Student Name $\qquad$
Teacher Name $\qquad$
School $\qquad$ A System $\qquad$


# Tennessee Comprehensive Assessment Program <br> Achievement Test ~ Grade 8 

## Practice Test

## PEARSON

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## Introduction

## What is the TCAP Achievement Test?

The TCAP Achievement Test is a multiple-choice test designed to measure student achievement in certain skills in four content areas: Reading/Language Arts, Mathematics, Science, and Social Studies. The questions in this practice test are examples of items used in the actual test.

## What are the questions testing?

Questions are written to test student performance in state content standards. The State Content Standards and Performance Indicators were developed by the Tennessee Department of Education. These Standards and Performance Indicators are listed on the State Department of Education Web site at http://www.state.tn.us/education/curriculum.shtml.

## Who will be tested?

Students in grades 3 through 8 will be tested.

## How long will the tests take?

The length of the tests will vary, depending on the grade level. The time limits are generous and allow most students time to finish. Extended time limits only apply to students who are eligible for special or English Language Learner (ELL) accommodations.

## How will the tests be scored?

The test answers will be machine scored. Results from the test provide information about how well students performed on the content being tested.

## May calculators be used?

Calculators may be used on Part 1 and 2 of the mathematics portions of the TCAP Achievement Test (grades 3-8) as per system policy.

## Which test accommodations may be used?

The TCAP Achievement Test may be administered using various procedures that are used during the student's daily educational program. Certain conditions must be met for students to be eligible for Special and ELL accommodations.

## What is the purpose of the practice test?

In a classroom learning session, these questions can be used to prepare students for the actual test. Teachers can use the practice test to help familiarize students with the format of test questions and how the actual test will be administered. This practice test can also be used to inform parents of the type of test their children will be taking.

## Here are some tips for preparing students for the test.

Remind students to:
Relax: It is normal to be somewhat anxious before the test. Remember that the score is only one of a number of measures of performance.

Listen: Listen to and read the test directions carefully.
Plan Use of Time: First, answer all the questions you are sure about. Do not spend too much time on any one question. If a question seems to take too long, skip it and return to it later if you have extra time.

Pause and Think: If you are not sure how to answer a question, carefully read it again. Rule out answer choices that you know are incorrect and then choose from those that remain.

## Reading/Language Arts



## Part 1

## Directions Read both stories. Then answer Numbers 1 through 7.

# The Champion of Miller's Lane 

by Michael David Hardy

Derek Barnes adjusted the straps of his helmet, straightened his sunglasses, and pulled on his black leather gloves, stretching his fingers for a snug fit.

Derek, the defending champion of the Miller's Lane bike race, looked to his left at the crowd of eager bikers hoping to strip him of his title.
"You ready, D.B.?" asked Joey Mains, Derek's longtime friend and neighbor.
"You bet! We couldn't have practiced any harder." Derek smiled and pushed the hair from his eyes.
"Yeah," Joey agreed. "And this time I'm gonna beat you."
Derek just laughed. "We'll see. Let's do it."
Joey slipped a pair of motorcycle goggles over his eyes. He turned to Derek, who was trying hard not to laugh. "What? So maybe I like wearing goggles, OK?" Derek smiled and gave Joey the "thumbs up." Joey returned the smile.
"On your mark," announced the starter. "Get set . . . Go!" The small crowd cheered as the bikers bolted from the line.

The pack of racers stayed close together as they left the school and
 sped along the Congress Street bike
lane. Derek, pedaling comfortably, positioned himself just behind the leaders and waited for the right time to move.

Derek gripped his handlebars tightly, pumping the sleek, red bicycle past the bus stop that marked the halfway point of the two-mile race. He glanced to his right and gave Joey a nod.

Both boys burst from the pack and quickly overtook the leaders, who had used much of their energy in the early going. Derek and Joey pedaled furiously as they battled for the lead. Derek got the inside track as they screamed around Buttermilk Curve, and he pulled to the front.

The panting racers, now forming two packs rather than one, quickly approached the covered footbridge. The bridge's wooden planks rumbled as the bikers zipped across the narrow span. Derek could feel the thumping of the uneven boards vibrate up his arms. This part of the course always made his ears tickle.

Bolting from the bridge into the hot afternoon sun, Derek leaned hard into the sharp right turn, looking over his shoulder to check the competition. Joey and two others were hot on his trail like hounds after a fox. Most of the others had fallen behind.

Derek barely slowed down as he turned onto Miller's Lane and flew past a small group of kids who had gathered to watch the racers go by. He was on the homestretch now, but he knew he couldn't let up.

Sweat stung his eyes as he steered his bike around the last sharp corner before Pop's Dairy Delight and the finish line. Again he turned his head to check the other riders. He had put a little more distance between himself and Joey, who seemed to have second place all but wrapped up.

Suddenly Joey's bike started shaking uncontrollably. Derek watched in horror as it lurched to the right and hit the curb sharply, launching Joey through the air like a football.

The finish line was just ahead, but Derek slammed on his brakes, leaving a long, black tire mark on the pavement. He spun the bike around and went like a shot back up the street.
"Joey! Hey, Joey, are you OK?" Derek jumped off his bike and let it fall to the ground. Joey sat on the sidewalk, holding his scraped right arm.
"Not exactly like we practiced was it?" Joey joked.
"Not exactly," Derek said.
"Man, you really had us beat, D.B.," Joey said. "Thanks for coming back to help."
"No sweat," Derek said, patting Joey's shoulder. "We'll get 'em next year."
"The Champion of Miller's Lane" by Michael David Hardy, from Highlights for Children, July/August 1992, copyright © 1992 by Highlights for Children, Inc. Columbus, Ohio. Used by permission.

# If at First You Don't Succeed, Try, Try Again 

by Hannah Blau<br>Illustrated by Claire O'Neill Sanger

The story below is about a girl named Izzy who is practicing for a big race. She gets encouragement from her older sister Natalie, and her friend Jessie.

Izzy and her sister, Natalie, stepped onto the asphalt at Bergman's Running Track on Norm Street. This was Izzy's favorite time of day. Quiet. The sun was rising. Izzy began to run, slowly at first, then speeding up. By the time she reached Natalie again she was at full speed.
"Time?" asked Izzy.
"Two-thirty," replied Nat.
"Yes!" Izzy exclaimed. "One more time."
The big race, three miles, was three weeks away-so far yet so near. Izzy spent afternoons practicing with her teammates. She practiced at the track near her house on Saturdays. Natalie, who raced for her high school, went along. Nat made Izzy feel confident. She was pretty and kind. Izzy admired her. She was a streak when she ran yet she was so happy and carefree. She would never be like Nat but oh how she wished. Izzy was also a little competitive with Nat. Izzy sort of thought it was good to be a little competitive. Maybe.

For the next hour, Izzy pushed herself to beat her best time. She loved running and the sensation of wind against her face at top speed. But she also wanted to win.
"Let's stop for a drink," Natalie suggested.
Izzy was glad. She was hot and sweaty. It was not an uncomfortable feeling, just a little feeling saying "mission accomplished." They headed to Brooks convenience store, where she bought a bottle of water. Then they walked up Norm Street towards home.

Every Saturday, Izzy kept to the same routine: she got up with her sister at five A.m., worked out at the track until seven, and returned home a half hour later. At ten, her best friend Jessie would come by. During those hours, Izzy amused herself by trying to watch a movie (Harry Potter), or reading a book (Harry Potter) or fitting together the pieces of a puzzle (Harry Potter), though she could hardly pay attention. Finally, ten o'clock came and so did Jessie. She tapped out the secret knock, although it wasn't very secret anymore.

The door swung open and the two friends gave each other a quick hug. They grabbed some Power Bars and left for the pool. That was how it went every Saturday. Izzy liked it.

It was the last Saturday before the race. Jessie had decided to join Izzy and Natalie for their Saturday routine.
"On your mark, get set, go!" instructed Natalie.

Izzy and Jessie ran and ran. On this morning, Izzy didn't notice the wonderful silence or the beautiful sunrise.
"Time?" Izzy breathed after finishing twelve hard laps, hopping from one foot to the other.
"Thirty-five minutes flat," Natalie replied.
"Not bad for three miles," Jessie said, trying to laugh. She was trying to be funny but Izzy could tell she was worrying about the race.

They practiced for another hour, trying. Izzy and Jessie were pleased. Better.
"You've got a whole week to practice," Natalie said. Her words were reassuring, but seven days didn't seem enough.

When they got home Izzy and Jessie were exhausted. No swimming.

Izzy's time was improving, but butterflies were beginning
 to form in her stomach. They came flying in as the day drew nearer. And finally just when there was no room for another butterfly, not even a moth, it was time.

Izzy and Jessie arrived twenty minutes early, as did the rest. The girls greeted each other with chatter. They warmed up alongside the track.

Parents, teachers and friends arrived. Then noise.
"I'm scared," Izzy whispered to Natalie, who stood with her.
"Don't worry, you'll do fine," she replied.
Izzy took her place on the track.
The whistle blew.
Before Izzy could think, her legs were carrying her. Going, going, Izzy felt so tired and she began to slow. It seemed like forever before the finish line came into view. And it seemed even longer before she crossed it. Everyone else was there already, it seemed.

She had failed.
Izzy had thought she was a good runner, and now what? Should she quit? She sat down with the rest of her team. She couldn't hear the loudspeaker as it called out the winners. Tears pressed hot behind her eyes. She looked down. This was more than embarrassing.

Weeks went by, races were missed. Practice didn't go well either. Nothing could comfort Izzy. She hadn't run for days. You'd have to be very smart to think of anything that would upset Izzy more than this, but your guess would probably be wrong anyway.

Almost every day Natalie would ask, "Are you sure you don't want to run today?"

And Izzy would always say, "Just leave me alone!"
One day, Jessie sat down beside Izzy in her room to talk.
"We've been losing all this time, and if you don't start coming to practices today we won't get to go to the championship race. You need to be back. And I miss you with me."
"Huh?" Izzy was stunned.
"You're a great runner, Izzy."
"But I let you down," Izzy sighed, "didn't I?"
"You didn't. You were nervous. Everyone has those days. Don't let a silly little race tear you away from something you love," Jessie explained reassuringly.
"Really?" Izzy asked excitedly.
"Yeah," was Jessie's calm answer.
Izzy felt like crying.
"Thanks," was all she could say.
"So will you win?" asked Jessie. Her tone had changed. Now it was determined.
Izzy nodded. They hugged, then walked out the door of Izzy's house and headed to go-what else?running. As she sprinted, wind whipping at her hair, a smile crossed her face. She was back.

Izzy and Jessie were the first runners at the championship race. Then the crowd and then noise. But Izzy didn't hear the noise; she was happy.
"On your mark. Get set. Go!"
Izzy knew exactly what to do.
She felt like wind. Sunlight shone on her cheeks, her heart bursting with joy. She felt as if she had already won. And it didn't matter anymore. Is it possible? Am I more like Nat? Yes. At last, she thought. This isn't all about winning. It's about having fun. That was what Jessie had tried to tell me. She felt the steady beat of her feet against the pavement.

Just then someone passed her.
"No," thought Izzy, "not this time."
And that's when Izzy ran.
"If at First You Don’t Succeed, Try, Try Again" text by Hannah Blau, illustration by Claire O’Neill Sanger, from Stone Soup, the Magazine by Young Writers \& Artists, copyright © 2007 by the Children's Art Foundation. Used by permission.

1 Which theme is best expressed in both stories?
A Sacrifice is necessary to gain success.
B Winning is the most important thing.
C Others' envy is the enemy of success.
D Believing in yourself will ensure success.

2 In each story, Derek's and Izzy's experiences differ mainly because
F Derek does not overcome his defeat.
G Derek knows how it feels to win.
H Izzy does not have a friend to help her.
J Izzy competes in a track race.

3 Read this sentence from Paragraph 9 of "The Champion of Miller's Lane."
The pack of racers stayed close together as they left the school and sped along the Congress Street bike lane.

Which synonym for pack matches how the word is used in the sentence above?
A container
B heap
C bag
D group

4 Which event will most likely happen next in "The Champion of Miller's Lane"?
F Derek will help Joey get back on his bike.
G Joey and Derek will ride their bikes home.
H Derek will make sure Joey gets home safely.
J Derek and Joey will finish the race.

5 Choose the sentence that best indicates the rising action in "The Champion of Miller's Lane."
A The pack of racers stayed close together as they left the school and sped along the Congress Street bike lane.

B Both boys burst from the pack and quickly overtook the leaders, who had used much of their energy in the early going.

C Derek watched in horror as it lurched to the right and hit the curb sharply, launching Joey through the air like a football.

D Derek jumped off his bike and let it fall to the ground.

6 Which question is answered in the passage "If at First You Don't Succeed, Try, Try Again"?
F What are the rules of championship racing?
G How did Izzy become interested in running?
H Why did Izzy stop running for several weeks?
J What is the outcome of the championship race?

7 The author most likely wrote the passage "If at First You Don't Succeed, Try, Try Again" in order to
A describe the training techniques of a runner.
B help readers understand the emotions of athletes.
C encourage readers to participate in healthful sports.
D share the lesson one girl learns about competition.

## Conestoga Heroes <br> by Alberta Haught <br> 

I never could remember dates
Of treaties, wars, and such.
Reciting lists of Presidents
Did not impress me much.
5 But stories of the pioneers
And settlers of this land?
Now, them I liked to read about,
That sturdy, stalwart ${ }^{1}$ band.
The loaded Conestogas ${ }^{2}$ rolled
10 Across the Western plains.
And many people traveled in
Those early wagon trains.

They came from homes in Tennessee, And Pennsylvania too,

Left settled towns for untamed lands, Where everything was new.

[^0]How hard they worked to clear their farms!
They reared ${ }^{3}$ their children there.
The men built homes, the women cooked,
And sewed warm clothes to wear.
They never chose to write their names
In books of history,
But I think all of these heroes
Lived lives of bravery.
"Conestoga Heroes" by Alberta Haught, from Hopscotch For Girls, April/May, copyright © 2007 by Bluffton News Publishing. Used by permission.
${ }^{3}$ reared: took care of

8 Read Lines 5 through 8.
But stories of the pioneers
And settlers of this land?
Now, them I liked to read about,
That sturdy, stalwart band.

## The phrase sturdy, stalwart band refers to a group of people who are

F eager to plan for the future.
G accustomed to long-distance travel.
H interested in exploring new places.
J determined to accomplish their goals.

9 Looking back on this time period, the poet views the pioneers mostly as
A fearless.
B truthful.
C fair.
D strange.

10 Which words help establish the 1800s time period of the poem?
F dates, wars, Presidents, history
G treaties, pioneers, wagon trains
H Western plains, Tennessee, Pennsylvania
J worked, reared, built, cooked, sewed

11 The speaker of the poem believes that the pioneer heroes
A preferred to move often.
B were rarely content.
C overcame difficulties easily.
D were often unknown.

