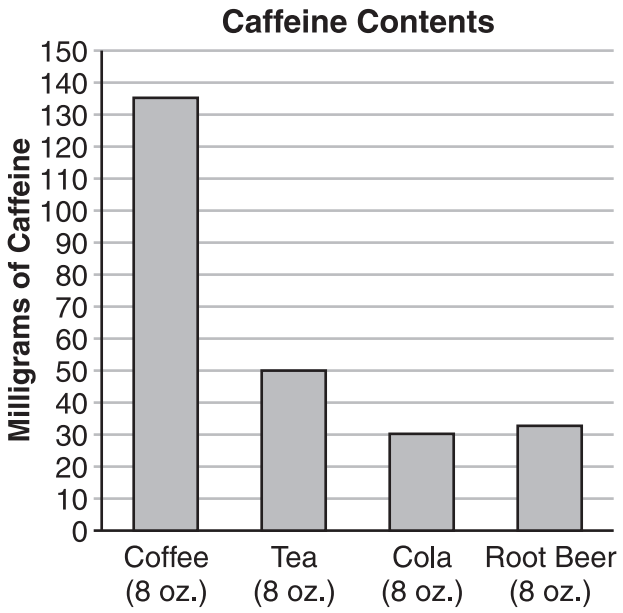
29. Rafe graphed the amount of caffeine in 8 ounces of some beverages.



Which statement is correct, according to the data in the graph?

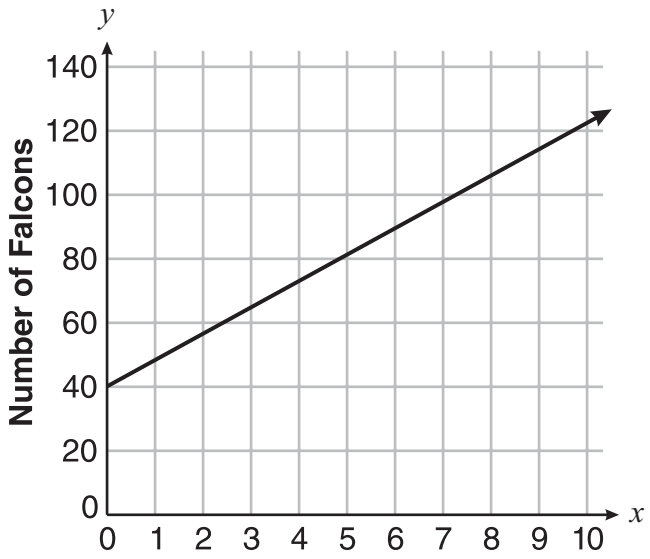
A. Coffee has more than five times as many milligrams of caffeine per ounce as root beer.

B. Coffee has more than three times as many milligrams of caffeine per ounce as tea.

C. Tea has less than one-fourth as many milligrams of caffeine per ounce as coffee.

D. Tea has less than twice as many milligrams of caffeine per ounce as root beer.

30. A scientist studying the population of a species of falcon in a national park made the graph below.



What information does the y-intercept of the graph provide about the falcon population?

A. There were about 40 falcons when the study began.

B. The study lasted 10 years.

C. The population is growing by approximately 8 falcons a year.

D. There are currently about 125 falcons.

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NO TEST MATERIAL
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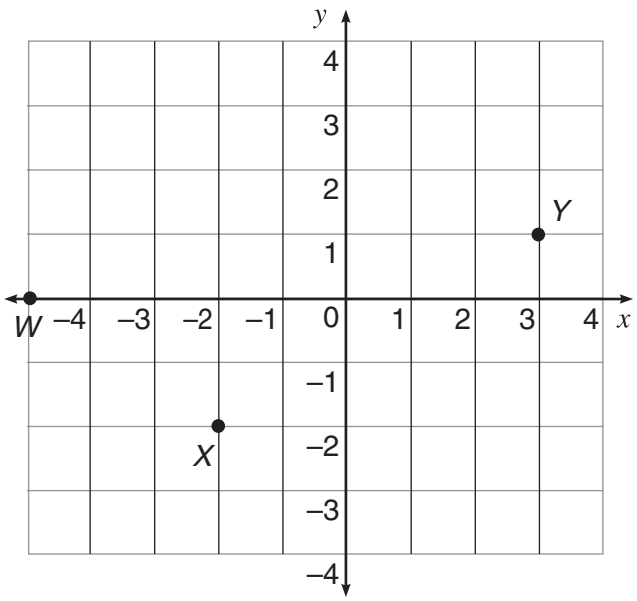
Mathematics
Session 2B (No Calculator)

This test session includes multiple-choice questions and questions for which you must show your work or write out your answer. You may NOT use a calculator during this session.