12 The poet's main purpose for writing this poem is to
F persuade readers to take a trip.
G share an experience of moving to another state.
H teach a lesson about traveling by wagon.
J inform readers about pioneer days.

13 Complete the analogy.

Conestogas are to wagons as helicopters are to $\qquad$ .

A aircraft
B jets
C birds
D rockets

# Living Above the Boiling Earth 

by Gail Jarrow

You know immediately that something strange is going on in the city of Rotorua. The air smells like rotten eggs. Plumes of steam rise from road drains. Peculiar crusts of yellow, white, and red cover the rocks. Mud puddles bubble. Rocks burn your hands. The ground vibrates as a hissing geyser spews hot water 100 feet into the air.

Welcome to New Zealand's North Island, where the earth boils beneath your feet. This hot spot is part of the Ring of Fire, a circle of volcanoes and earthquake-prone areas that surrounds the Pacific Ocean. New Zealand sits above a crack between two enormous sections of the earth's outer shell, called plates. As the two plates slowly move together, the edge of one plate is pushed under the other, where it melts into hot molten rock. This molten rock heats rocks and groundwater lying above it, creating a thermal zone.

Underneath Rotorua lies a huge reservoir of steam and hot water heated by molten rock. The steam escapes into the air through cracks in the rocks. Scalding hot water rises to the surface through openings in the ground, forming hundreds of hot springs and geysers throughout the city.


Hot underground gases bubble to the surface and cause mud to fly in the air.


Minerals in the boiling water coat the ground near the hot springs and geysers with different colorswhite from silica, red from iron, yellow from sulfur. The sulfur fumes tarnish silver and corrode electronic equipment such as televisions and computers. The sulfur gives Rotorua its rotten-egg smell. No wonder the city's nickname is "Rotten-rua"!

Rotorua may not sound like the ideal place to live, but people who make their homes in the thermal zone have adapted well. The first settlers, the Maori, arrived 600 years ago and built villages around the hot springs. They considered the thermal areas sacred treasures and sources of spiritual and physical comfort. The Maori used the hot water to wash and keep warm. They cooked their food by placing flax baskets full of meat and vegetables into steaming pools. Today, Maori in traditional villages still use the geothermal heat the same way their ancestors did.

Modern New Zealanders found a new use for the heat under their feet. Since the 1950s, they have produced electricity by drilling into underground pockets of steam, then piping the steam to electricitygenerating plants where it turns turbines. Hot water from subterranean ${ }^{1}$ reservoirs heats many homes and businesses, and homeowners bore the ground to obtain steam and hot water for washing, bathing, and swimming. In the 1980s, people noticed that increased extraction of steam and water from underground

[^1]had reduced geyser activity. In order to preserve the unique thermal areas of Rotorua, the government closed many bores. Today a regional council oversees the use of geothermal resources. It limits new borings and prohibits drilling within a mile of Rotorua's major thermal areas-especially those considered sacred by the Maori.

The people of Rotorua have learned to live with the dangers of boiling earth. The ground in the thermal areas of Rotorua is so thin and hot that the early Maori settlers had to bury their dead in aboveground tombs. Walkers in hot spots must stay on marked paths, or risk crashing through the thin ground and tumbling into a pool of boiling water. For safety, houses are not built in known thermal areas. But sometimes the steam and hot water break through the ground in unexpected places, and a house must be abandoned. Imagine a geyser suddenly appearing in your front yard!


A geyser erupts in Rotorua.

14 The caption under the first photograph helps the reader understand
F why mud is unusual in Rotorua.
G where hot mud can be found in Rotorua.
H what causes the mud to boil in Rotorua.
J how mud is used in Rotorua.

15 Which detail from the passage best supports the main idea that people on Rotorua have found ways to use their environment to their advantage?

A This hot spot is part of the Ring of Fire, a circle of volcanoes and earthquake-prone areas that surrounds the Pacific Ocean.

B The steam escapes into the air through cracks in the rocks.
C They cooked their food by placing flax baskets full of meat and vegetables into steaming pools.
D Today a regional council oversees the use of geothermal resources.

16 Based on the diagram in the passage, what makes a geyser erupt?
F groundwater that seeps through porous rocks
G steam that has been trapped under the surface
H the increased temperature in a hot spring
J the porous rock above the magma chamber

17 Which word best completes the analogy below?

Geysers is to Rotorua as sand is to $\qquad$ .

A glass
B desert
C garden
D hourglass

18 The organizational structure of Paragraphs 5 and 6 can best be described as
F chronological.
G cause-effect.
H comparison-contrast.
J problem-solution.

19 Which resource is best for finding more information for a research paper about the moving plates under Rotorua?

A a fictional story about the eruption of a volcano
B a Web site about the history of the Maori people
C an encyclopedia article about New Zealand geography
D an article about human interaction with the environment

## Directions Read the rough draft of Patrick's letter. It contains mistakes. Then answer Numbers 20 through 27.

September 19, 2009
Dear Ms. Johanssen:
(1) I recently read on the Clarendon Middle School Web site that you are looking for an eighth grade editor for the local newspaper. (2) I have many qualities that would benefit our school newspaper. (3) I hope you will consider me for the position.
(4) First of all, I contribute to school newspapers since I was in third grade. (5) While at Oak Street Elementary School, I wrote a lot of articles for our newsletter, including one on the school history fair and another on Mrs. James afterschool homework program. (6) Mr. Perez the newspaper advisor really liked a piece "I wrote titled Looking Out for Younger Students." (7) As you know, the Clarendon Courier has printed many of my other articles as well. (8) In fact, you complimented me last year on my article called "Arbor Day: Don't Get Leafed Out!"
(9) I am a good student and take my studies very serious. (10) I turn in my homework assignments and am prepared on time for all class projects. (11) Therefore, I can easily meet the deadlines for the newspaper. (12) In seventh grade, I was voted president of the Quill Pens (the middle school creative writing club) and encouraged many students to join. (13) These accomplishments prove that I am very committed to everything I do.
(14) In addition, I have some ideas that could improve our newspaper. (15) Many students attend activities taking place in our town for example Clarendon Cleanup Day, the annual book sale at Kensington Memorial Library, and the Tri-County Fair are all interesting. (16) It would be a great idea to have a section called "Community Corner," which could include upcoming town events that kids would enjoy. (17) Clarendon students appreciate it. (18) It might increase participation in town activities.
(19) Thank you for considering me for the job of eighth grade editor. (20) If you choose me, I promise that I will help produce the best newspaper possible.

Respectfully,
Patrick King

First of all, I contribute to school newspapers since I was in third grade.
Choose the best way to revise the underlined word.
F will contribute
G have been contributing
H had contributed
J will be contributing

21 Read Sentence 5.
While at Oak Street Elementary School, I wrote a lot of articles for our newsletter, including one on the school history fair and another on Mrs. James afterschool homework program.

Choose the best way to revise the underlined words.
A articles'... Mrs. James's
B articles... Mrs. James's
C articles's... Mrs. James'
D articles'... Mrs. James'

22 Read Sentence 6.
Mr. Perez the newspaper advisor really liked a piece "I wrote titled Looking Out for Younger Students."

Choose the sentence that shows correct comma usage.
F Mr. Perez the newspaper advisor really liked a piece I wrote titled, "Looking Out for Younger Students."

G Mr. Perez, the newspaper advisor really liked a piece I wrote titled "Looking Out for Younger Students."

H Mr. Perez, the newspaper advisor, really liked a piece I wrote titled "Looking Out for Younger Students."

J Mr. Perez the newspaper advisor, really liked a piece I wrote titled, "Looking Out for Younger Students."

23 Choose the correct way to write Clarendon Courier.
A "Clarendon Courier"
B Clarendon Courier
C Clarendon Courier
D "Clarendon Courier"

I am a good student and take my studies very serious.
Choose the best way to revise the underlined words.
F very seriously
G seriouser
H more serious
J more seriously

25 Read Sentence 10.

I turn in my homework assignments and am prepared on time for all class projects.
Choose the best revision of this sentence.
A I turn in my homework assignments on time and am prepared for all class projects.
B I turn in on time my homework assignments and am prepared for all class projects.
C I turn in my homework on time assignments and am prepared for all class projects.
D I turn in on time and am prepared for homework assignments and all class projects.

Many students attend activities taking place in our town for example Clarendon Cleanup Day, the annual book sale at Kensington Memorial Library, and the Tri-County Fair are all interesting.

## Choose the best revision for this sentence.

F Many students attend activities taking place in our town; for example: Clarendon Cleanup Day, the annual book sale at Kensington Memorial Library, and the Tri-County Fair are all interesting.

G Many students attend activities taking place in our town for example Clarendon Cleanup Day. The annual book sale at Kensington Memorial Library, and the Tri-County Fair are all interesting.

H Many students attend activities taking place in our town, for example Clarendon Cleanup Day, the annual book sale at Kensington Memorial Library and the Tri-County Fair, are all interesting

J Many students attend activities taking place in our town. For example, Clarendon Cleanup Day, the annual book sale at Kensington Memorial Library, and the Tri-County Fair are all interesting.

## 27 Read Sentences 17 and 18.

Clarendon students appreciate it. It might increase participation in town activities.

## What is the best way to combine these sentences?

A Neither would Clarendon students appreciate it, nor would it increase participation in town activities.

B Clarendon students appreciate it, but it might increase participation in town activities.
C Either Clarendon students appreciate it, or it might increase participation in town activities.
D Not only would Clarendon students appreciate it, but it might also increase participation in town activities.

## Virginia Apgar: Healthy Babies

 suffered from medical problems because all the attention was on the mother's condition. Dr. Virginia Apgar was instrumental in changing the medical care babies receive. surgery. Apgar entered the field at a time when potent medicines were being introduced. Thus, doctors, instead of nurses, needed to administer these medicines to patients. chairman of the department worried that few patients would agree to be operated on by a woman. Apgar decided to follow the chairman's advice to switch to the new field of anesthesiology.After 10 years, Apgar specialized in the field even further by working solely to help control the pain of expectant mothers during the delivery of their babies. Apgar observed how pain medicines affected both mothers and newborn babies. Apgar was present for enough deliveries to observe how little care newborn babies received following delivery. No one checked vital signs of a baby's health, $\qquad$ the strength of its heartbeats, reflexes, and skin color in the minutes after a baby's birth. Through careful study, Apgar developed a system to evaluate and measure newborn health. anesthesiologists because they were often not seen as equal to other doctors. She was only the second woman accepted as an anesthesiologist. Soon afterward, Apgar was asked to lead the Anesthesiology Department at Columbia Presbyterian Hospital. She became the first female department head at the hospital.

7 Apgar's system assigned zero to two points to five different areas: appearance, respiration, muscle tone, color, and reflexes. Babies testing at a two in each area were in good health. Those receiving a one in some areas warranted extra care.

8 Apgar's system was highly successful, and soon hospitals worldwide were using it. To honor Apgar, her name was made an acronym for the test. A for appearance, P for pulse, G for grimace (or reflex irritability), A for activity (or muscle tone), and R for respiration. Thanks to Dr. Apgar, babies' medical care was made forever better.

28 Which sentence is the best thesis statement for the passage?
F After Dr. Virginia Apgar became an anesthesiologist, she assigned numbers to determine what care a newborn baby needed.
G Because Dr. Virginia Apgar was a pioneer in the new field of anesthesiology, she was honored by having the Apgar test named after her.

H Dr. Virginia Apgar, an excellent medical student and one of the first doctors to specialize in anesthesiology, observed and cared for mothers and babies during childbirth.
J Dr. Virginia Apgar, one of the first female anesthesiologists, was instrumental in improving the quality of care for newborn babies.

29 Choose the most logical order for Paragraphs 3, 4, 5, and 6.
A $5,4,3,6$
B $4,3,6,5$
C $6,3,4,5$
D $3,5,6,4$

30 Read the following sentence from Paragraph 5.
No one checked vital signs of a baby's health, $\qquad$ the strength of its heartbeats, reflexes, and skin color in the minutes after a baby's birth.

## Choose the best transitional phrase to fill in the blank.

F in brief
G such as
H as usual
J in contrast

Apgar was destined to become a leader. Being in a new field of medicine was difficult for anesthesiologists because they were often not seen as equal to other doctors. She was only the second woman accepted as an anesthesiologist. Soon afterward, Apgar was asked to lead the Anesthesiology Department at Columbia Presbyterian Hospital. She became the first female department head at the hospital.

Choose the sentence that should be deleted from Paragraph 6.
A Apgar was destined to become a leader.
B Being in a new field of medicine was difficult for anesthesiologists because they were often not seen as equal to other doctors.

C She was only the second woman accepted as an anesthesiologist.
D Soon afterward, Apgar was asked to lead the Anesthesiology Department at Columbia Presbyterian Hospital.

## 32 Read Paragraph 7.

Apgar's system assigned zero to two points to five different areas: appearance, respiration, muscle tone, color, and reflexes. Babies testing at a two in each area were in good health. Those receiving a one in some areas warranted extra care.

## Choose the additional sentence that would best support the context and flow of ideas in this paragraph.

F Babies born prematurely usually have lower Apgar test scores.
G Lower scores are not a prediction for the baby's long-term health.
H Babies scoring zeros were considered high risk and received intensive care.
J The Apgar test is generally given twice, but if scores are low, it may be given again.

33 The purpose for writing this passage is to
A inform readers about a person whose contribution permanently changed patient care.
B describe to the medical community the early practices of pain management.
C persuade doctors to care for patients in a new and specialized manner.
D entertain readers with a narrative about the first female anesthesiologist.

34 Look at the web.


Choose the best idea to fill in the blank.
F chose to specialize in surgery after graduating
G advised to enter the new field of anesthesiology
H became the first female department head at a major hospital
J observed the care newborn babies and their mothers received

35 The key ideas in this passage would best be supported by
A facts about Virginia Apgar's childhood and family.
B anecdotes of Virginia Apgar's experiences as a medical student.
C a detailed explanation of how Apgar administered medicine to block pain.
D an illustrated diagram of the Apgar test given by a doctor at birth.

36 What source would be the most reliable to help determine the health of an infant?
F a doctor's eyewitness account after examining the infant
G a baby's birth announcement printed in the local newspaper
H a hospital's Web page about the care offered to mothers and their babies
J a magazine article about infant care in different cultures

37 Joaquin is giving a presentation to his science class about grasshoppers. Which is an effective method for keeping the audience's attention during his presentation?

A speak clearly
B face the teacher
C stop to answer questions
D read directly from notes

38 Penny is organizing a presentation about her favorite meal, the history behind it, and how to prepare it. What is the best way to organize the note cards for her speech?

F name of the dish, history of the dish, why she likes it, how to prepare it
G history of the dish, how to prepare it, name of the dish, why she likes it
H why she likes it, name of the dish, how to prepare it, history of the dish
J how to prepare it, why she likes it, history of the dish, name of the dish

39 Read the sentence.
The cedar fence post had grayed with age, but when Sean began sawing, he was surprised to find that the interior of the wood smelled as strong as if it had been cut the day before.

Choose a replacement for the underlined word that makes the description more vivid.
A interested
B shocked
C concerned
D troubled

40 Meilin is writing her boss to request a two-day vacation. Which sentence best conveys her request?
F I am too tired to work anymore this week and do not want to work Thursday and Friday.
G With your approval, I plan to take Thursday and Friday off to attend a family event.
H Because I worked so much overtime the last couple weeks, I think I deserve Thursday and Friday to myself.

J With your approval, I would like to take off work Thursday and Friday to go camping and hiking with my family and some neighbors out by Fisher's Lake.

41 Which premise is true?
A If the school is closed, it is a weekend.
B If you own a dog, you do not own a bird.
C If there are clouds in the sky, it will rain.
D If you hit a homerun, your team will score a point.


The items in this picture support the idea of
F good nutrition.
G saving money.
H outdoor activities.
J promoting recycling.

# DO NOT MARK ON THIS <br> PACE 

## Part 2

## Directions Read the drama. Then answer Numbers 43 through 49.

## The Lunchroom Incident

CHARACTERS:<br>JESSE and MARIO, each 14 years old<br>CHRIS, a classmate

(Setting: The lunchroom of a middle school.)
(JESSE and MARIO walk into a crowded lunchroom. JESSE wears a book bag on his shoulder.)
JESSE: Lunchtime! Finally! I'm starving!
MARIO: Me too. By the time 12:30 comes along, all I can think of is food.
JESSE: Tell me about it! For the last half hour I've been dreaming of nothing but chicken nuggets.
MARIO: Chicken nuggets? Is that on today's menu?
JESSE: I don't know. We'll see when we get closer to the front.
(JESSE and MARIO join a long lunch line. They continue talking as they stand one behind the other. The line inches forward as the boys continue to talk.)

MARIO: Look! Burgers! They sure are tasty.
JESSE: And macaroni and cheese! My favorite.
MARIO: I see kids eating chocolate cake. That must be one of the choices for dessert. I love that!
JESSE: Same here.
MARIO: My mouth is watering just thinking about it.
(CHRIS walks up and stands behind JESSE in the lunch line.)
JESSE: (JESSE digs furiously through his book bag.) Oh, no. I just remembered. I left my baseball cap outside of my locker. Can you hold my place for a minute? I'll be right back.

MARIO: Well, I...

JESSE: Just for a minute. It's my lucky cap. I'm hungry, but I've got to get that cap. I'll be back in a flash.
MARIO: Um, the other kids don't really like that so much.
JESSE: (JESSE puts his book bag on the floor in his place.) Here, I'll leave this. When the line moves up, just push it forward, as if it's me.

MARIO: I don't know about this.
JESSE: Thanks. This won't take long. (JESSE turns and races offstage.)
CHRIS: (CHRIS taps MARIO on the shoulder.) Mario, aren't you going to move ahead?
MARIO: What? Oh, yes.
(MARIO takes a step forward in line. He pushes JESSE's book bag forward with his foot.)
CHRIS: (To MARIO.) I'm so hungry. I have my eye on those burgers. (JESSE returns. JESSE picks up his book bag.) What's going on?

JESSE: Nothing.
CHRIS: Nothing? I think it's something.
JESSE: What's something?
CHRIS: You're breaking into the line.
JESSE: I didn't break into the line. I was in line all along. I just stepped away for a minute.
CHRIS: That's impossible. I was talking to Mario, and you weren't here. If you had been, I would have seen you.

JESSE: I may not have been here, but my book bag was in my place. Didn't you see my book bag?
CHRIS: Sure, I saw a book bag on the floor. But a book bag doesn't eat lunch. All I know is I was standing in line, waiting my turn like everyone else. You just barged into line ahead of Mario.

MARIO: Actually, no. He didn't barge in. He was here before. He had to get his cap.
JESSE: Yes, my cap. See? (JESSE holds up the cap in his hand.) I left my book bag in my place for just a minute.
CHRIS: You can't leave a book bag to hold a place. You need a person.
MARIO: I' $m$ the person holding his place. I was holding his place and moving the book bag forward as if Jesse were still here.

CHRIS: But you're not Jesse. Looks to me as if Jesse is breaking into the line. So, Jesse, take your book bag and go to the end of the line.

JESSE: That's not going to happen.
CHRIS: Oh, yes it will.
MARIO: Guys, guys. We've always gotten along so well. We don't need any problems. I have an idea. Remember what we learned about compromising?
(CHRIS and JESSE nod.)
MARIO: Chris, what's your favorite dessert?
CHRIS: Um, well, I have a few favorite desserts.

MARIO: Okay, good. What's one of your favorite desserts?
CHRIS: Chocolate cake.

MARIO: Chocolate cake . . . real tasty. If that's what's on the menu, is that what you're going to order?
CHRIS: Probably. Or maybe I'll have some chocolate pudding. I like that too.
MARIO: Chocolate cake and chocolate pudding. Both delicious. I bet you wish you could have them both, don't you?

CHRIS: Yes, sometimes.
MARIO: But you can only order one. Now, here's what I suggest. I'll bet that if you order chocolate cake, Jesse will order chocolate pudding and split it with you. Right, Jesse? So you'll have half cake and half pudding. And so will Jesse. If you let Jesse back in line where he actually belongs, he'll share his dessert with you. And you'll share yours with him. Fair enough?

CHRIS: Okay. I think that's fair.
MARIO: And that means we'll all sit at the same table and have fun like always, right? After all, if you are sharing dessert, it helps to sit at the same table, right?

CHRIS: True. Okay, Jesse, you can get back in line.
(JESSE picks up his book bag and gets in line.)
MARIO: Everybody wins! Except me, of course. No one will be sharing dessert with me.

## CURTAIN

43 Read the lines from the drama.

MARIO: Guys, guys. We've always gotten along so well. We don't need any problems. I have an idea. Remember what we learned about compromising?

Choose the meaning of the underlined word.
A debating an issue
B refusing to participate in a group
C giving in to someone's demand
D reaching an agreement

44 The last lines of the drama suggest that the boys will
F enjoy eating together.
G lose their place in line.
H quarrel again another day.
J continue arguing over lunch.

45 Read the lines from the drama.
CHRIS: (CHRIS taps MARIO on the shoulder.) Mario, aren't you going to move ahead?

MARIO: What? Oh, yes.
(MARIO takes a step forward in line. He pushes JESSE's book bag forward with his foot.)

CHRIS: (To MARIO.) I'm so hungry. I have my eye on those burgers. (JESSE returns. JESSE picks up his book bag.) What's going on?

Choose the plot element illustrated in these lines.
A climax
B exposition
C rising action
D denouement

46 Choose the main conflict present in this drama.
F person vs. self
G person vs. person
H person vs. technology
J person vs. environment

47 Read the lines from the drama.
JESSE: (JESSE digs furiously through his book bag.) Oh, no. I just remembered. I left my baseball cap outside of my locker. Can you hold my place for a minute? I'll be right back.

## MARIO: Well, I...

JESSE: Just for a minute. It's my lucky cap. I'm hungry, but I've got to get that cap. I'll be back in a flash.

Based on these lines, choose the best description of Jesse's personality.
A critical
B forceful
C respectful
D thoughtful

48 Read the line from the drama.
CHRIS: . . . But a book bag doesn't eat lunch.

Choose the best explanation of this line.
F Chris uses a simile to attack Mario's plan.
G Chris uses a pun to make a joke about Jesse.
H Chris uses hyperbole to suggest that Mario is correct.
J Chris uses personification to question Jesse's argument.

49 This passage is considered a drama mostly because
A it has dialogue and a plot.
B the characters resolve their conflict.
C a conflict exists between the characters.
D instructions are given for a stage production.

## Overgrown Garden

The overgrown garden
At the empty,
Old house, shivers
In the wild autumn wind
As I pass. Today
I will try to find
My way inside
Through the locked
Gate.

10 The garden
Is like a boy I know,
Untamed, with hair a mussy mess.
His eyes sometimes
Empty and dark,
Locking out those
Who want to know him.
Through the gate,
The garden looks
Anything but inviting.
Inside, tall, tangled weeds Grab and snag at my ankles, Like tiny octopus tentacles. Tree branches block The walkway.


25 Even flowers,
Brown and crisp as toast,
Turn their faces away,
As if trained not to care.

The boy shrugs his shoulders
30 When I ask if I can eat
At his table. He clutches
His lunch,
Props a book,
Like a fence, in front
35 Of his face, as if
He's trained himself
Not to care.

But I do.
In the garden, I bring out
40 My clippers, snipping away
At dry branches, snarled
Weeds, trimming tiny
Stems of flowers
To invite the rays of sunlight.
45 At lunch,
I offer the boy a coconut
Macaroon cookie.
"My favorite!"
He exclaims, and I watch
50 As his wild eyes
Find my face
And smile.

50 Which point of view is used in the poem?
F first person
G third-person objective
H third-person limited
J third-person omniscient

51 What does the speaker do that causes the boy to respond?
A smiles at him
B trims the garden
C asks to eat at his table
D offers him a cookie

52 What does the locked garden gate symbolize?
F how hard it is to find the garden
G how difficult it is to know the boy
H how the garden is a dangerous place
J how the speaker likes to hide things

53 The poet most likely repeats the phrase "trained ... not to care" to
A hide the boy's true feelings.
B connect the boy to the garden.
C suggest that the garden needs attention.
D prove that the boy's life is complicated.

54 Read Lines 10 through 12.
The garden
Is like a boy I know,
Untamed, with hair a mussy mess.
The poet uses a simile in these lines to
F show a contrast in themes.
G describe the setting.
H introduce a new character.
J build upon one kind of imagery.

## Directions Read the speech. Then answer Numbers 55 through 63.

## Speech for the Defense

Before 1920, American women were not allowed to vote in elections. Susan B. Anthony was one of the people who worked tirelessly to gain this important right. In 1872, Anthony was arrested and put on trial for voting.

Gentlemen of the jury, I ask you to look at the defendant, Miss Susan Brownell Anthony. You will see a respected person of outstanding character, a person who cares deeply for law and order. This woman has committed no crime. She has broken no law. She does not deserve to be put on trial! All she did was exercise her right as a United States citizen. Isn't it a citizen's duty to vote? Should Miss Anthony be arrested and put on trial for performing her civic duty?

Allow me, Miss Anthony's lawyer, to read the charge against my client; Miss Anthony is accused of "knowingly, wrongfully, and unlawfully" voting for a member of Congress "without having a lawful right to vote . . . being then and there a person of the female sex." My argument will show that this charge is ridiculous.

The prosecution says that Miss Anthony broke the law because it is illegal for a woman to vote. But that is simply not true. Miss Anthony's vote was legal, and I will tell you why. Four years ago, in 1868, Congress


> Susan B. Anthony 1820-1906 ratified the Fourteenth Amendment to the United States Constitution. This amendment states that "all persons born and naturalized in the United States . . . are citizens of the United States," and all citizens are entitled to the same privileges. States must provide "equal protection and due process of the laws" to every American citizen. Miss Anthony was born in Massachusetts. By birthright, she is an American citizen; no one can deny this truth. Therefore, the state of New York, where she now lives, must grant her the same rights as they do all other American citizens, including the right to vote.

Furthermore, the prosecution has argued that Miss Anthony knowingly and willfully broke the law in order to draw attention to her own views about women's rights. This is also untrue. Prior to casting her ballot, Miss Anthony consulted Judge Henry Selden, whom you will hear from today. Judge Selden will tell you that he carefully considered the law. He concluded that Miss Anthony was, beyond a doubt, as authorized as any man to vote in the election. He told this to Miss Anthony. When she cast her vote, she did so in good faith. She certainly did not think she was breaking the law and was completely shocked to be arrested and tried in this fashion.

The sad truth is Miss Anthony is being prosecuted because she is female. If she were a man, we would not be here today, would we? We would praise her for doing her part to preserve democracy in this great country of ours. Her action would be not only innocent but honorable. Does this action become dishonorable merely because it was carried out by a woman? Of course not!

It is wrong to prosecute a citizen of the United States who was merely trying to do her duty. It is wrong to put Miss Anthony on trial simply because she is female. Women make up half of the population of this country. They work as hard as their fathers, brothers, husbands, and sons. They deserve to have their voices heard, just as we men do. It is unfair to expect any citizen of a country to abide by laws which they had no say in making. Isn't that why the United States fought the Revolutionary War against England? We did not want to be treated like second-class citizens! Why should we expect women, who also sacrificed and contributed, to accept this kind of treatment?

Gentlemen of the jury, you have been given a rare opportunity to strike down injustice! Let me summarize the reasons why you must find Miss Anthony innocent of any wrongdoing. First of all, the Fourteenth Amendment guarantees the rights of all United States citizens, not just male citizens, and this clearly includes the right to vote. Secondly, even if you interpret the law differently, as the prosecution clearly does, Miss Anthony can only be innocent since she honestly believed she was exercising her rights, rather than willfully disregarding the law. Thirdly, please consider the absurdity of trying a person in a court of law for no better reason than that she happens to be female.

Miss Anthony harmed no one. She did not rob a bank. She voted! Let's end this farce and send a clear message that we will uphold the noble principles on which our nation was built. Exercise your civic duty and find Miss Anthony innocent.

Thank you.

## 55 To whom is this speech directed?

A a group of lawyers
B the students in a history class
C the judge whom Susan B. Anthony consulted prior to voting
D the jury presiding over Susan B. Anthony's trial

56 Choose the sentence that best expresses the main point of the speech.
F Susan B. Anthony broke the law to bring attention to women's rights.
G The Fourteenth Amendment guarantees the rights of all United States citizens, including the right to vote.
H Citizens of the United States should not be expected to follow laws which they had no say in creating.

J Susan B. Anthony was within her rights as a woman when she voted.

57 This speech is organized by
A telling the cause and effects of Miss Anthony's actions.
B stating Miss Anthony's problem and offering a solution.
C listing topics of discussion about Miss Anthony in sequential order.
D presenting arguments for and against Miss Anthony.

58 The purpose of this speech is mainly to
F provide information about a historic event.
G describe the actions of a noteworthy person.
H persuade a group to make a decision.
J entertain students with a humorous performance.

59 Read this excerpt from Paragraph 2.
. . . Miss Anthony is accused of "knowingly, wrongfully, and unlawfully" voting for a member of Congress "without having a lawful right to vote . . . being then and there a person of the female sex." My argument will show that this charge is ridiculous.

Which persuasive technique is the speaker using?
A testimonial
B bandwagon
C name-calling
D loaded words

60 Which source about Susan Anthony is a primary source?
F a diary written by her
G a biography about her
H an encyclopedia article about her
J an interview with someone who knew her

61 To keep his audience engaged, the speaker should
A shout in a loud voice.
B make eye contact.
C use exaggerated arm gestures.
D read directly from note cards.