Mark your answers to questions 35 through 41 in the section marked "Mathematics—Session 2B (No Calculator)" in your Student Response Booklet.

Use the coordinate grid below to answer question 35.



35. Which pair of coordinates should be assigned to a point Z so that $WXYZ$ is a parallelogram?

A. (–2, 2)

B. (–2, 3)

C. (0, 2)

D. (0, 3)

36. Which equation is equivalent to $a+b=c$?

A. $c-b=a$

B. $b=a+c$

C. $a-c=b$

D. $a=c+b$

37. A unit of measure called the grain is used to measure the weight of very small items. One grain is 0.002285 ounce. Which expression shows the number of ounces in a grain in scientific notation?

A. 2.285×10^{2}

B. 2.285×10^{-2}

C. 2.285×10^{3}

D. 2.285×10^{-3}

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Mathematics
Session 3 (No Calculator)

This test session includes multiple-choice questions and questions for which you must show your work or write out your answer. You may NOT use a calculator during this session.

Mark your answers to questions 44 through 64 in the section marked "Mathematics—Session 3 (No Calculator)" in your Student Response Booklet.

44. Michelle has a summer job. She earns \$6.75 per hour plus a \$100 bonus if she stays the entire summer season. Which expression can be used to find how much money Michelle will earn if she works h hours and stays the entire summer season?
    A. $106.75 + h$
    B. $106.75h$
    C. $6.75h + 100$
    D. $6.75 + 100h$

45. What is the rule for the pattern shown in the table below?

x	*y*
1	2
2	5
3	10
4	17

    A. $y = 3x - 1$
    B. $y = 4x - 2$
    C. $y = 2x^2$
    D. $y = x^2 + 1$

46. A fruit punch recipe that serves 8 people calls for $2\frac{1}{2}$ cups of pineapple juice. How many cups of pineapple juice are needed to make enough fruit punch to serve 20 people?
    A. 8
    B. $7\frac{1}{2}$
    C. $6\frac{1}{4}$
    D. 6

47. The approximate distance between the Sun and the planet Jupiter is 778 million kilometers. What is this distance expressed in scientific notation?
    A. 778×10^6 km
    B. 77.8×10^7 km
    C. 7.78×10^8 km
    D. 7.78×10^6 km

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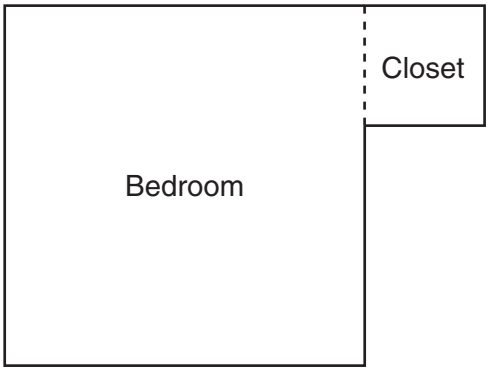
48. A closet and a bedroom are each in the shape of a square, as shown below.



Not to scale

The length of one side of the closet is $\frac{1}{3}$ the length of one side of the bedroom. Carpet is sold by the square foot. How does the amount of carpet needed for the closet compare to the amount needed for the bedroom?

A. $\frac{1}{9}$ as much is needed

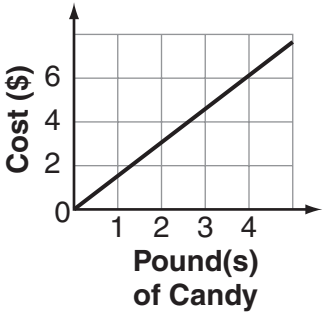
B. $\frac{1}{6}$ as much is needed

C. $\frac{1}{3}$ as much is needed

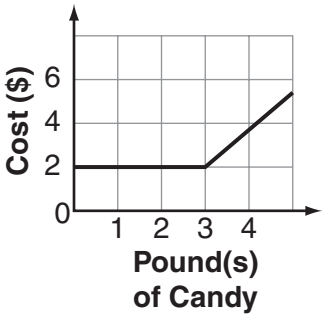
D. $\frac{1}{2}$ as much is needed

49. Nick's Shop sells candy with a gift basket. The gift basket costs \$2 and the candy costs \$1.50 per pound. Which graph **best** represents the cost of buying candy with a gift basket?