62 Jerome wants to learn more about Susan B. Anthony. The best source of information about her would be from a

F Web site called Famous Americans.
G history book about the rights of women.
H newsletter from an organization for women.
J TV show titled Great Americans.

63 A class decides to do a mock trial about Susan B. Anthony's case. Groups were assigned to research and prepare information that would be presented during the trial. Which strategy is not appropriate for working together in a group?

A taking turns listening and speaking with each other
B writing down ideas that are personally appealing
C asking relevant questions that move the group toward its goal
D summarizing information so group members are aware of project developments

## Directions The following directions contain mistakes. Read the directions and answer Numbers 64 through 66.

(1) By using just 1 quart of milk and a little plain unflavored, unsweetened yogurt that contains live bacteria, you can make your own yogurt at home. (2) Pour the milk into a pan with a thick bottom and heat it over a low burner, stirring constantly to prevent scorching. (3) Use a candy thermometer to watch the temperature rise. (4) This kind of thermometer is also useful for making candy. (5) Watch for the temperature to reach $170-195^{\circ} \mathrm{F}$. (6) Then remove the pan from the heat. (7) Let the milk cool to $105-120^{\circ}$ F, then stir in 4 tablespoons of the starter yogurt until it is thoroughly mixed. (8) Pour the mixture into clean containers, cover them with lids, and set them in an ice chest. (9) Place pitchers of hot water in the ice chest to help maintain the heat inside. (10) Close the ice chest and avoid disturbing it for 6-8 hours, keeping the lid closed as much as possible to keep heat from escaping. (11) After 6 hours, check to see if the yogurt has turned partly solid. (12) If so, it is ready to refrigerate. (13) Place the containers in the refrigerator. (14) After the yogurt has gelled a little more, you have a chance to be creative with your own flavors. (15) Mix in berries or other fruit, granola or other crunchy cereal, nuts, coconut-use your imagination!

64 Which sentence is irrelevant to the paragraph and should be removed?
F This kind of thermometer is also useful for making candy.
G Place pitchers of hot water in the ice chest to help maintain the heat inside.
H After 6 hours, check to see if the yogurt has turned partly solid.
J Place the containers in the refrigerator.

Watch for the temperature to reach $170-195^{\circ} \mathrm{F}$. Then remove the pan from the heat.
Choose the best way to combine these sentences without changing the meaning.
A Watch for the temperature to reach $170-195^{\circ} \mathrm{F}$, yet remove the pan from the heat.
B When the temperature reaches $170-195^{\circ} \mathrm{F}$, remove the pan from the heat.
C While watching the temperature reach $170-195^{\circ} \mathrm{F}$, so remove the pan from the heat.
D Watch for the temperature to reach $170-195^{\circ} \mathrm{F}$, but remove the pan from the heat.

66 Which sentence provides the best conclusion for this paragraph?
F Making your own yogurt is a fun way to save money and have a good supply of healthful snacks.
G With a very few simple ingredients, it's not hard to make your own yogurt—but it does take a little time.

H The growth of the live bacteria is what makes the yogurt turn liquid milk into a semisolid.
J The bacteria in the starter yogurt would be killed if they were added while the milk was still too hot.

## Directions Read the passage. Then answer Numbers 67 through 74.

## Washed Away

Imagine spending hours, even days, creating a work of art, only to let the rain wash away all traces of it. A rare kind of artist will do exactly that, especially if he or she works in a medium as impermanent as chalk.

Julian Beever is this kind of artist. Born in England, Beever started making chalk drawings after he graduated from art school. His first attempts were two-dimensional, and he drew them on public pavement, receiving pennies from passing admirers. Then one day, Beever was working in Brussels and saw some street tiles being removed. He liked the idea of trying to re-create the depth of tiles and space in his chalk drawings, so he tried drawing a woman in a tile-lined swimming pool. Creating the illusion of depth in the picture was a real challenge-until Beever discovered a secret.

Looking through a wide-angle camera lens allowed Beever to gain a greater perspective. It has to do with how the brain judges distance when only looking through one eye, as when looking through the viewfinder of a camera. Or, as Beever says, "It makes the brain believe stuff that it otherwise wouldn't believe." Beever soon realized that by keeping a camera on a tripod in one spot and by checking every chalk mark he made, he could create images that appeared to have height, width, and depth.

Beever usually begins by drawing his intended design in miniature. Then he outlines a scribble on the pavement where he is drawing by using a rope to help create the lines. Once the lines are created, Beever constantly walks back and forth to the camera between sketching, which makes his work physically tiring. It is not uncommon for one of Beever's drawings to take three or more days to complete.

Aside from the challenges of actually making his chalk drawings, Beever's work conditions depend on the weather. If he is working on a drawing in winter, he has fewer daylight hours in which to work. If it is cold, windy, scorching, or humid, Beever simply has to struggle through whatever nature offers.

Then there are the difficulties posed by working in public places. Most artists work privately, but because of the locations Beever chooses, he is watched and questioned by bystanders. Some people even try to strike up conversations about current events or life in general. Through any distraction, Beever remains focused and involved in his artistic process.

The uniqueness and temporary quality of Beever's work make observers feel honored to witness his process or see the final result. However, some people do not like the fact that Beever's work is drawn in public places. A few have labeled it "graffiti." Beever doesn't mind, though. He believes that art is for the people, saying, "Art shouldn't be locked away in galleries and libraries and books." Moreover, people are excited to watch or wait for the final product.

Beever's three-dimensional chalk images often amaze people. Once Beever drew potholes on the pavement that looked so real drivers swerved to avoid them!

Since his art is often washed or worn away over time, Beever has found a solution for creating something more lasting-a camera. The photographs Beever takes of his street art are permanent records of his creations. The photographs allow a whole new audience to experience his art, thanks to the far-reaching vehicle of the Internet. The Internet acts as a kind of virtual art gallery, or museum, where countless numbers of people can marvel at Beever's work anytime, from anywhere in the world. For an artist who believes art should
 be available to everyone, Julian Beever has found a wonderful way to achieve his goal of reaching many people with his chalk creations.

67 Which words in the passage help the reader know what medium means in Paragraph 1?
A chalk, drawing, product, photographs
B perspective, brain, lens, depth
C weather, winter, cold, windy, nature
D gallery, museum, marvel, reaching

68 Choose the question that is answered in the passage.
F How many chalk drawings has Julian Beever created?
G Where did Julian Beever attend art school?
H What process does Julian Beever use to create his chalk art?
J At what age did Julian Beever know he was going to pursue a career in art?

69 By looking at the photograph of Julian Beever's work, the reader can infer that the artist is
A reserved and reluctant to communicate with the public.
B playful and wants to engage an audience.
C focused and anxious to start a new project.
D daring and likes to be perceived as rebellious.

70 What is the main idea of Paragraph 9?
F Julian Beever interacts with the public as part of his art.
G Julian Beever uses the Internet to showcase his art.
H Julian Beever believes that people should help him with his art.
J Julian Beever knows how to keep his artwork from being ruined by the weather.

71 Read the instructions.
Steps Julian Beever Uses to Create Chalk Drawings
Step 1 make outline of sketch on pavement
Step 2 draw a sketch of idea on paper
Step 3 make adjustments to sketch for depth until complete
Step 4 check sketch on pavement through camera lens
In what order should these steps be completed?
A $1,4,3,2$
B 2, 1, 4, 3
C $4,3,1,2$
D $2,3,4,1$

72 Choose the statement from the passage that is an opinion.
F Born in England, Beever started making chalk drawings after he graduated from art school.
G Then one day, Beever was working in Brussels and saw some street tiles being removed.
H Moreover, people are excited to watch or wait for the final product.
J The photographs allow a whole new audience to experience his art, thanks to the far-reaching vehicle of the Internet.

## 73 Beever uses a wide-angle camera lens to

A take pictures for his Web site.
B arrange large scenes for his artwork.
C create the illusion of height, width, and depth.
D capture an image regardless of the lighting.

74 A student wants to learn more about optical illusions. Choose the book that would provide the best information.

F Bloom, Harold J. The First Eye Doctors. London: Brit Press, 1962
G Andres, Carlos. The Science of Tricking the Eye. Philadelphia, PA: Newton Press, 2001
H Chang, Elliott. A Guide to Better Vision. Sydney, Australia: Down Under Publishing, 2006
J Sylvester, Arlyss. Drawing with Color and Perspective. San Francisco, CA: Eye See, Inc. 2007

## Directions Read and answer Numbers 75 through 83.

75 Which sentence is written correctly?
A The English author William Shakespeare, is probably the world's most famous playwright.
B The English author William Shakespeare is, probably, the world's most famous playwright.
C The English, author William Shakespeare, is probably the world's most famous playwright.
D The English author William Shakespeare is probably the world's most famous playwright.

76 In which sentence is the underlined word misspelled?
F My favorite desert is peach pie with vanilla ice cream.
G My sister takes courses in English, history, and math.
H The principal of our middle school is going to retire next year.
J The soldier walked with his head up, shoulders back, and spine straight.

77 Choose the sentence that is written correctly.
A Ricardo's car is out of gas.
B Virginias' piggy bank is full of pennies.
C The little puppys' food dish is empty.
D The new childrens' book is easy to read.

78 Choose the sentence that uses stationary or stationery correctly.
F The stationary was blue with yellow flowers printed around the border.
G The letter of recommendation must be written on official school stationary.
H The deer remained stationary as we approached from the edge of the meadow.
J The stationery weather provided perfect conditions for their flight over the island.

79 Which sentence is written correctly?
A Romeo and Juliet for Kids is a book by Lois Burdett, written to help children understand Shakespeare's play "Romeo and Juliet."

B "Romeo and Juliet for Kids" is a book by Lois Burdett, written to help children understand Shakespeare's play "Romeo and Juliet."

C "Romeo and Juliet for Kids" is a book by Lois Burdett, written to help children understand Shakespeare's play Romeo and Juliet.

D Romeo and Juliet for Kids is a book by Lois Burdett, written to help children understand Shakespeare's play Romeo and Juliet.

80 Choose the phrase that means "enthusiasm toward a common cause."
F esprit de corps
G alma mater
H femme fatale
J fauxpas

81 Look at this picture.


## Which kind of conflict is shown in the picture?

A person vs. self
B person vs. person
C person vs. technology
D person vs. environment

82 Read the paragraph below.

My friends are going to the beach this weekend. Everyone knows it is fun to be at the beach with your friends. They are going to swim in the ocean and play volleyball on the beach. On their way home, they are planning to stop for pizza. I will ask my parents if I can go with my friends.

Choose the sentence from the paragraph that contains bias.
F My friends are going to the beach this weekend.
G Everyone knows it is fun to be at the beach with your friends.
H They are going to swim in the ocean and play volleyball on the beach.
J On their way home, they are planning to stop for pizza.

83 Look at this picture.


Which line best communicates the message presented by the picture?
A It is important to wash your hands before touching food.
B Vegetables can add bright colors to a meal.
C Many people have fun cooking together.
D Cooking requires great concentration.

# DO NOT MARK ON THIS <br> PACE 

$$
\begin{gathered}
\text { DO NOT } \\
\text { MARK } \\
\text { ON THIS } \\
\text { PAGE }
\end{gathered}
$$

## Mathematics

## Part 1

1 Ryuta's homework assignment was to measure the temperature in his backyard and then graph the results. The results are shown below.


Based on the graph, which statement best describes the change in temperature?
A The temperature decreased, then stayed constant, and then decreased again.
B The temperature decreased, then increased, and then stayed constant.
C The temperature increased, then stayed constant, and then decreased.
D The temperature increased, then decreased, and then increased again.

2 Rennie rode her bicycle 2.2 miles up a hill in 0.2 hour. Then she rode back downhill on the same path in 0.12 hour.

$$
\text { distance }=\text { rate } \times \text { time }
$$

What is her average rate for the combined trip?
F 10.88 miles per hour
G $\quad 13.75$ miles per hour
H 27.50 miles per hour
J 31.43 miles per hour

3 Which function is nonlinear?
A $\quad f(x)=5$
B $\quad f(x)=3 x$
C $f(x)=5 x^{2}-2$
D $f(x)=-2 x+3$

4 What is the value of this expression?

$$
\frac{\left(1.5 \times 10^{24}\right)\left(6 \times 10^{-12}\right)}{2 \times 10^{3}}
$$

F $\quad 4.5 \times 10^{4}$
G $\quad 4.5 \times 10^{9}$
H $\quad 4.5 \times 10^{12}$
J $4.5 \times 10^{15}$

5 Look at the two figures below.


Which could not describe the intersection of these two figures?
A a line segment
B a point
C a right angle
D a ray

6 Which number is a rational number?
F 1
G $\pi$
H $\sqrt{6}$
J $0.832141141114 \ldots$

7 The table shows the coordinates of three points contained in the graph of a line.

| $x$ | $y$ |
| ---: | ---: |
| -1 | 1 |
| 0 | 3 |
| 1 | 5 |

What is the slope of the line?

A -2
B $-\frac{1}{2}$
C $\quad \frac{1}{2}$
D 2

8 The diagram below shows the path Maya took to get from Point $M$ to Point $T$.


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

Which is closest to the distance between Points $M$ and $T$ ?
F 20 feet
G 14 feet
H 12 feet
J 9 feet

9 What is the solution for $x$ in the equation $f(x)=g(x)$, where $f(x)=30-0.5 x$ and $g(x)=2 x-15$ ?

A $x=6$
B $\quad x=10$
C $x=18$
D $x=30$

10 Which linear equation is best represented by this graph?


F $\quad y=-2 x+1$
G $\quad y=-x+2$
H $\quad y=2 x+1$
J $y=x+1$

11 What is the value of $y$ in the solution to this system of linear equations?

$$
\begin{gathered}
8 x-4 y=28 \\
-3 x+6 y=12
\end{gathered}
$$

A 2
B 3
C 5
D 6

12 Shelley received the four cards shown below.


She was asked to put the cards in order from least to greatest value. Which list shows the correct order of the cards?

F $\quad P, T, R, S$
G $S, P, T, R$
H $T, P, R, S$
J $T, R, P, S$

13 A radio station will play five different songs in a row in a random order. Two of the songs are by the same artist. What is the probability that those two songs will be the first two played?

A 0.40
B 0.20
C 0.10
D 0.05

14 Brenna built a skateboard ramp with the measurements shown below.


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

What is $x$, the length of the ramp?
F 5 inches
G 14 inches
H 17 inches
J 23 inches

15 A brand new one-dollar bill is $4.3 \times 10^{-3}$ inch thick. What would be the thickness of a stack of 200 brand new one-dollar bills?

A 0.63 inch
B 0.86 inch
C 6.3 inches
D 8.6 inches

16 The ages and heights of a number of different plants of the same species are recorded on the scatterplot.


Which equation represents a line of best fit for this scatterplot?
F $\quad y=\frac{5}{7} x$
G $y=\frac{5}{6} x$
H $\quad y=\frac{6}{5} x$
J $y=\frac{9}{5} x$

17 The distance between London and Paris is about 340.6 kilometers. Which is closest to this distance in miles? ( 1 mile $\approx 1.61$ kilometers)

A 211.55 miles
B $\quad 338.99$ miles
C 342.21 miles
D 548.37 miles

18 Tamara read a newspaper article about the cost of attending a university in 2005.

- The average cost to attend a public university was about $\$ 12,000$ per year.
- The average cost to attend a private university was about \$30,000 per year.
- The author of the article stated that a person would save between \$40,000 and $\$ 50,000$ over 4 years by attending a public university.

Which statement best describes the author's statement?
F It is valid because the total cost over 4 years of attending both types of universities is about \$42,000.

G It is invalid because the total cost over 4 years of attending both types of universities is about \$168,000.

H It is invalid because the difference in costs over 4 years of attending a private university to a public university is about $\$ 18,000$.

J It is invalid because the difference in costs over 4 years of attending a private university to a public university is about $\$ 72,000$.

19 Mrs. Myer put congruent trapezoid-shaped tiles in her kitchen, as shown below.


What is the measure of Angle $x$ ?
A $\quad 15^{\circ}$
B $75^{\circ}$
C $105^{\circ}$
D $285^{\circ}$

20 Which scatterplot displays a negative relationship over the entire set of data?
F

H


J


21 Jerry needs 402 feet of fencing for an enclosure. How many yards of fencing does he need?
A 12
B 34
C 121
D 134

22 What appears to be the $y$-value of the $y$-intercept of this graphed linear function?


F 3

G 0

H $\frac{1}{3}$

J -3

23 The heights of five 3-year-old children are shown in this graph.


A student claimed that Amy is much taller than the other four children. Which statement best explains why this claim is misleading?

A There is no comparison to the children's heights the previous year.
B The heights are recorded in inches and not feet.
C The weights of the children are not given.
D The scale of the vertical axis is very small.

24 Which point on the number line is closest to the location of -1.2 ?


F $W$
G $X$
H $Y$
J $Z$

25 Alfonso compared the price of tiles at four different stores. Which store sells the tile at the lowest price per tile?

A Store W sells 100 tiles for $\$ 140$.
B Store $X$ sells 130 tiles for $\$ 221$.
C Store Y sells 170 tiles for $\$ 255$.
D Store Z sells 180 tiles for $\$ 288$.

26 Which graph best represents the solution to $2 y+4 \geq 4 x+2$ ?


27 The five pieces of paper below are placed in a bag.


What is the probability that a piece of paper with a "C" written on it will be drawn first?
A $10 \%$
B $20 \%$
C $50 \%$
D 100\%

28 Which is closest to the straight-line distance between Points $P$ and $Q$ on the grid below?


F 8 units
G 11 units
H 13 units
J 16 units

29 Parallel Lines $t$ and $u$ when cut by Transversal $v$ form eight angles, as shown in the diagram below.


If the measure of Angle 2 is $112^{\circ}$, what is the measure of $\angle 5$ ?
A $68^{\circ}$
B $\quad 72^{\circ}$
C $112^{\circ}$
D $248^{\circ}$

30 Which inequality is equivalent to $4 y+44-2 x \geq 7 x+8-5 y$ ?
F $\quad y \leq x-4$
G $y \geq x-4$
H $\quad y \leq x+4$
J $y \geq x+4$

31 Which equation best represents the line graphed on the grid below?


A $y=3 x$
B $\quad y=x-3$
C $y=x+3$
D $y=3 x+3$

32 What is the value of $\frac{\left(8.4 \times 10^{36}\right)}{3 \times 10^{9}}$ ?
F $\quad 2.8 \times 10^{4}$
G $5.4 \times 10^{4}$
H $\quad 2.8 \times 10^{27}$
J $5.4 \times 10^{27}$

33 What is the slope of the line that passes through the points $(6,13)$ and $(10,21)$ ?

$$
m=\frac{y_{2}-y_{1}}{x_{2}-x_{1}}
$$

A 2
B 4
C 6
D 8

34 In 2008, the world's population was estimated to be $6.705 \times 10^{9}$ people. The table below shows the approximate populations of two continents the same year.

Populations of Continents

| Continent | Approximate <br> Population |
| :--- | :---: |
| Asia | $4.052 \times 10^{9}$ |
| Europe | $7.36 \times 10^{8}$ |

Which is closest to the number of people who lived on continents other than Asia or Europe?
F $\quad 1.917 \times 10^{9}$
G $\quad 2.653 \times 10^{9}$
H $\quad 3.397 \times 10^{9}$
J $4.707 \times 10^{9}$

35 Henry is practicing for a swim meet. Four of his practice results are shown in the table.

Henry's Results

| Distance <br> (in meters) | Time <br> (in seconds) |
| :---: | :---: |
| 50 | 56 |
| 100 | 130 |
| 200 | 184 |
| 400 | 345 |

$$
\text { distance }=\text { rate } \times \text { time }
$$

For which distance did Henry swim the fastest?
A 50 meters
B 100 meters
C 200 meters
D 400 meters

## Part 2

36 Jamal is on the high-jump team at his school. The graph below shows the height of each jump attempt he made at a competition.


Jump Attempts

Based on the graph, which statement best describes the heights of Jamal's jumps?
F The heights of Jamal's jumps decreased, then stayed constant.
G The heights of Jamal's jumps increased, then stayed constant.
H The heights of Jamal's jumps stayed constant, then decreased.
J The heights of Jamal's jumps stayed constant, then increased.

37 An equation is given below.

$$
4 x+2 y^{3}=5+y
$$

Which term identifies this equation as nonlinear?
A $4 x$
B $2 y^{3}$
C 5
D $y$

38 Which expression can be used to find the product of $\left(5.8 \times 10^{34}\right)$ and $\left(4.7 \times 10^{15}\right)$ ?
F $\quad(5.8+4.7) \times 10^{(34 \times 15)}$
G $(5.8+4.7) \times 10^{(34+15)}$
H $(5.8 \times 4.7) \times 10^{(34 \times 15)}$
J $(5.8 \times 4.7) \times 10^{(34+15)}$

39 Which pair of figures, when overlapped, could have exactly 8 points of intersection?
A


B


C


D



40 Look at this list of values.

$$
\left[-1, \sqrt{8}, \frac{3}{8},-0.212\right]
$$

Which statement about these values is true?

F Only -1 is irrational.

G Only -0.212 is rational.

H $\quad \sqrt{8}$ and $\frac{3}{8}$ are irrational.
J $-1, \frac{3}{8}$ and -0.212 are rational.

41 What is the slope of the line represented by this equation?

$$
4 x+2 y=6
$$

A -4
B $\quad-2$
C 3
D 4

42 Which graph represents a linear equation that appears to have a $y$-intercept of $\left(0, \frac{1}{2}\right)$ ?





43 The triangle on the grid represents a section of Miesha's backyard.


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

Which is closest to the length of side $h$ in this triangle?
A 14.0 units
B $\quad 10.3$ units
C 9.3 units
D 7.5 units

44 Given: $\left\{\begin{array}{l}f(x)=2.4+0.4 x \\ g(x)=0.28 x-1.2\end{array}\right.$
What is the solution to $f(x)=g(x)$ ?
F $\quad-30$
G $\quad-10$
H 3.75
J 11.25

45 Which graph best represents the inequality $3 x \leq 9-6 y$ ?
A

C


D


46 If $2 x-6 y=32$ and $3 x+5 y=6$, then which ordered pair represents the solution for $x$ and $y$ ?
F $(-3,3)$
G $(7,-3)$
H $(25,3)$
J $(-3,-7)$

47 The table below shows the masses of some of the planets in our solar system.
Mass of Planets

| Planet | Mass <br> (in kilograms) |
| :---: | :---: |
| Earth | $7.3483 \times 10^{22}$ |
| Jupiter | $1.8987 \times 10^{27}$ |
| Uranus | $8.6849 \times 10^{25}$ |
| Neptune | $1.0244 \times 10^{26}$ |

Which list of planets is in order from the least mass to the greatest mass?
A Neptune, Jupiter, Earth, Uranus
B Jupiter, Neptune, Uranus, Earth
C Earth, Uranus, Neptune, Jupiter
D Uranus, Earth, Jupiter, Neptune

48 Next year, Travis will be randomly assigned to a gym class and an art class. Ms. Watson will teach $20 \%$ of the gym classes and Mr. Canfield will teach $15 \%$ of the art classes next year. What is the probability that Travis will not be assigned to either of these teachers?

F 65\%
G 68\%
H 95\%
J $97 \%$

49 Parallel Lines $t$ and $u$ are cut by Transversal $v$, forming eight angles, as shown below.


The measure of $\angle 1=48^{\circ}$. What is the measure of $\angle 7$ ?
A $42^{\circ}$
B $48^{\circ}$
C $132^{\circ}$
D $228^{\circ}$

50 The distance from the planet Venus to the sun is about $1.08 \times 10^{8}$ kilometers. Light travels at a rate of $3 \times 10^{5}$ kilometers per second. How much time, in seconds, does it take for light to travel from the sun to Venus?

F 0.36
G 2.78
H 360
J 2,778

51 A group of students each measured the growth of a group of plants at different ages. The results are shown in the scatterplot below.


Which conclusion about the growth rate of the group of plants is best supported by the data?
A The plants grew about 2 inches per month.
B The plants grew about 3 inches per month.
C The plants grew about 4 inches per month.
D The plants grew about 6 inches per month.

52 In 2008, a tower of chrysanthemums was recognized as the tallest flower structure ever built. The tower was 24.43 meters in height. Which measurement is closest to the height of the tower, in yards? ( 1 meter $\approx 1.09$ yards)

F 22.41 yards
G 23.34 yards
H 25.52 yards
J 26.63 yards

53 The graph below was included in a newspaper article about the average rainfall in a city.


The article states that the three months shown in the graph indicate a significant drop in rainfall this year compared to previous years. How is the information in the graph misleading?

A The vertical axis intervals are very small.
B The scale on the vertical axis is not constant.
C The comparison was not made with other cities.
D More than three months should have been used.

54 A student designed a rectangular flag for a school project, as shown below. The diagonal distance is 5 ft .


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

If the length of the flag is 4 ft , what is the width?
F 9 feet
G 6 feet
H 4 feet
J 3 feet

55 A food manufacturer compared the cooking times for different frozen foods in a microwave oven $(x)$ to the cooking times in a conventional oven $(y)$. A line of best fit for the data collected is $y=0.5 x+5$. Which scatterplot best represents this set of data?


56 The graph below shows the linear function $y=-5 x$.


If the value of $x$ is 2 , what is the value of $y$ in this function?

F 10

G $\frac{2}{5}$
H $-\frac{2}{5}$

J -10

57 Rita is playing a game using the spinner below. Each section on the spinner is the same size.


What is the probability that the spinner will land on an even number on both of Rita's next two spins?

A $\frac{4}{25}$
B $\frac{6}{25}$
C $\frac{8}{25}$
D $\frac{9}{25}$

58 Javier will sort the four equations shown by classifying them as linear or nonlinear.

$$
y=1 \quad x+y=3 \quad y=2-x^{3} \quad x=6
$$

Which shows the correct way Javier should sort the above equations?

F $x=6$
Linear


Linear

H $\begin{gathered}y=1 \\ y=2-x^{3} \\ x=6\end{gathered}$
Linear


Linear
$x+y=3$
$y=2-x^{3}$

Nonlinear


Nonlinear


Nonlinear

59 Coach Jenson will order soccer uniforms from one of the stores listed below.

- Store A sells 15 uniforms for a total of $\$ 449.85$.
- Store B sells 10 uniforms for a total of $\$ 300.00$.
- Store C sells uniforms for $\$ 32.00$ per uniform.
- Store D sells 2 uniforms for a total of $\$ 58.00$.

Which store has the lowest price per uniform?
A Store A
B Store B
C Store C
D Store D

60 Matthew measured a right triangle with a hypotenuse 10 centimeters ( cm ) long and one leg 6 centimeters long.

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

What is the length of the other leg of the triangle Matthew measured?
F $\quad 4 \mathrm{~cm}$
G 8 cm
H $\quad 12 \mathrm{~cm}$
J 16 cm

61 Two number cubes, each with faces numbered 1 through 6 , are rolled at the same time. What is the probability that at least one of the cubes will land on 6 ?

A $\frac{1}{36}$
B $\frac{1}{6}$
C $\quad \frac{11}{36}$
D $\frac{11}{30}$

62 The rectangle on the grid below represents the dimensions of a kitchen floor.


What is the distance, $n$, across the kitchen floor?
F 21 units
G 15 units
H 12 units
J 8 units

63 What is the value of $b$ in the solution to this system of linear equations?

$$
\begin{gathered}
2 a-4 b=4 \\
3 a+3 b=-21
\end{gathered}
$$

A $\quad-9$
B $\quad-6$
C $\quad-4$
D $\quad-3$

64 The graph of a linear function is shown below.


Which linear equation is best represented by this graph?
F $\quad y=2 x-3$
G $\quad y=3 x-2$
H $\quad y=-2 x+3$
J $y=-3 x+2$

65 The table below shows information Miguel recorded.

Hypotenuse of a Right Triangle

| Right Triangle | Hypotenuse <br> Measure |
| :---: | :---: |
| $P$ | $\sqrt{\frac{25}{16}}$ |
| $R$ | $\sqrt{20}$ |
| $S$ | $\sqrt{25}$ |
| $T$ | $\sqrt{169}$ |

Which triangle has a hypotenuse with a length that is an irrational number?
A Triangle $P$
B Triangle $R$
C Triangle $S$
D Triangle $T$

66 The graph below shows the balance of Joey's bank account over time.


Based on the graph, which statement about Joey's bank account balance is true?
F The balance in Joey's account was highest at the end of this time period.
G The balance in Joey's account was lowest in the middle of this time period.
H The balance in Joey's account was constant throughout this time period.
J The balance in Joey's account increased steadily over this time period.

67 Two circles are shown below.


If the two circles above are overlapped, what is the maximum number of points of intersection possible?

A 4
B 3
C 2
D 1

68 Which value appears to be the slope of the line graphed below?


F 4

G $\frac{1}{4}$
H $-\frac{1}{4}$
J -4

69 A rocket plane traveled at approximately $18,783.3$ meters per second.
distance $=$ rate $\times$ time

At that rate, which is closest to the number of seconds it would take the rocket plane to travel 21,000 meters?

A 0.69
B 0.89
C 1.12
D 1.81

$$
\begin{gathered}
\text { DO NOT } \\
\text { MARK } \\
\text { ON THIS } \\
\text { PAGE }
\end{gathered}
$$

## Science

## Part 1

1 A student observes actions that occurred in four different eggs. Which action describes only a chemical change?

A a cut up egg
B a stirred egg
C a rotting egg
D a dropped egg

2 The parts of an electromagnet are shown below.


The strength of the magnet will be increased by
F using more nails.
G adding a switch.
H making more loops with the wire.
J placing the battery closer to the nail.