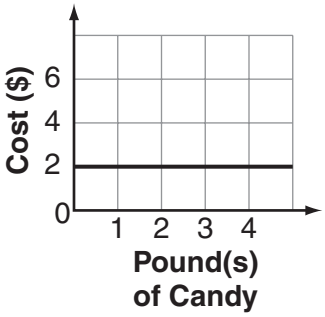
A.



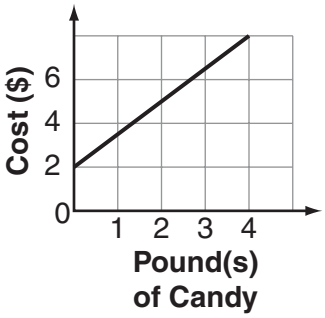
B.



C.



D.



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50. Greenland is a large island northeast of Canada. Approximately 81% of Greenland is covered with ice year-round. Which fraction is closest to 81%?

A. $\frac{3}{4}$

B. $\frac{4}{5}$

C. $\frac{17}{20}$

D. $\frac{21}{25}$

51. What is the value of this expression?

$$20 - (5 - 2)^2 \bullet 2$$

A. 2

B. 8

C. 22

D. 28

Use the following expression to answer question 52.

$$(24 \times 5) + (24 \times 15)$$

52. Which expression is equivalent?

A. $24(5 + 15)$

B. $5(24 + 10)$

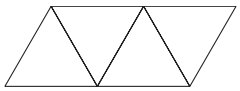
C. $24(5 \times 15)$

D. $5(24 + 3)$

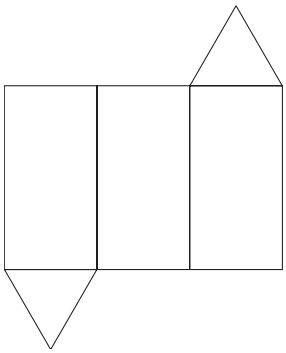
53. Which net can be used to form a triangular prism?

A.

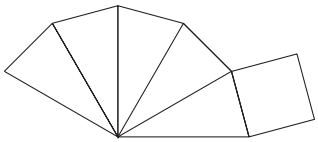
B.



C.



D.



54. Kira's car holds 12 gallons of gas when full. On average, the car gets 30 miles per each gallon of gas. About how many miles will Kira be able to travel on a **quarter** of a tank of gas?

A. 30 miles

B. 90 miles

C. 180 miles

D. 360 miles

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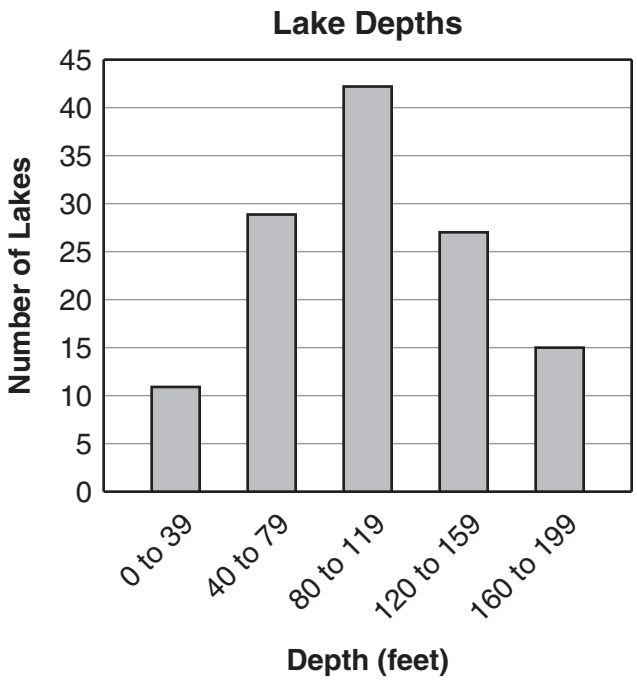
55. *Lakes Living* magazine included this graph in an article about the depths of 124 different lakes.



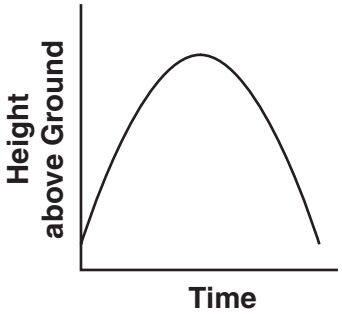
About what percent of the lakes are less than 80 feet deep?

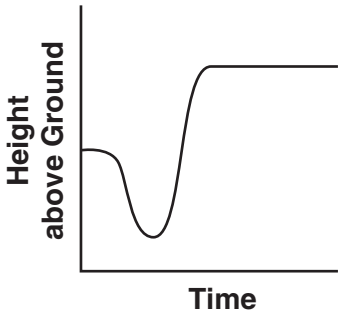
A. 30%
B. 40%
C. 50%
D. 60%

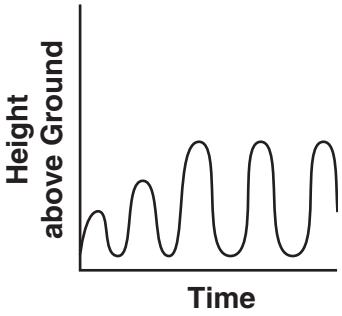
56. Which expression has the least value?

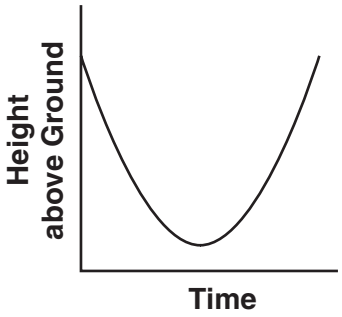
A. $12 + \sqrt{4}$
B. $12 - \sqrt{4}$
C. $12 \times \sqrt{4}$
D. $12 \div \sqrt{4}$

57. Kyle is swinging on a playground swing. Which graph below could show Kyle's height above ground during the first minute after he starts swinging?

A.


B.


C.


D.


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58. What is the prime factorization of 36?

A. $2^3 \times 3^2$
B. 4×3^2
C. $2^2 \times 9$
D. $2^2 \times 3^2$

59. The equation below relates the length in inches, y, of a candle to the number of minutes, x, that the candle has been burning.

$$y = -0.1x + 9$$

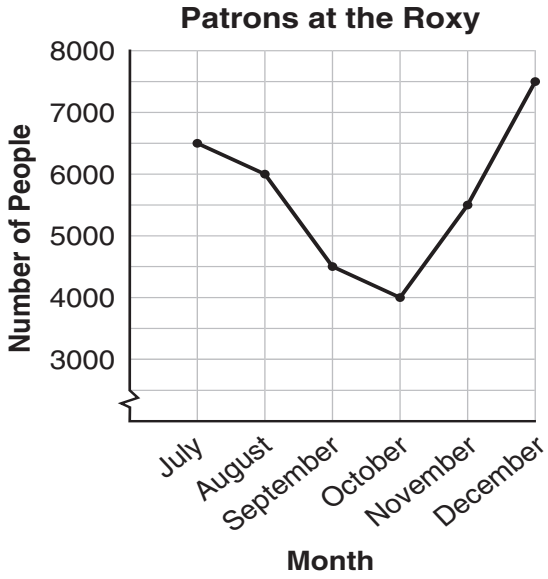
According to the equation, which of the following is true about the candle?

A. It shrinks 0.1 inch in 1 minute.
B. It shrinks 1 inch in 0.1 minute.
C. It shrinks 0.1 inch in 9 minutes.
D. It shrinks 9 inches in 0.1 minute.

60. Leta has a babysitting job. Her rates are \$5 per hour before midnight and \$6 per hour after midnight. Which expression represents her earnings if she works b hours before midnight and a hours after midnight?