3 The activity of an enzyme at different pH levels is shown in the graph.


Which table best represents the data in the graph?
Enzyme Activity
A

| Activity <br> Level | pH Level |
| :---: | :---: |
| Highest | Strong acid, 2.5 |
| Lowest | Weak acid, 6.4 |

Enzyme Activity

| Activity <br> Level | pH Level |
| :---: | :---: |
| Highest | Strong acid, 2.0 |
| Lowest | Weak acid, 6.0 |

Enzyme Activity

B | $\begin{array}{c}\text { Activity } \\ \text { Level }\end{array}$ | pH Level |
| :---: | :--- |
| Highest | Strong acid, 1.0 |
| Lowest | Weak acid, 5.0 |

| Activity <br> Level | pH Level |
| :---: | :--- |
| Highest | Strong acid, 1.0 |
| Lowest | Weak acid, 5.0 |

4 A classification key for an organism is shown below.


To what class does the organism belong?
F Cestoda
G Gastropoda
H Trematoda
J Bivalvia

5 The clearing of rain forests for agricultural use has led to a decrease in biodiversity in many areas. One potential consequence of deforestation is

A an increase in the amount of atmospheric oxygen.
B the loss of plants with potential medicinal uses.
C a decrease in soil erosion.
D improved habitat for wildlife.

6 Two fossils that appear to be from the same type of organism are found in two different layers of rock. The layers of rock are shown below.


Which can be determined from the location of the fossils?
F the prey of the organisms
G the predators of the organism
H the cause of death for each organism
J the relative age of each organism

7 The table shows the percentage of individuals in a population of insects that is resistant to certain types of insecticides.

Insecticide Resistant Insect Populations

| Population | Insecticide 1 | Insecticide 2 | Insecticide 3 |
| :---: | :---: | :---: | :---: |
| 1 | $12.8 \%$ | $48.5 \%$ | $1.8 \%$ |
| 2 | $52.5 \%$ | $2 \%$ | $9.3 \%$ |
| 3 | $28.6 \%$ | $9.2 \%$ | $34.8 \%$ |
| 4 | $0 \%$ | $0 \%$ | $10.1 \%$ |
| 5 | $2.8 \%$ | $66.6 \%$ | $3.5 \%$ |
| 6 | $3.6 \%$ | $78.5 \%$ | $48.2 \%$ |

Which two populations would be most affected by a widespread use of Insecticide 2 ?
A 2 and 4
B 1 and 6
C 3 and 5
D 4 and 6

8 A student applies heat to a solid substance. Which indicates that a chemical change occurred?
F The substance becomes a liquid but solidifies when cooled.
G The substance changes color and stays that color when cooled.
H The substance goes from liquid to gas very quickly.
J The substance expands but stays the same color.

9 Which option contains only compounds?
A $\mathrm{H}_{2} \mathrm{O}, \mathrm{H}_{2} \mathrm{O}_{2}, \mathrm{H}_{3} \mathrm{O}, \mathrm{CO}_{2}$
B $\mathrm{Na}, \mathrm{NaCl}, \mathrm{Pb}, \mathrm{C}_{6} \mathrm{H}_{12} \mathrm{O}_{6}$
C $\mathrm{NH}_{3}, \mathrm{KNO}_{3}, \mathrm{Hg}, \mathrm{Ne}$
D $\mathrm{Au}, \mathrm{Ni}, \mathrm{Cu}, \mathrm{Fe}$

10 Compare the fossil layers shown below.


Which organisms are most likely to be the same approximate age?
F 1 and 3
G 3 and 5
H 2 and 4
J 5 and 6

11 The Arctic environment has temperatures that range between $-22^{\circ} \mathrm{C}$ and $6^{\circ} \mathrm{C}$ with snow covering some of the area. Which adaptation would most likely help a population of organisms survive this environment?

A long necks and tall legs
B large shell and leathery skin
C light colored fur and layers of blubber
D brightly colored feathers and webbed feet

12 The table below shows the average rainfall amounts and number of grazing animals in an area over a 30 -year period.

|  | Millimeters <br> of Rain | Number of <br> Grazing Animals |
| :---: | :---: | :---: |
| 1975 | 780 | 1500 |
| 1980 | 525 | 2000 |
| 1985 | 600 | 1500 |
| 1990 | 575 | 2500 |
| 1995 | 300 | 1500 |
| 2000 | 850 | 1000 |
| 2005 | 300 | 1500 |

Which is the best conclusion based on the data?
F The number of grazing animals increases approximately every 5 years.
G The number of grazing animals supported by rainfall cannot exceed 2000.
H The number of grazing animals is not affected by the amount of rainfall.
J The number of grazing animals increases after years of increased rainfall.

13 The table shows the average distance from the sun to the planets Mercury, Venus, and Earth.

Average Distance from Sun

| Planet | Millions of Kilometers <br> $(\mathbf{k m})$ |
| :--- | :---: |
| Mercury | 58 |
| Venus | 108 |
| Earth | 150 |

Which graph best compares the distances from the sun for these three planets?


14 An engineering company is testing a new weather-forecasting program. Which procedure would best verify that the program is making accurate predictions?

F comparing the predictions of the program to the actual weather
G comparing the predictions of the program to other predictions
H using the program to verify events not related to weather
J using the program to verify past weather-related events

15 The following graph represents the percentages of gases that make up the atmosphere of Earth.

The Atmosphere of Earth


Which gas is represented in the portion labeled 1 on the graph?
A argon
B hydrogen
C nitrogen
D oxygen

16 A company is designing a dam with a floodgate to keep houses safe during the rainy season. The company is reviewing several possible designs that have worked in the past and is trying to develop a plan for implementing one design. Which is the next step in this process?

F pick several dams to use in a consumer survey
G test each dam model during a different flood season
H analyze the dam designs and pick one based on local needs
J redesign the past dams based on what the company feels will work best

17 Which diagram best shows the type of particle arrangement associated with a gas?

c



18 The equation for density is shown below.

$$
\begin{aligned}
\text { Density } & =\frac{\text { mass }}{\text { volume }} \\
D & =\frac{m}{v}
\end{aligned}
$$

Which block has the greatest density?
F

Volume $=9$ cubic centimeters
G
Volume $=12$ cubic centimeters

J

Volume $=4$ cubic centimeters

19 Which statement best describes the difference between a mixture and a compound?
A Compounds are pure elements.
B Compounds contain elements bonded together.
C Compounds can be easily separated into distinct parts.
D Compounds have multiple boiling points.

20 A student is trying to determine the density of a cube using the formula shown below.

$$
\begin{aligned}
\text { Density } & =\frac{\text { mass }}{\text { volume }} \\
D & =\frac{m}{v}
\end{aligned}
$$

What is the density of the cube if it has a mass of 2 grams and a volume of 1 cubic centimeter?
F $3.0 \mathrm{grams} / \mathrm{cubic}$ centimeter
G 2.0 grams/cubic centimeter
H 1.0 gram/cubic centimeter
J 0.5 gram/cubic centimeter

21 The main biofuel on the market today is ethanol, a fuel made from corn. Which type of bioengineered product is ethanol?

A adaptive
B assistive
C resistant
D manipulated

22 Four changes are shown below.


Which of these represents a chemical change?
F A match is lit, creating a yellow-orange flame.
G A small piece of ice melts, changing from a solid to a liquid.
H A ball of clay sinks in water, and floats when reshaped.
J A pot of water is heated to boiling, and evaporation occurs.

23 The periodic table of elements is shown below.


| Ce | Pr | Nd | Pm | Sm | Eu | Gd | Tb | Dy | Ho | Er | Tm | Yb | Lu |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Th | Pa | U | Np | Pu | Am | Cm | Bk | Cf | Es | Fm | Md | No | Lr |

Which statement best describes the reactivity of the shaded elements nitrogen (N), oxygen (O), and fluorine ( F ) ?

A The nonmetals increase in reactivity from right to left in the same period.
B Oxygen is the most reactive of all the elements listed.
C The nonmetals decrease in reactivity from right to left in the same period.
D Fluorine is the least reactive of all the shaded elements.

24 A chemical equation is shown below.

$$
\mathrm{C}_{6} \mathrm{H}_{12} \mathrm{O}_{6}+6 \mathrm{O}_{2} \longrightarrow 6 \mathrm{CO}_{2}+6 \mathrm{H}_{2} \mathrm{O}
$$

What are the products of the reaction?
F $\quad \mathrm{H}_{2} \mathrm{O}$ and $\mathrm{O}_{2}$
G $\mathrm{C}_{6} \mathrm{H}_{12} \mathrm{O}_{6}$ and $\mathrm{CO}_{2}$
H $\mathrm{CO}_{2}$ and $\mathrm{H}_{2} \mathrm{O}$
J $\mathrm{O}_{2}$ and $\mathrm{C}_{6} \mathrm{H}_{12} \mathrm{O}_{6}$

25 The procedure below is designed to test how water temperature affects the rate at which sugar dissolves.

- Measure 150 milliliters of water into each beaker.
- Heat water to three different temperatures.
- Put 5 grams of sugar into each of the beakers at the same time.
- Stir and record the time it takes for the sugar to completely dissolve.

Which additional step will most improve the investigation?
A Use 200 milliliters of water in each beaker.
B Record the initial and final temperatures of the water.
C Stir at different rates for each beaker.
D Record the times when sugar is half dissolved.

26 The table below shows researchers' data from an investigation designed to determine which sponge shape absorbs the greatest volume of water.

Sponge Table

| Sponge Shape | Mass of <br> Wet Sponge |
| :---: | :---: |
| Round | 5.50 grams |
| Square | 5.70 grams |
| Irregular | 6.00 grams |
| Oval | 5.53 grams |

Based on the data, the researchers stated that the irregular-shaped sponge absorbed the greatest volume of water. Researchers plan to market the irregular-shaped sponge as "super absorbent." What is wrong with the researchers' interpretation of the data?

F The researchers should have tested the sponges in different types of liquids.
G The researchers should have tested more types of sponges.
H The researchers did not record the dry mass or volume of each sponge.
J The researchers did not freeze each sponge before massing it.

27 An iron block had an initial mass of 100 grams. As the block rusted, its mass increased. Which best explains why the mass increased?

A Oxygen combines with iron when rust is formed.
B Rust grows as it absorbs energy from the block.
C Water is absorbed as rust forms on the iron block.
D Rust releases heat and makes the iron expand.

28 Which procedure best represents the law of conservation of mass?
F evaporating salt water leaves 5 grams of salt
G burning 2 kilograms of wood leaves 0.4 kilogram of ash
H using filter paper to separate 2 grams of solid from 10 grams of water
J combining 2 grams of copper and 4 grams of sulfur to produce 6 grams of copper sulfate

29 An unknown substance will be classified as an acid if the substance
A has a pH of 3.0.
B is slippery to the touch.
C turns red litmus paper blue.
D releases hydroxide ions in water.

30 Which is best used with a bar magnet to produce an electric current?
F metal coins
G silver pins
H paper clips
J wire coil

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31 A student is to determine how much salt will dissolve in 50 milliliters of water. Which tool is best for measuring the volume of water to be used?

A 100-milliliter graduated cylinder
B thermometer
C spring scale
D 25-milliliter beaker

32 The equation below represents a chemical reaction that releases energy.

$$
2 \mathrm{Na}+2 \mathrm{H}_{2} \mathrm{O} \longrightarrow 2 \mathrm{NaOH}+\mathrm{H}_{2}+\text { energy }
$$

Which part of the equation is a reactant?
F 2 NaOH
G $\mathrm{H}_{2}$
H $2 \mathrm{H}_{2} \mathrm{O}$
J energy

33 Which diagram shows an apparatus that is correctly set up to produce and measure electricity?
A
Microammeter

Microammeter
C

B
Microammeter

D
Microammeter


34 The construction of an electromagnet would be best completed by introducing a current into loops of wire wrapped around

F a sandstone rock.
G a glass square.
H a plastic rod.
J an iron nail.

35 A factory is producing a new machine designed to reduce the amount of air pollution in houses. The machine was produced and sold to the public. After several months, reports show the machine is not working correctly. Which of these most likely caused this outcome?

A The proper cost analysis was not performed.
B The prototype was not tested before use by the public.
C The designers did not test other types of machines.
D The manufacturing of the machine was done over several months.

## Part 2

36 A chemical equation is shown below.

$$
2 \mathrm{Zn}+2 \mathrm{HCl} \longrightarrow 2 \mathrm{ZnCl}+\mathrm{H}_{2}+\text { heat }
$$

The element zinc ( Zn ) can best be described as a
F compound.
G mixture.
H gas.
J reactant.

37 In order to prolong the shelf life of fruits and vegetables, companies expose some types of fruits and vegetables to X-rays in order to kill bacteria. Which best describes irradiated fruits and vegetables?

A adaptive products
B assistive products
C synthetic products
D natural products

38 A student asks why the ashes from a fire have a much lower mass than the wood that was burned. Which is the correct answer to the student's question?

F Atoms in the wood are destroyed.
G Gases are released into the air.
H Water inside the wood solidifies.
J Heat causes molecules to lose density.

39 Which diagram represents a magnet creating an electric current?


40 The sun is much larger than the moon. Which of these best explains why the moon, despite its smaller size, has a greater effect on ocean tides than the sun does?

F The moon is much closer to Earth.
G The moon produces less light than the sun.
H The moon and Earth have the same composition.
J The moon has a lower surface temperature.

41 Which two items are best to use to determine the combined volume of three small rocks?
A electric scale and ruler
B graduated cylinder and water
C hot plate and beaker
D meter stick and eye dropper

42 Which properties most likely indicate that a substance is a base?
F releases hydrogen gas and reacts with metals
G turns red litmus blue and conducts an electric current
H turns blue litmus red and conducts an electric current
J has a pH below seven and corrodes a nail

43 Wire coils spinning between two magnets will produce
A cold.
B electricity.
C steam.
D chemicals.

44 A scientist wants to study what happens when carbon dioxide $\left(\mathrm{CO}_{2}\right)$ reacts with hydrogen $\left(\mathrm{H}_{2}\right)$. The scientist discovers that this reaction produces methane $\left(\mathrm{CH}_{4}\right)$ and water $\left(\mathrm{H}_{2} \mathrm{O}\right)$. Which equation correctly represents this reaction?