A. $(5 + b) + (6 + a)$
B. $(5 + a) + (6 + b)$
C. $5a + 6b$
D. $5b + 6a$

61. The graph below shows the number of people who went to The Roxy Theater to see a movie each month for six months.



In which month was there the greatest decrease in the number of moviegoers from the previous month?

A. August
B. September
C. October
D. December

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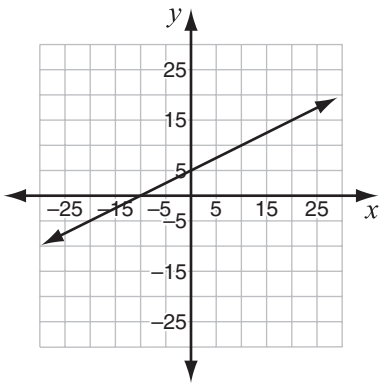
Use the graph below to answer question 62.



62. What is the y-intercept of this line?

A. –10
B. –5
C. 5
D. 10

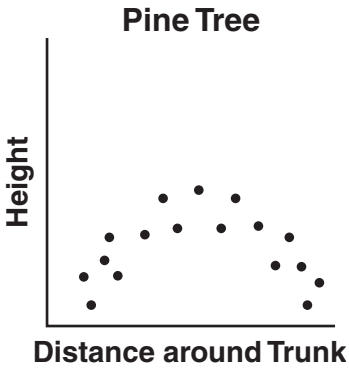
63. Mr. Garcia celebrated his 40th birthday by taking his 8-year-old son and 6-year-old daughter to the movies. The chart below shows the ticket prices.

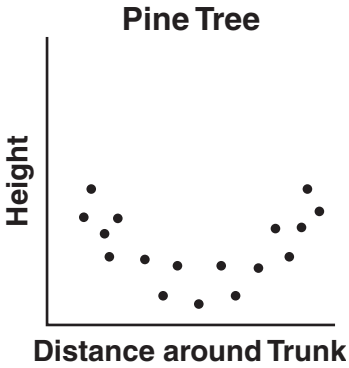
Adult	$8.75
Child (12 and under)	$5.50
Senior (55 and over)	$5.00

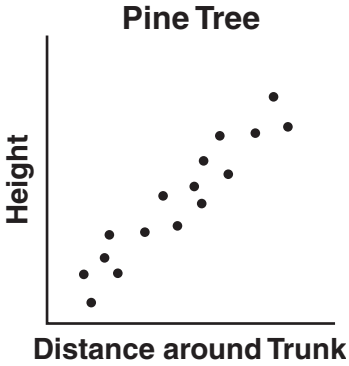
What was the total cost of the tickets for Mr. Garcia and his two children?

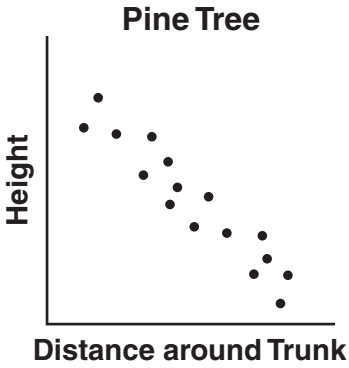
A. $23.00
B. $19.75
C. $19.25
D. $18.75

64. Which scatter plot shows the **most** likely relationship between the height of a pine tree and the distance around the pine tree's trunk?

A.


B.


C.


D.


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Write your answers to questions 65 through 67 in the spaces provided in your Student Response Booklet. Show all of your work.

65. What is the value of the expression below if $a = -2$ and $b = 5$?

$$ab + a^2$$

66. What is 140% of 20?

67. Solve for x.

$$3x + 3 = -9$$

Please go on to the next page.

Write your answer to question 68 in the space provided for it in your Student Response Booklet. Show all of your work.

68. The following sandwich choices are offered at Victor's Sandwich Bar.

Victor's Sandwich Choices

Bread	Meat	Cheese
Wheat	Turkey	American
Rye	Chicken	Swiss
	Beef	

a. How many different sandwich choices are possible if every choice consists of one type of bread, one meat, and one cheese? Show your work or explain how you found your answer.

b. A Deluxe Sandwich consists of one type of bread, **two** meats, and one cheese. How many different Deluxe Sandwich choices are possible? Show your work or explain how you found your answer.

Please STOP. STOP