F $\mathrm{CO}_{2}+\mathrm{H}_{2} \longrightarrow \mathrm{CH}_{4}+\mathrm{H}_{2} \mathrm{O}$
G $\mathrm{CO}_{2}+4 \mathrm{H}_{2} \longrightarrow \mathrm{CH}_{4}+\mathrm{H}_{2} \mathrm{O}$
H $\mathrm{CO}_{2}+\mathrm{H}_{2} \longrightarrow \mathrm{CH}_{4}+2 \mathrm{H}_{2} \mathrm{O}$
J $\mathrm{CO}_{2}+4 \mathrm{H}_{2} \longrightarrow \mathrm{CH}_{4}+2 \mathrm{H}_{2} \mathrm{O}$

45 The table provides information about different worms.

Worm Characteristics

| Type of <br> Worm | Segmented | Bilateral <br> Symmetry | Sexual <br> Reproduction | Body <br> Cavity | Example |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Segmented <br> worms | Yes | Yes | Yes | Yes | Earthworms <br> and leeches |
| Flatworms | No | Yes | Yes | No | Planaria and <br> tapeworms |
| Roundworms | No | Yes | Yes | Modified | Hookworms <br> and Ascaris |

Which is an example of a nonsegmented worm with no body cavity?
A Earthworms
B leeches
C Ascaris
D tapeworms

46 A chart listing the density of four metals is shown below.

Metal Densities Chart

| Metal | Density (grams/cm ${ }^{3}$ ) |
| :--- | :---: |
| Aluminum | 2.70 |
| Iron | 7.87 |
| Nickel | 8.91 |
| Silver | 10.49 |

$$
\begin{aligned}
\text { Density } & =\frac{\text { mass }}{\text { volume }} \\
D & =\frac{m}{v}
\end{aligned}
$$

A student determines that a metal has a mass of $\mathbf{8 1 0 . 0}$ grams and a volume of $\mathbf{9 0 . 0}$ cubic centimeters. Using the formula above, this unknown metal is most likely

F aluminum.
G iron.
H nickel.
J silver.

47 A student recorded the speed of several blue cars versus several red cars over the course of 1 day. The average speed of red cars was 70 mph , while the average speed of blue cars was 68 mph . The student concludes that red paint makes cars go faster. Which statement identifies an error in the student's conclusion?

A The conclusion was made based on two types of cars.
B The observation was made on several highways.
C The observation shows information for several times of day.
D The conclusion claims that there is a cause and effect without evidence.

48 A student coils a copper wire around a bar magnet. Which action will cause the device to generate electricity?

F The student connects the copper wire to a light bulb.
G The student insulates the copper wire with plastic.
H The student uses a horseshoe magnet instead of a bar magnet.
J The student moves the bar magnet through the copper wire coils.

49 Which keeps Earth in its orbit?
A the rotation of Earth
B the gravity of the sun
C the revolution of the moon
D the gravity of the moon

50 A nuclear power plant has recently been built to generate electricity for a town located near several small lakes. Which is not a benefit of this nuclear power plant being built?

F The cost of the electricity will decrease.
G The loss of habitat for local wildlife.
H The heating of homes will be easier.
J The nuclear power plant will provide jobs.

51 A student wants to test how the concentration of phosphorus in a fertilizer affects plant growth. In designing this experiment the independent variable would most likely be the

A amount of phosphorus used per plant.
B height each plant grows after given fertilizer.
C type of each plant used.
D type of phosphorus used.

52 A student designs an experiment to test the acidity of the water in several ponds near an industrial area. Which tool would best help a student obtain accurate data?

F oxygen probe
G metric ruler
H pH indicator
J heat sensor

53 A student observes a tree with small needle-like leaves that stay green year round. Which conclusion can the student draw from the shape of the leaves?

A The leaves of the tree do not perform photosynthesis.
B The leaves of the tree have an illness that stunts their growth.
C The leaves of the tree are nonfunctional.
D The leaves of the tree are intended to reduce water loss.

54 A student investigated how the mass of a plastic disk affected its motion. The student pushed five similar plastic disks, each with a different mass, across a wooden floor. The student recorded the distance each disk traveled. The investigation was repeated five times. The student concluded there was no relationship between mass and distance traveled. Which of these best describes an error in the investigation?

F The student performed too few trials.
G The student should have used disks that were the same mass.
H The student should have pushed the disks across different surfaces.
J The student failed to control the amount of force applied.

55 Which statement best describes what the planet Saturn, a lizard, and a steaming kettle have in common?

A All are made of atoms.
B All are multicellular organisms.
C All are at the same internal temperature.
D All produce their own energy without help.

56 A student observes that a gas is formed when chemical $Y$ is added to chemical $Z$ in the lab. The student's observation of a new product being formed is the common outcome of all

F physical changes.
G chemical changes.
H mass changes.
J phase changes.

57 Which substance is classified as an element?
A NaCl
B CO
C $\mathrm{H}_{2} \mathrm{O}$
D Li

58 A combination of salt and sugar grains is best classified as a mixture because
F the grains taste different from one another.
G both the salt and sugar grains are in the same state of matter.
H no new chemical bonds are formed between the salt and sugar grains.
J a new product is formed when the salt and sugar grains are combined.

59 Which elements make up most of the atmosphere of Earth?
A oxygen and nitrogen
B nitrogen and helium
C water vapor and helium
D oxygen and water vapor

60 Diagrams of molecular arrangements are shown below.


The molecular arrangement of a solid is best represented in
F diagram 3.
G diagram 1 .
H diagrams 1 and 2 .
J diagrams 2 and 3 .

61 A 5-gram sample of water occupies 5 milliliters of space in a beaker.

$$
\begin{aligned}
\text { Density } & =\frac{\text { mass }}{\text { volume }} \\
D & =\frac{m}{v}
\end{aligned}
$$

Using the above formula, what is the density of the water sample?
A 1 gram/milliliter
B 5 grams/milliliter
C 10 grams/milliliter
D 25 grams/milliliter

62 Which statement best describes a physical change?
F A process separates water into hydrogen gas and oxygen gas.
G An iron nail exposed to the atmosphere forms rust.
H Burning carbon releases the gas carbon dioxide.
J Salt added to a cup of water makes salt water.

63 Five diagrams of atomic arrangements are shown below.


Which of these best describes all five diagrams?
A All are compounds made of atoms.
B All have three types of atoms.
C All are composed of atoms.
D All have the same atomic symbol.

64 A student performed a classroom investigation by mixing a purple liquid and a white powder. Diagrams of the setup and the resulting blue solid are shown below.


The student could best classify this reaction as a
F physical change.
G weight change.
H mass change.
J chemical change.

65 The picture below illustrates an experiment designed to test plant growth using potted green bean sprouts placed in front of a window.


Which of these is the independent variable in this experimental design?
A different species of plants
B different types of light sources
C the height of each plant's ceramic pot
D the distance of the plants from the light source

66 Which of these occurs during all chemical changes?
F new elements are formed
G temperature increases
H new bonds form between atoms
J phase changes from solid to liquid

67 Which statement describes a possible consequence if biodiversity were to decrease in the Arctic due to the extinction of polar bears?

A changes in the food web, leading to a loss of food resources for native people
B an increase in the number of producers after a herbivore population boom
C a decrease in the number of herbivores due to natural predators being gone
D disturbances in weather patterns, leading to a higher average water temperature

68 A cross section of rock layers is shown below.


Which fossil is found in the oldest layer?
F dinosaur
G fish
H shell
J leaf

69 The table below lists properties of four different pure samples.

Table of Solution Properties

| Sample | Color of Blue <br> Litmus Paper <br> After Dipped <br> in Solution | $\mathbf{p H}$ | Does Sample <br> Conduct <br> Electricity? |
| :---: | :---: | :---: | :---: |
| 1 | Red | 5.2 | Yes |
| 2 | Purple | 7.0 | No |
| 3 | Blue | 9.8 | Yes |
| 4 | Red | 4.3 | Yes |

Based on the table, which sample is a base?
A Sample 1
B Sample 2
C Sample 3
D Sample 4

# DO NOT MARK ON THIS <br> PACE 

$$
\begin{gathered}
\text { DO NOT } \\
\text { MARK } \\
\text { ON THIS } \\
\text { PAGE }
\end{gathered}
$$

## Social Studies

## Part 1

1 When a school asks students to recite the Pledge of Allegiance, it is promoting
A healthy lifestyles.
B hard work.
C free enterprise.
D active citizenship.

2 Why was the Cumberland Gap important to the expansion of the United States?
F It connected major cities on the Ohio and Mississippi rivers.
G It completed the trade route between Virginia and Pennsylvania.
H It provided a route for the explorers of the Louisiana Territory.
J It made crossing the Appalachian Mountains easier.

3 The 13th, 14th, and 15th Amendments can best be seen as effects of the Civil War because they
A granted rights to African Americans.
B increased hourly wages for all workers.
C opened up free lands in the West for settlers.
D granted women the right to vote.

4 A business owner has an agreement with a bank that allows him to borrow money based on his assets and his ability to repay in the future. This is an example of

F tax.
G debt.
H credit.
J interest.

5 Who has the power in democratic governments?
A the people
B the courts
C the police
D the military

Directions Use the map below and your own knowledge to do Numbers 6 and 7.


6 Which city shown on the map is located nearest $5^{\circ} \mathrm{N}$ latitude and $75^{\circ} \mathrm{W}$ longitude?
F Bogota
G Caracas
H Lima
J Quito

7 In which direction would a person going from Santiago to Brasilia travel?
A southeast
B southwest
C northeast
D northwest

## The Triangle Trade



8 Which best replaces the question mark in the map above?
F Tea
G Livestock
H Pottery
J Slaves

Total Population of Some U.S. States, 1790


9 Which state in the graph above had the smallest percentage of slaves in its total population?
A Delaware
B Georgia
C Maryland
D New York

- working in soup kitchens
- building parks and playgrounds
- setting up neighborhood watch programs

10 The activities in the box are examples of ways to
F raise money for the community.
G help political parties in the community.
H elect community government leaders.
J participate in meeting local needs.


11 Which term best completes the diagram above?
A Industrial growth
B Anti-immigration movement
C Westward expansion
D Abolitionist movement

## Puritans

## Quakers

- Life is a constant struggle with evil
- Obedience to word of God
- Public confession of faith
- Men and women equal in eyes of God
- People should listen to their "inner light" to connect with God
-?

12 What phrase best completes the diagram above?
F Obedience to the king
G Religious tolerance
H Respect for warfare
J Belief in reincarnation

## Directions Use the timeline below and your own knowledge to do Number 13.



13 Andrew Jackson was elected president in 1828. Based on the timeline, he was a member of which party?

A Whig Party
B Free Soil Party
C Federalist Party
D Democratic Party


14 Which of these best completes the diagram?
F Right to legal representation
G Right to a jury trial
H Freedom of religion
J Freedom from unreasonable searches

15 Which pair of state names demonstrates the influence of Native American groups on the cultural development of the United States?

A New York and Georgia
B Mississippi and Missouri
C Virginia and Pennsylvania
D New Hampshire and Maine

16 Which worker in the early American colonies would best be classified as performing a service economic activity?

F a craftsman producing furniture
G a person cooking meals
H a farmer harvesting crops
J a fisherman selling his daily catch

## Factors that Contributed to ?

- Imposition of new taxes
- Quartering of troops
- Tyrannical government

17 Which event best completes the title of this list?
A the French and Indian War
B the Revolutionary War
C Westward Expansion
D the War of 1812

## Machu Picchu



18 The major civilization that built the city shown above most likely chose the location because it was
F shielded by forests.
G surrounded by plains.
H accessed by rivers.
J protected by mountains.

## Tennessee Physical Map



| KEY |  |
| :---: | :---: |
| $\square 500 \mathrm{ft}$ | $\square \mathrm{5}, 000 \mathrm{ft}$ |
| 凅 $1,000 \mathrm{ft}$ | $\square 10,000 \mathrm{ft}$ |
| $\square \mathbf{2 , 0 0 0} \mathrm{ft}$ |  |

19 Based on the map, the area of Tennessee near the Mississippi River is most likely
A a mesa.
B a plain.
C a plateau.
D a mountain.

- States had different money systems
- States ignored needs of other states
- States competed in trade

20 Which document led to the conditions listed above?
F Articles of Confederation
G Magna Carta
H Declaration of Independence
J Mayflower Compact

21 Which of these is a characteristic of the system of federalism?
A the appointment of leaders for life
B the absence of a written constitution
C the separation of powers among three branches
D the division of power between state and national governments

22 Which economic practice did European settlers introduce to North America?
F cultivation of the soil
G private ownership of land
H barter of scarce goods
J collection of income taxes

New Technological
Advances in Colonial America

- Sawmills
- Gristmills
- Iron Forges

23 The technologies listed above contributed to which aspect of Colonial American development?
A transportation
B industrialization
C education
D exploration

A triangular deposit of sand and soil located at the mouth of a river

24 Which geographical feature is described above?
F marsh
G delta
H harbor
J oasis

## Excerpts from 1585 Pamphlet Promoting English Colonization of America

1. The increase of the force of the Christians.
2. The possibility of . . . enlarging . . . the Queen's . . . [territory and] power
3. An ample vent [market for] . . . the woolen clothes of England . . .
4. A great possibility of further discoveries ...
— Richard Hakluyt (1585)

25 Which part of the excerpt above represents a religious-based reason for establishing an English colony?

A 1. The increase of the force of the Christians.
B 2. The possibility of . . . enlarging . . . the Queen's . . . [territory and] power . . .
C 3. An ample vent [market for] ... the woolen clothes of England ...
D 4. A great possibility of further discoveries ...

## A house divided against itself cannot stand. I believe this

 government cannot endure, permanently, half slave and half free. I do not expect the Union to be dissolved; I do not expect the house to fall; but I do expect it will cease to be divided. It will become all one thing, or all the other.- Abraham Lincoln, 1858

26 Which statement summarizes Abraham Lincoln's view on the issue of slavery in this speech?
F Territories will ban slavery, but states should allow it.
G Some southern states will abolish slavery.
H Either slavery or freedom will become the law.
J Abolitionists will slowly embrace slavery.

## Population of Great Plains

| 1700s | 1850s |
| :--- | :---: |
| - Many tribes <br> - Broadly <br> scattered |  |$\quad$| - Fewer tribes <br> - Declining <br> population |
| :---: |$\quad$| Few tribes on <br> reservation <br> Small <br> population |
| :--- |

27 Which historic development contributed most to the changes listed above?
A westward migration
B introduction of sharecropping
C urban expansion
D growth of manufacturing

28 Which of these was an effect of the Dred Scott v. Sandford decision by the Supreme Court in 1857?
F Civil liberties were extended to more people.
G Judicial review was established.
H Immigration decreased because of government regulations.
J African Americans were denied the rights of citizenship.

## Surrender at Yorktown, 1781



| KEY |  |
| :---: | :--- |
| 㭗 | Battle site |
| —..... | Arench blockade |

29 According to the map, which of these best explains why Cornwallis and his army were forced to surrender at Yorktown?

A British naval forces were occupied with wars in Europe.
B Lafayette and his troops were waiting for Cornwallis in New York.
C They were trapped by American and French land and sea forces.
D Washington and Rochambeau had defeated Cornwallis in South Carolina.

30 Which document is a secondary source about industrialization in the 1800s?
F a journal kept by a factory worker
G an account book of factory finances
H a photograph taken inside a factory
J an encyclopedia article about a factory

31 Eighteenth-century Virginia planters who needed workers to produce their crops relied on which labor force?

A soldiers
B slaves
C prisoners
D artisans

32 Which political question arose as a direct consequence of the Mexican-American War?
F Should Texas be annexed into the Union?
G Should the Oregon Country become a U.S. territory?
H Should the United States buy the Louisiana Territory?
J Should California be admitted to the Union as a free or a slave state?

Clothing: parkas, ponchos
Inventions: hammocks, toboggans
Words: moose, chipmunks, squash
Traditions: respect for nature

33 The listings in the box above reflect the contributions to the cultural development of the United States by

A Irish settlers.
B African slaves.
C Native Americans.
D German immigrants.

34 Which law declared that the issue of slavery in the western territories would be decided by popular sovereignty?

F the Missouri Compromise
G the Kansas-Nebraska Act
H the Wilmot Proviso
J the Homestead Act


35 Which title completes the diagram above?
A Refining Petroleum
B Making Textiles
C Mining Minerals
D Processing Lumber

## Part 2

36 An example of a primary source of information about the American Revolution is a
F textbook.
G biography.
H diary.
J documentary.

37 Which activity is a responsibility of American citizens?
A visiting a national park
B purchasing a new home
C running for political office
D serving on a jury

38 A major cause of the Civil War was the issue of
F establishing a National Bank.
G allowing immigrants into the United States.
H state powers versus federal powers.
J taxation without representation.

39 Which sentence is the best description of the impact of European colonization on Native Americans?

A Native Americans lost their lands to Europeans.
B British settlers absorbed Native Americans into colonial society.
C British colonists adopted religious practices of Native Americans.
D Native Americans protected Europeans from attacks.

Population of the South, 1790-1830

| Year | White | Free <br> Nonwhite | Slave |
| :---: | :---: | :---: | :---: |
| 1790 | $1,240,454$ | 32,523 | 654,121 |
| 1800 | $1,691,892$ | 61,575 | 851,532 |
| 1810 | $2,118,144$ | 97,284 | $1,103,700$ |
| 1820 | $2,867,454$ | 130,487 | $1,509,904$ |
| 1830 | $3,614,600$ | 175,074 | $1,983,860$ |

Source: U.S. Census Bureau

40 Based on the table above, the South's slave population reached one million during which decade?
F 1791 to 1800
G $\quad 1801$ to 1810
H 1811 to 1820
J 1821 to 1830

Causes

| - Weak central |
| :--- |
| government |
| - Economic instability |
| - ? |



41 Which event best completes the diagram above?
A Shays's Rebellion
B Ratification of the Bill of Rights
C George Washington's presidential election
D Passage of the Northwest Ordinance

## Proclamation of 1763



42 According to the map, the Proclamation of 1763 prohibited settlement west of an imaginary line drawn along the

F Ohio River.
G Mississippi River.
H Appalachian Mountains.
J Rocky Mountains.

43 Which economic activity is the best example of a subsistence economy?
A running a bank
B working in a factory
C growing food for family use
D raising livestock to sell at a market

| Transaction | Payment | Deposits/ <br> Credits | Total |
| :--- | :---: | :---: | :---: |
| DEPOSIT |  | $+1,000.00$ | $1,000.00$ |
| Water Bill | -33.00 |  | 967.00 |
| Utility Company | -87.50 |  | 879.50 |
| Car Payment | -400.00 |  | 479.50 |
| Phone Company | -67.98 |  | 411.52 |

44 Which transaction is being made to reduce a debt on a loan?
F Car Payment
G Phone Company
H Water Bill
J Utility Company

45 The Supreme Court of the United States government may be considered the least democratic part of the federal government because

A there are term limits for its members.
B its members are appointed for life.
C there are two members from each state.
D its membership is based on population.

> But we are assembled to protest against a form of government existing ... to declare our right to be free as man is free, to be represented in the government which we are taxed to support . . . $$
\begin{array}{l}\text { - Elizabeth Cady Stanton, } \\ \text { Seneca Falls Convention speech, } 1848\end{array}
$$

46 Elizabeth Cady Stanton's speech excerpted above was intended to attract support for F access to public education.

G abolition of slavery.
H women's suffrage.
J prison reform.

From Cocoa Bean to Chocolate Bar


47 Which step in making chocolate occurs before the process moves to the factory?
A grind beans into liquid
B dry and ferment beans
C tempering
D conching

- Favorable geography for growing cash crops
- Large plantations dominate economy
- Need for large supply of labor

48 What is the best title for the table above?
F Reasons Slavery Flourished in the South
G Factors That Attracted Immigrants to the South
H Evidence That Slavery Would Be Abolished
J Reasons That Industry Was Slow to Develop in the North

49 Which colony was founded on principles of religious tolerance?
A Pennsylvania
B New Hampshire
C North Carolina
D Virginia

## Directions Use the map below and your own knowledge to do Numbers 50 and 51.

The Election of 1828


| CANDIDATE |  |
| :--- | :--- |
| Andrew Jackson | $\square$ |
| John Quincy Adams | $\square$ |

50 According to the map, Andrew Jackson received much of his support from
F people living in the territories.
G industrialists in the Northeast.
H farmers in the South.
J voters in each of the original colonies.

51 The total popular vote in the 1824 election was less than half of what it was in the 1828 election. Which of these was the most likely reason for the increase in the popular vote?

A Jackson's experience in politics
B Jackson's support of the aristocracy
C increased immigration to the cities
D expanded voting rights for white males

52 Which of these statements describes an effect of European colonization in North America by 1820?
F formation of a diverse population of settlers
G completion of a transcontinental railroad
H establishment of a single religion
J development of a dictatorship

53 In the early 1800s, Memphis and Nashville grew faster than other areas in the state because
A natural resources were scarce in other areas.
B few opportunities were available in other areas.
C cities were safer than the open countryside.
D locations on major rivers connected them to other markets.

54 Which situation allows for the regulation of free speech?
F The speech is unpopular.
G The speech poses a threat to safety.
H The speech is critical of the government.
J The speech is based on unpopular opinions.

# Want Ad from the New York Evening Post, September 4, 1830 

## WANTED

Cook.
They must be American, Scotch, Swiss, or African - no Irish.

55 Irish immigrants were excluded from this advertisement because
A farmers out west clashed with Irish immigrants over land.
B it was illegal to hire Irish immigrants.
C anti-Irish sentiment grew with the increase in Irish immigration.
D Irish immigrants did not have the necessary skills.

56 Which of these was directly responsible for the greatest changes to the environment in the Cumberland Gap area?

F the clearing of the Wilderness Road
G the trails established by Native Americans
H the establishment of a national park in the area
J the presence of hunters in western regions

57 In the 1600s the French exploring Tennessee were most interested in obtaining
A steel.
B oil.
C tea leaves.
D animal pelts.

- Agitation by War Hawks
- Impressment of American sailors
- Violation of neutral rights

58 Which conflict resulted from events on the list above?
F the War of 1812
G the First Seminole War
H the Mexican-American War
J the War for Texas Independence


59 Which inventor shown in the timeline above could help a New York business owner in 1865 quickly communicate information to a business partner on the West Coast?

A Robert Fulton
B George Stephenson
C Samuel Morse
D Cyrus Field


60 Which conflict best completes the diagram above?
F Shays's Rebellion
G The Revolutionary War
H Pontiac's Rebellion
J The Civil War

61 Which of these political questions from the early 1800 s was most related to westward expansion?
A Should laws be passed to restrict immigration from some countries?
B Should the federal government pay for roads and canals?
C Should laws be passed to improve conditions for factory workers?
D Should the federal government pass a protective tariff?

62 Which type of economy was most often found in pre-colonial Native American societies? F monopoly

G free competition
H traditional
J oligopoly

63 In which conflict did Great Britain win control of Canada?
A the French and Indian War
B the American Revolution
C the War of 1812
D the Civil War

64 Religion is best defined as a set of
F rules and laws governing a nation.
G beliefs and practices relating to a god or gods.
H traditions passed down within a family or families.
J principles based on the teachings of political leaders.


65 Which event best completes the timeline above?
A Jefferson makes Louisiana Purchase
B Pilgrims land at Plymouth
C George Washington is elected president
D Boston Tea Party takes place

Samantha has a job that pays $\$ 800$ per week. Her company takes $\$ 120$ from her weekly pay and sends it to the government for taxes.

66 Which type of taxation is described in this scenario?
F income tax
G excise tax
H property tax
J sales tax

67 Which of these describes a major contribution of Sam Houston to United States history?
A He explored and mapped the western United States.
B He wrote legislation forbidding the extension of slavery.
C He led the fight for Texas independence from Mexico.
D He led the colonists in Revolutionary battles against Great Britain.

68 Which of these was the first document to outline a structure of the United States government?
F Bill of Rights
G Declaration of Independence
H Magna Carta
J Articles of Confederation

69 Which sentence best describes a result of the Emancipation Proclamation?
A It damaged the economy of the South.
B It decreased the number of factories in the North.
C It created job competition in the North.
D It promoted better treatment of slaves in the South.

Reading/Language Arts Answer Key

| 1 | A | 22 | H | 43 | D | 64 | F |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | F | 23 | B | 44 | F | 65 | B |
| 3 | D | 24 | F | 45 | C | 66 | F |
| 4 | H | 25 | A | 46 | G | 67 | A |
| 5 | B | 26 | J | 47 | B | 68 | H |
| 6 | H | 27 | D | 48 | J | 69 | B |
| 7 | D | 28 | J | 49 | D | 70 | G |
| 8 | J | 29 | B | 50 | F | 71 | B |
| 9 | A | 30 | G | 51 | D | 72 | H |
| 10 | G | 31 | B | 52 | G | 73 | C |
| 11 | D | 32 | H | 53 | B | 74 | G |
| 12 | J | 33 | A | 54 | H | 75 | D |
| 13 | A | 34 | H | 55 | D | 76 | F |
| 14 | H | 35 | D | 56 | J | 77 | A |
| 15 | C | 36 | F | 57 | D | 78 | H |
| 16 | G | 37 | A | 58 | H | 79 | D |
| 17 | B | 38 | F | 59 | D | 80 | F |
| 18 | F | 39 | B | 60 | F | 81 | B |
| 19 | C | 40 | G | 61 | B | 82 | G |
| 20 | G | 41 | D | 62 | G | 83 | C |
| 21 | B | 42 | J | 63 | B |  |  |

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Mathematics
Answer Key

| 1 | C | 19 | C | 37 | B | 55 | A |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | G | 20 | J | 38 | J | 56 | J |
| 3 | C | 21 | D | 39 | A | 57 | A |
| 4 | G | 22 | F | 40 | J | 58 | J |
| 5 | D | 23 | D | 41 | B | 59 | D |
| 6 | F | 24 | G | 42 | F | 60 | G |
| 7 | D | 25 | A | 43 | B | 61 | C |
| 8 | G | 26 | F | 44 | F | 62 | G |
| 9 | C | 27 | B | 45 | C | 63 | D |
| 10 | F | 28 | H | 46 | G | 64 | F |
| 11 | C | 29 | A | 47 | C | 65 | B |
| 12 | J | 30 | G | 48 | G | 66 | F |
| 13 | C | 31 | D | 49 | C | 67 | C |
| 14 | H | 32 | H | 50 | H | 68 | G |
| 15 | B | 33 | A | 51 | A | 69 | C |
| 16 | H | 34 | F | 52 | J |  |  |
| 17 | A | 35 | D | 53 | A |  |  |
| 18 | J | 36 | G | 54 | J |  |  |

Grade 8 Answer Key | Page 189

Science
Answer Key

| 1 | C |
| :---: | :---: |
| 2 | H |
| 3 | A |
| 4 | G |
| 5 | B |
| 6 | J |
| 7 | A |
| 8 | G |
| 9 | A |
| 10 | H |
| 11 | C |
| 12 | J |
| 13 | B |
| 14 | F |
| 15 | C |
| 16 | H |
| 17 | A |
| 18 | H |


| 19 | B |
| :---: | :---: |
| 20 | G |
| 21 | A |
| 22 | F |
| 23 | C |
| 24 | H |
| 25 | B |
| 26 | H |
| 27 | A |
| 28 | J |
| 29 | A |
| 30 | J |
| 31 | A |
| 32 | H |
| 33 | D |
| 34 | J |
| 35 | B |
| 36 | J |


| 37 | A |
| :---: | :---: |
| 38 | G |
| 39 | B |
| 40 | F |
| 41 | B |
| 42 | G |
| 43 | B |
| 44 | J |
| 45 | D |
| 46 | H |
| 47 | D |
| 48 | J |
| 49 | B |
| 50 | G |
| 51 | A |
| 52 | H |
| 53 | D |
| 54 | J |


| 55 | A |
| :---: | :---: |
| 56 | G |
| 57 | D |
| 58 | H |
| 59 | A |
| 60 | G |
| 61 | A |
| 62 | J |
| 63 | C |
| 64 | J |
| 65 | D |
| 66 | H |
| 67 | A |
| 68 | H |
| 69 | C |

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## Social Studies

Answer Key

| 1 | D |
| :---: | :---: |
| 2 | J |
| 3 | A |
| 4 | H |
| 5 | A |
| 6 | F |
| 7 | C |
| 8 | J |
| 9 | D |
| 10 | J |
| 11 | C |
| 12 | G |
| 13 | D |
| 14 | H |
| 15 | B |
| 16 | G |
| 17 | B |
| 18 | J |


| 19 | B |
| :---: | :---: |
| 20 | F |
| 21 | D |
| 22 | G |
| 23 | B |
| 24 | G |
| 25 | A |
| 26 | H |
| 27 | A |
| 28 | J |
| 29 | C |
| 30 | J |
| 31 | B |
| 32 | J |
| 33 | C |
| 34 | G |
| 35 | B |
| 36 | H |


| 37 | D |
| :---: | :---: |
| 38 | H |
| 39 | A |
| 40 | G |
| 41 | A |
| 42 | H |
| 43 | C |
| 44 | F |
| 45 | B |
| 46 | H |
| 47 | B |
| 48 | F |
| 49 | A |
| 50 | H |
| 51 | D |
| 52 | F |
| 53 | D |
| 54 | G |


| 55 | C |
| :---: | :---: |
| 56 | F |
| 57 | D |
| 58 | F |
| 59 | C |
| 60 | J |
| 61 | B |
| 62 | H |
| 63 | A |
| 64 | G |
| 65 | D |
| 66 | F |
| 67 | C |
| 68 | J |
| 69 | A |

Tennessee Comprehensive Assessment Program
Achievement Test ~ Grade 8
Practice Test


[^0]:    ${ }^{1}$ stalwart: strong, robust
    ${ }^{2}$ Conestogas: covered wagons of the 1800 s

[^1]:    ${ }^{1}$ subterranean: underground

